Darwin Initiative Main and Post Project Annual Report

To be completed with reference to the "Writing a Darwin Report" guidance: (http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2019

Darwin Project Information

Project reference	25-003
Project title	Conservation social networking, ecotourism and land-use planning in Maputaland
Host country/ies	Eswatini (Swaziland) and Mozambique
Lead organisation	DICE, University of Kent
Partner institution(s)	All Out Africa, ANAC, Izele, KUWUKA JDA, ENTC, UEM, UNESWA
Darwin grant value	£294,449
Start/end dates of project	July 2018 – March 2021
Reporting period (e.g., Apr 2018 – Mar 2019) and number (e.g., Annual Report 1, 2, 3)	July 2018 – Mar 2019 Annual Report 1
Project Leader name	Bob Smith
Project website/blog/Twitter	https://izele.org/projects/278
Report author(s) and date	Bob Smith, 30/4/2019

1. Project rationale

Maputaland is a global biodiversity hotspot, prime ecotourism destination and home to some of southern Africa's poorest people. Lack of alternative livelihoods has led to habitat loss through unplanned subsistence agriculture, so in response the Eswatini, Mozambique and South Africa governments launched the Lubombo Transfrontier Conservation Area (TFCA) initiative in 2000. This aims to turn subsistence farmers into ecotourism professionals, tackling poverty and biodiversity loss by improving infrastructure, training local people and expanding the conservation area network. Our previous Darwin-funded project (Ref 12006) developed the Maputaland conservation planning system to inform this work, helping establish 30,000 ha of state conservation areas and guide a US$6.5 million conservation investment strategy.

The TFCA has achieved many of its ecotourism goals in South Africa, creating thousands of jobs and new community conservation areas, especially through increases in independent, self-guided tourism. Success in Eswatini and Mozambique depends on extending these benefits but: (a) self-guided ecotourists are largely unaware of options outside South