Social Impacts of the Isles of Scilly Seabird Recovery Project

Dr Caroline Keenan, Dr Sarah L. Crowley and Professor Robbie A. McDonald

Environment and Sustainability Institute
University of Exeter
Penryn Campus, Penryn TR10 9FE

E-mail c.keenan@exeter.ac.uk



Executive Summary

- Rodent eradications from inhabited islands pose a range of important social considerations.
- The Isles of Scilly Recovery Project (IoSSRP: 2009-2016) aimed to eradicate brown rats (*Rattus norvegicus*) from the islands of St. Agnes and Gugh.
- The University of Exeter was requested to conduct an independent follow-up evaluation of the social impacts of the project.
- Interviews were held with 46 residents of St. Agnes and Gugh, including at least one member of every permanent household. These data were thematically analysed to summarise key perspectives from the community, and to identify the social benefits and risks of this and similar, future initiatives.
- We identified extensive and early community engagement as a key factor in the project's achieving its aims. From the community's perspective, the success of the project was also due to the talents and hard work of the project team.
- The IoSSRP demonstrates that by providing the necessary impetus, resources and expertise, island communities can be successfully and positively engaged with large environmental projects initiated by external bodies.
- The risks to the longevity of this project lie in: limited engagement of the island community in the goal of seabird recovery, rather than rat eradication; and a potential loss of capacity and enthusiasm (on the part of busy residents), which could be compounded if there were insufficient continuous support from the RSPB and partners.

Introduction

Introduced rodents create substantial economic, social and ecological challenges on inhabited islands. They can predate vulnerable native species, disrupt ecosystem processes, damage stored food, crops and property, and act as vectors for a range of zoonotic infections. Consequently, introduced rodents are frequently the targets of eradication schemes that aim to remove all individuals from a given island, normally through the use of anticoagulant rodenticides. As the techniques and technologies of eradication become more sophisticated, larger and more environmentally complex islands, including permanently inhabited islands, are increasingly being selected for rodent eradication initiatives. While all such initiatives are characterised by technical, logistical and financial constraints, projects on inhabited islands tend to involve a greater breadth and depth of social considerations. These include evaluating the relative costs and benefits to human communities on the island of the eradication itself, as well as how it is planned and implemented.

The Isles of Scilly Seabird Recovery Project was first initiated by a group of organisations as part of a wider seabird conservation strategy for the islands, produced in 2009. Although the residents of five inhabited islands in the archipelago were consulted on the potential for eradicating brown rats (*Rattus norvegicus*), in 2011 a feasibility study concluded that eradication was currently feasible only on the connected islands of St. Agnes and Gugh. Following further community consultation, funding was secured from EU Life Nature and the Heritage Lottery Fund to deliver the project, which was implemented from 2013, with the key phase of rat removal (using island-wide rodenticide baiting) carried out in winter 2013-2014. These two islands were declared officially 'rat free' in 2016.

Although consultation and feedback exercises were carried out by contractors and/or members of the project team, the project partnership recognised that these evaluations had the potential to have been subject to bias, both in terms of reporting (as evaluative questions were asked by the same individuals who had implemented the project) and, potentially, in terms of evaluation (as the project team may interpret responses in relation to their existing knowledge, experiences and positions). Consequently, the University of Exeter was requested to undertake an independent, *post-hoc* evaluation of the conduct and outcomes of the project. The purpose of this evaluation was to learn about island residents' experiences of the Isles of Scilly Seabird Recovery Project, in order to (a) provide project partners and other interested parties with independent feedback, and (b) inform the development of future projects. The study was not intended as an evaluation of the project team, or their performance, as individuals or as organisations. Rather, it is an independent assessment of the various positive and negative social dimensions of the project, as reported by the resident human community of St. Agnes and Gugh.

Methods

Semi-structured interviews were conducted with at least one member of all households permanently resident on St. Agnes. 46 residents were interviewed in total. Residents were initially approached by members of the Isles of Scilly Seabird Recovery Project (IoSSRP) team in their final visit to St. Agnes and were given a letter written by the University of Exeter researchers, outlining the goals of the evaluation (see Appendix I). The majority of residents agreed to participate at this stage and interview times were set. The remaining households were contacted by the researchers on their arrival on St. Agnes, and further appointments made. The interviews were conducted over six days by CK and/or SLC on St Agnes, at a location of the interviewee's choice (usually their home). Before each interview, participants were read a short preamble explaining the goals of the research and, if they wished to continue, given a consent form to read and sign. Participants were aware that they could stop the interview at any stage or decline to answer a question (see Appendix 2). The majority of interviews were audio-recorded; three interviews were recorded with detailed, contemporaneous notes by the researcher. The study was conducted with ethical approval of the University of Exeter.

Interviews were structured using a personal history approach, designed to allow each participant to construct their own timeline of the project and to identify their own highlights and concerns (see Appendix 3). Researchers had familiarised themselves with the key phases and rough timeline of the project, but did not consult the reports prepared by the project team or partners to prepare the interview schedule, nor were these reports referred to by researchers during interviews.

The results were analysed in two stages. The first stage consisted of a series of meetings in which the researchers initially discussed each interview and identified common themes. The interviews were then re-examined through the writing process, and the themes developed, combined and, on occasion, discarded.

Findings from this report have been organised into two sections. The first, larger section describes participants' reflections on the social impacts of the project. In this section, the views expressed are those of participants, rather than the reflections of researchers. Where interviews are summarised, the language used has been chosen deliberately to reflect the language of the interviews. Direct quotations were selected if they clearly encapsulated an identified theme. Some participants have therefore been quoted more than once. In the second section we consider potential social risks to future similar projects and potential opportunities, based on our findings from this study.

Results: Participant reflections on the social impacts of the project

I. Planning, Delivery and Personnel

1.1 Early Engagement and Building Support

The project team got to know the community without the project being set in stone. Participants remember understanding that the project would/could only proceed with their consent and with the consent of the whole community. There were multiple methods of engagement at these preliminary stages:

Meetings with targeted interest groups: Initial meetings were held with particular interest groups, most notably the farmers. Some participants recognised this as demonstrative of the project team's understanding of the nature of their particular community. 'Without the farmers on board, it could not have been done' (29). These meetings involved presentations, which were tailored towards the particular audience. Information was imparted in a lively way, which was appropriate and interesting to that audience. 'We had a meeting - we said yes - well they obviously knew what they were talking about' (13b).

School Visits: The team also involved the children of the island from an early stage. The project officer visited their school on St. Agnes and talked about why there needed to be a project. When children raised concerns, these were taken and responded to seriously. One child, who initially had ethical concerns about the project, became a project advocate following a dedicated discussion with the project officer.

Whole island meetings: Community meetings about the project were made sociable, and were often held in the pub.

Home visits: Members of the project team also visited everyone in their homes several times, answering questions knowledgably and professionally.

'It was an easy project to support because they were so professional about it. The information they presented to us was so ...interesting, you knew that it was based on proper research, they had really done their homework before they got here' (27b).

1.2 Preparation

Communicating planning and preparation: It had been clearly conveyed to participants that extensive planning needed to be done. 'They said that that's where other places had failed, because they weren't properly prepared when they did it' (24a). For example, participants were aware that careful preparation was needed to administer the poisoned baits effectively. They knew that they would personally have to stop poisoning rats well before the project started, in order to avoid compromising the rat removal phase.

For some, this period was 'frustrating...you know – is it ever going to happen?' (22b). After the meetings 'everyone was just thinking, come on, let's go! Let's do it now!' (13b). Some participants identified this timeline as risking a diminution in community enthusiasm at the beginning of the project. Participants explained that this risk had been mitigated in this project by the engagement strategy outlined above, and by the speedy eradication of rats once that phase of the project actually began.

Responding to early concerns: The long lead-in time was used to identify and respond to residents' concerns. For example, during initial meetings, pet owners had expressed concerns that their pets might eat the poison bait. The team had successfully assured pet owners that the risk to their animals was minimal; pet owners were informed where the antidote (Vitamin K) was kept, that there was sufficient antidote available if required.

'Clearing up': The lead-in time was also used, most significantly for participants, to clear up the island ready for the delivery of the project. 'The big tidy up before was quite amazing' (24a). A member of the project team visited every home to identify what needed to be done to enable access for rat removal and to ensure the entire rat population was susceptible. The attitude conveyed by the project team was positive and conscientious. 'It wasn't like 'you've got to do this', it was like 'this is really helpful to the project, would you mind if we ...?' (14a). The project team also took a proactive approach to this preparation, carrying out the clearance of barns, garages, sheds and attics with energy and good humour. They had a farm clearing day when those on farms could identify refuse across their land and the team would come and take it away. When participants planned to undertake the work themselves, the project team ensured that they had all that they needed to complete the work. For example, participants described how the team sourced and provided skips, which can otherwise be both prohibitively expensive to hire and difficult to arrange.

Once cleared the team helped participants in creating good systems of waste management and storage of animal feed and other potential rat food sources. This help came partially in the free provision of good quality compost refuse and feed bins. The team also ensured, however, that these were correctly installed and used. Some participants concluded that this process changed the way that many on the Island thought about storage and waste. 'They sorted out all the beach cleans, but it stepped up everyone on the Island, we said 'we need to make more of an effort' and we were getting together much more often and going and clearing the beaches' (14b).

Community events: Community events were held that were clearly linked to the project, and made fun and engaging by the project team. These included Apple Day, in which residents got together to clear up the orchard, and an apple press was sourced so that the children all brought home apple juice. There was also bonfire of scrap wood that marked the end of the clearing up; fireworks and food were provided by the project team. Participants perceived this event as a celebration of what had already been achieved, and as recognition of the community from the project team.

1.3 Delivery

The project delivery was well thought-out and sensitive to the particular community. This was contrasted, by participants, with other groups of people who had worked on St. Agnes and Gugh around the same time. Participants reported that builders who had renovated the Island Hall had not been considerate of people's property or the need for access along narrow lanes. 'To compare them - we have a lot of television crews, come over they are always wanting to make films and they see themselves as being more important than your day to day life and that's an assumption they make... they are very shocked if you don't want to be part of their film and you don't want to spend all day re-doing little bits of filming' (9a). Participants recognised that all members of the project team made efforts to ensure that the project was delivered without placing a burden upon the community. 'They didn't just pass [the hard work] over to us and walk away, they got stuck in and I think

that it was probably the biggest difference, that made everyone sign up to it...It made it feel like we were helping them to help us' (19a).

Asking permission: Participants noted the polite and respectful way in which all members of the project team asked permission before visiting their home for the project. It was recalled that it was not assumed that because permission had been given once it was continuous. The project team were 'thorough' (32b) and 'very careful about asking permission and saying that they would be on the farm at such and such time' (32a).

Orange hats: Although initially sceptical of the need for the project team to wear bright orange hats, numerous participants recalled this aspect of the project and reported that the hats had been invaluable as an identifying feature of the project team, which helped build trust. It meant that a stranger walking across a field could be easily identified, as could someone 'messing around' in your garden. Residents got into the habit of stopping people in orange hats to ask how they had got on that day. Although the project volunteers changed over time, the hats provided a sense of continuity for residents, who were always able to identify who was involved in the project.

Information at every stage

Involving everyone: 'They always tried to involve everybody. We were never in the dark about it. They made sure that you knew if there were meetings... Every step of the way they were really informative' (7a). If residents couldn't get to a meeting, the project officer would ask when it would be convenient for her to pop in for five minutes, to fill them in on what was happening.

Readily approachable: Participants observed that as the project team were resident on the island and working there, they were always around.

Newsletters, Project and Facebook page, village noticeboards: Information was always available in other formats for those who wanted to understand what was happening. Paper copies of newsletters were hand-delivered by a volunteer resident on the island.

Speed and competence of rat removal: Participants remembered being absolutely sceptical that the rats would be eradicated, particularly because most people had had some experience of trying to control rats in the past and failing: 'I didn't see how they could do it. I didn't think that it would work' (6). They recalled concerns that 'all that work would be done [by the team] and it would break down, it wouldn't work' (27a). However, the strategic application of the grid system (placing bait stations every 50 metres) convinced several participants that the team knew what they were doing. Following consultation with residents, the bait stations were put in sensible, suitable places (for example, not in the middle of fields, where they could damage farm machinery, but in hedges and corners). As the project team were so visible and friendly it was easy to ask how things were getting on and it was exciting and impressive how quickly the process took. 'It was absolutely amazing to think, yes we're catching some, we've caught loads, we've caught loads, there's hardly any left, we're down to the last couple' (19a). Participants recalled seeing maps of the bait stations at the end of project overview and looking at how many red triangles, which recorded bait having been taken at the beginning of the project and how quickly they disappeared and realising just how fast it must have worked.

Post-project training: The project team remained a presence long after the rats appeared to have been eradicated. Before the project funding finally finished, volunteers were

trained to monitor bait stations. 'Towards the end they were training us to do the job that they were doing to make sure that there were no more rats' (7a).

1.4 Personnel

Many participants attributed the success of the project to the talents and hard work of the three key individuals in the project team and the contributions of the carefully selected volunteers. There was flexibility within the team to allow them to be sensitive to people's concerns or needs, and to respond to them. There was also an ability across the team to understand the character of this particular community and to adapt their behaviour accordingly.

The main contractor was portrayed as an inspiring professional with significant knowledge and enthusiasm. 'You can't help but admire her professionalism in every way, [she] really knew [her] job, just gave you complete confidence' (27b). 'She was really on the ball' (9a). She was also recognised as straightforward, open and honest — even blunt at times. She was positively described as a realist, recognising both that inhabitants had other concerns in their lives and would not necessarily prioritise seabird recovery; and that the project might have negative consequences, particularly that the rabbit population was likely to increase.

The project manager was reported to be full of energy and enthusiasm, knowledgeable about the place, intuitive about people, organised and a good communicator. She was described as 'an amazing personality who could convince anyone of anything' (19b). 'She is just the most enthusiastic wonderful person — ever' (24a).

The project supervisor was considered the energy behind the project. Participants explained that he had the vision that the project could be achieved and the ability and drive to procure the funding and support to do it.

The volunteers were described as 'a jolly bunch' (32b). 'There was a big meeting at the start and we got to know those guys and every single one of them was just so nice' (24b). 'They picked them well, they just fitted in. They were so interested in what we were doing, just as much as we were interested in what they were doing' (13b). They also became 'part of the community. They shopped here, they went to be pub here, they slept here, they were part of the community for a little while' (7a). They were friendly but 'they didn't cross the line and become over-familiar or anything. They didn't take up your time or anything, they were just really pleasant people' (13a). Above all, they were hardworking. 'There wasn't one of them who wasn't doing their job' (32a). Participants remembered the team working in all weathers to make sure that the project was delivered.

2. Community Ownership

2.1 Initiation

The community would not have thought of this project themselves. They could not have envisaged how to go about creating such a project, before it had happened. They have neither the financial nor other resources of a large organisation like the RSPB to contemplate such an undertaking. Furthermore, having seen the type of workforce needed to complete this type of project successfully, they know that it would have been beyond a small community in which most of the adult population already have several jobs. They were, however, mostly pleased that the RSPB had initiated it. The project team were so enthusiastic 'and very, very, persuasive, but in a nice way. I don't think that we ever felt like we were bludgeoned into doing the project' (15a). 'It didn't feel imposed in anyway, it felt that it was something that the community wanted, as opposed to someone outside... in fact it is only now that I am saying this that I realise that was really what had happened' (19a).

2.2 Priorities

Some on St. Agnes and Gugh welcomed the project for its potential to enable seabird recovery: 'I think it is a great project, over my lifetime I have seen nesting birds reduce' (27a). However, overall community investment in the project was more in rat removal than seabird recovery per se. 'For a lot of people I think you'll find it was just about not liking rats, I think you'll find it wasn't all about saving seabirds' (15a) 'It is very nice and a thing to be proud of, but not my personal driver' (19a). At points, this could come into tension with the overall aims of the project team, for whom seabird recovery was the priority. 'It grated with me that all that bubbly enthusiasm was all for birds...we are struggling...it was a slap in the face for them to say [the most important problem on St. Agnes was] to save the seabirds' (32a).

2.3 Legacy

Towards the end of each interview we asked, 'if another community was to take part in a project like this, what advice would you give them?' This question was responded to with unanimous enthusiasm. A selection of advice was to 'follow what they say and enjoy it all' (5) 'Go for it! Do it!' (6), and 'if you have as good a project team as we did - just trust your project team' (19a).

However respondents described feeling pessimistic in looking to the future, now they were in charge. Those who had been trained in checking bait stations, felt well trained and confident in carrying on this work and there was a sense of responsibility across the whole community to try to maintain the 'rat-free status' of the islands. However there was a recognition, that a job that had been done full-time by a group of skilled professionals supported by a big organisation, was now going to be undertaken by a small community with limited resources. One suggestion mooted to militate against this, was for organisations like the RSPB to consider at the start how some support for the community could be maintained after the funding life of a project. 'It's not what you naturally ask at the beginning of a project...no-one [when you get funding for five years] is asking about what happens at the end of that process...you almost want a funder to say [at the beginning] we'll support this project for evermore' (15b). It was suggested that this could make a difference to the long-term legacy of a project like this.

3. Outcomes and Impact

3.1 Social impacts

Social benefits of being rat free: Everyone interviewed had a story about how, on reflection, the presence of rats had interfered with the daily lives of those living on St Agnes and Gugh. Rats could live within the walls of homes and make nests in cupboards. Several participants recalled being in their homes, only to see a rat watching them from a hole in the ceiling, or the top of a cupboard. The rats were particularly apparent around the coast and on the beaches. 'If you went for a walk round the coast the mallows would be swinging around loaded down with rats' (9a). The community often meet up and have barbeques on the beach, and it remains remarkable for them that they can relax and put food on the tables without the rats. Inhabitants only tend to notice their absence at other times having visited other islands that still have a rat problem.

Greater awareness of aspects of their environment: The majority of islanders had not been interested in seabirds before the project and for them the project had been an education. They had understood that rats were a problem for people, but hadn't really considered the impact on other animals. 'I didn't know that the birds were in that much trouble because of the rats. I hadn't really thought much about it' (6). For some this is where the interest stopped, but for others this had been the impetus to learn more about the birds themselves. 'For me it has been an eye-opener on the bird front...I am much more interested in birds than I had been before. That to me is an unexpected consequence' (15a). The project was perceived as having an educative value which would be long-lasting.

During the project, the children of the islands were valued and involved as seabird ambassadors and checkers of their own bait stations in and around the school. Participants considered it was very important to have included the children throughout, as they are the ones that will be responsible for the continued success of the seabird project. The contagious enthusiasm of the project team once the seabirds had returned helped maintain this: 'They were coming round afterwards saying come and look at the shearwater burrows' (14b) and then 'it was fantastic...taking the kids out in the dark to go and listen to shearwaters and seeing them actually – going out with torches and seeing the baby chicks on the ground. The kids love it – I mean really, really love it' (14a).

The perceived success of the project in beginning the recovery of a lost seabird population was a source of significant pride. 'The bird population has thrived, it is visible and when you go round and you can hear the Manx Shearwaters in the burrows and the chicks and everything' (15a). 'The project really has stopped that decline. It is too early to see what the result of that will be, but we feel that it has got off to a good start' (27a). 'Now [the recovered bird population] is something that I am really proud of (19a).

Pleasure in having the team on the Island: It was lovely to have the team on St. Agnes and Gugh, particularly through a dark and stormy winter. They brought fun and interest to the Island. 'I miss them in my kitchen, opening a bottle of wine and putting the world to rights' (27b).

New Traditions - Community activities the project brought that will continue: Although Apple Day was started as part of the clear-up for the project, it has become part of school and community life. The beach cleaning, now organised by the Isles of Scilly Wildlife Trust, has again become an established part of the calendar.

3.2 Economic impacts

From the project itself: All those working on the project stayed on the island for the duration, although 'they didn't need to do that, they could have just come over everyday' (17). As they stayed with people and shopped in the shop 'the money stayed on the Island' (5).

Tourism: Tourists had complained about rats, and this was getting more frequent. Tourists were coming into contact with rats around the coast and in the campsite. For example, a child on holiday had had a packet of crisps pulled from their hands by an enterprising rat, that then disappeared into the bushes. Tourists had also started to encounter rats in holiday accommodation, with two rats caught eating from the butter dish left on the dining table. However, participants felt that most people would come anyway, putting up with substandard accommodation and even the presence of rats to be able to stay on St. Agnes.

Effects on businesses: There had been significant losses to business caused by rats. Farmers reported that rats nibbled though hay and silage wraps making small air holes, which meant that large amounts of the feed was regularly spoiled. Rats ate their way though bags of chicken feed and seed potatoes and found their way through metal doors to eat bulbs and flowers stored before shipping. It was so demoralising for all that work to have gone to waste and even if there was the money to replace the damaged feed, it is extremely difficult to source replacements for the items lost to rat damage. The project and the publicity surrounding it had lead to an increase in wildlife tourism business. Plans were in development to market trips to St. Agnes and Gugh as a wildlife experience.

The financial benefits beyond the reduction in rat damage and increase in wildlife tourism, are more intangible, but nevertheless felt significant, to some interviewees. The project was empowering in encouraging some inhabitants to think differently about the way that they did things, including running their businesses and to innovate successfully as a result.

4. Risks

Interviewees identified a number of risks to the continued success of this project, primarily surrounding re-incursion and the resultant waste of all the hard work to get to this point.

Longevity and community memory: Participants expressed concern that, in a few years, inhabitants will have forgotten just how difficult rats made daily life and how much their enjoyment of the outdoors was affected by rats: 'Very quickly you forget about it, once they were all gone' (13b). As time passes people move on to the island who were never involved in the project and those who are now very involved may become less so, particularly because of age or illness. There was concern that the skills and interest required for monitoring will fade with time.

Overtaken by other concerns: Whilst volunteers trained by the project team will continue to monitor bait stations, the islands will have to find funding for baits and other equipment to maintain these stations effectively. At present there remains a boatshed stocked full of resources by the project team when they left, however, these will deplete. The wildlife tour boat currently collects money, which it donates to the project. It can be hard to communicate and justify the continuing importance of this project to other people, as it can feel like an insignificant problem when there are so many others. It would be hard to ring-fence this money, should a more urgent community need arise.

Forces outside community control: Participants felt that these two small islands with fewer than 100 inhabitants have little control and influence over much larger problems that may affect the re-introduction of rats. Rats are seen to be a major problem on the other islands and are not dealt with consistently or responsibly there. Residents did not consider it likely that a rat would be able to swim from another island. They identified the main risk to be transportation of rats from the other islands to St. Agnes and Gugh. There were two potential methods of transportation: the freight and tourist boats that connect the islands and the yachts and large motorboats that moor in the bay in summer (there can be up to 30 at a time). The behaviour of others in this respect was considered largely out of their control. While appreciating that should a rat be spotted 'a crash team will come and surround the rat with poison' (27a), it was a question of 'not if, but when rats would return' (17) and whether they would be noticed quickly enough, if they arrived in the season when everyone was working all the time. 'It's inevitable, they are on St. Mary's, they are on Bryher, it's only a matter of time' (9b).

Participants recognised the benefits of being part of the Seabird Recovery Project, supported by the resources of a large organisation. However, now that the project has finished, there are concerns that the potential scale of any future problem would overwhelm the community. Some participants were worried that they didn't have the capacity to continue this long term without on-going support, and that this manifested in some cases as a little resentment towards the 'swoop in, swoop out' approach by the RSPB as an organisation. 'I think because [the RSPB] are a charity they are used to people [wanting to do things] for free...they are also very corporate...used to dealing with other corporate bodies...they are [making decisions] far away and they don't understand how we do things here' (15b).

The lack of authority of the volunteer monitors: Those tasked with keeping up the monitoring do not have the authority of the project team, whose knowledge and experience commanded respect. It is therefore difficult, sometimes impossible, for one islander to tell another that they should not do something or to tell them off. Some interviewees suggested that it was patronising and potentially inflammatory for one islander to suggest to another, especially those who had lived on the land for generations, that they did not understand how behave in a responsible way to protect seabirds. It will also present a problem when volunteers block off parts of the islands, particularly Gugh, in breeding season. 'Suddenly there are these signs saying you are not to go here and there...and they [the volunteer monitors] are going to get into arguments if they try and stop certain people...from doing what they normally do, because of it' (14b).

Discussion

The findings of our independent evaluation have implications, including risks and opportunities, for the Isles of Scilly Seabird Recovery Project and for future, similar projects. We should reiterate that this section, unlike the findings outlined above, is not a direct report of participants' comments, but provides our interpretation and evaluation of some of the key issues raised.

Attending to community-specific context: This project was both accepted and considered successful by this small, quite cohesive community. However, there is a risk an assuming that exactly the same approach will work for other communities. A fundamental component of successful community relations in this project was the extensive, early groundwork conducted by the project team, getting to know this particular community and tailoring the project accordingly. This enabled the development of partnerships between the project team and highly talented individual community members, some of whom proved invaluable, particularly in the development and maintenance of the project communications strategy. Building an understanding of the characteristics of a whole community also created opportunities for innovation in community engagement. This early groundwork, and a flexible response to the unique challenges and opportunities arising within each project, should not be omitted in favour of a standardised, 'one-size-fits-all' approach.

Matching conservation and community priorities: The aim of seabird conservation alone may not be sufficient to ensure community buy-in to a project, particularly when there are other, competing pressures on resources. For example, in the Isles of Scilly there is significant pressure on housing, with extended families living in converted farm outbuildings or similar properties. Consequently, were the community given the option to develop their own initiatives, conservation projects are likely to be less of a priority than other social or environmental projects, e.g. housing and waste management. Here, the removal of rats was also a benefit to those businesses and households not committed to seabird conservation, and therefore generated broader support. It is therefore important for initiators of such environmental projects to consider how their work might bring positive social, as well as ecological, impact to an area, particularly if communities will be required to invest time and resources in the project.

Conversely, environmental projects of this kind will have less traction with communities if there are mismatches between how the project is framed and the things of which people are proud in their community. Community memory of the importance of the focal seabirds on these islands was effectively, locally extinct. However, there was a commitment to innovation and to an identity of St. Agnes and Gugh as islands that embrace change, which fitted the ethos of the project. There also appears to be a clear commitment, by a significant number of inhabitants, to life-long learning. This meant that while some participants had not considered the problems faced by ground-nesting seabirds before the project began, over the course of the project's delivery they became more cognisant of, and interested in the future of, threatened seabirds.

Variation in target species: Rats are widely considered a pest species and were not popular inhabitants of St. Agnes and Gugh. Regardless, some participants expressed ethical concerns about whole-island eradication, including both the welfare implications of anticoagulant rodenticides and the human right to intervene in nature and natural processes. Should the target species differ in other projects, it could be much more difficult to overcome the

concerns of participants that to eradicate a species from an area is 'playing God', especially if that species also has some utilitarian, aesthetic, cultural, or other value to the community.

Ownership of the project: Despite the project team's success in gaining the consent and general support of the community, this cannot be considered a community-led or 'grassroots' project; it was initiated, owned and managed throughout by the Seabird Recovery partnership. This may have significant implications for the longevity of the project, for example, 'handing over' the project to the community to fund and maintain carries some risk, as residents could become disinterested or even disaffected over time.

Conclusions

This project has demonstrated that by providing the necessary impetus, resources and expertise, it is possible to successfully engage island communities with large environmental projects and empower residents to effect real change in their natural and social environment. This success can be largely attributed to the due diligence taken in recognising, assessing and tailoring the project to community needs; this process of careful planning is transferable to other projects of this kind. The success of the project was also partially due to the convergence of community and project partnership goals around the benefits of rat eradication. However, although the aims were shared, the community and project partnership had different drivers for pursuing eradication. Primarily, the community saw the project as socio-economically beneficial, and the project partners (and funders) were primarily interested in the ecological and conservation benefits of eradication. Therefore, in other contexts (e.g. a different target species or community priorities) the goals of different parties may be less easily aligned. Such situations may require additional methods of engagement in order to adapt project planning and delivery to less amenable situations and communities.

Acknowledgements

We would like to thank all the participants in this research for their time and contributions. We are grateful to Rosie Fenton for hosting us during our stay on St. Agnes.

Appendix 1: Letter of invitation

Environment and Sustainability Institute

University of Exeter Penryn Campus Cornwall

TR10 9FE

Tel: 07384 242793 Email: s.crowley@exeter.ac.uk

c.keenan@exeter.ac.uk

Dear Sir or Madam:

Letter of Invitation Isles of Scilly Seabird Recovery Project: Participant Feedback

We understand that your household has been involved in the Isles of Scilly Seabird Recovery Project. We are writing to invite you to participate in an independent study to get your feedback on the delivery of the project. For example, we are interested in what you thought went well, and what might have been done better.

Participation in this study is entirely voluntary and participants are free to withdraw at any time. Taking part involves a meeting and conversation with a member of our research team at a mutually agreed time and location (this is normally your home, but we are happy to meet at cafés or similar if preferred). Meetings should take no longer than one hour. All adult members of the household are welcome to join in a group conversation, or speak to us individually, as you prefer.

With your permission, our conversations will be audio recorded. Recordings will not be shared with anyone outside the research team. You can also request that the audio recording be switched off at any time.

We will be providing fully anonymised, impartial feedback about the project to the IoS Seabird Recovery Project team, to inform their post-project evaluation exercise. We may also use select quotes from our conversations in future research or publications; these will also be anonymised and participants' identities protected.

Thank you for taking the time to read this invitation, and we look forward to hearing from you.

Yours faithfully

Dr Sarah Crowley Dr Caroline Keenan

Consent form:

loS Seabird Recovery Project - Participant Feedback

Please tick the boxes to confirm your agreement with the	he statements
I have read the letter of invitation / information sheet and I have understood the information provided and what taking part involves	
I know that I am free to withdraw from the research at any time	
I know that I can choose not to answer any question	
Please delete as appropriate	
I agree to an audio recording of my interview	YES / NO
Signed (participant)	
Date	
Signed (researcher)	
Date	

Isles of Scilly Seabird Recovery Project - Schedule

Preamble:

This is a follow-up piece of independent research to learn about residents' experiences of the seabird recovery project and to inform future projects. We will provide the RSPB project team with general feedback, but not specific comments.

It is not an evaluation of the project team, or their performance.

We are looking for your honest assessment of the project.

All contributions will be treated in confidence.

The recording may be turned off at any time, should you want to say anything off the record.

Schedule:

Introduction – tell me a bit about yourself and your background. When and how did you become involved in the SR project?

Why?

Tell me about your experience of the project – what did you do and how did you feel about it?

What were the memorable moments of the project for you? What would you say were the high points of the project? What would you say were the low points of the project?

Did you have any concerns about the project?

If so, did you raise them? (How?)
If so, how were they responded to?

The relationship between the project and the community has been important. If another community was to take part in a project like this, what advice would you give them?

What do you think worked well?

What might you advise them to do differently?

Is there anything else you want to add?
Have you a got any good stories about the project?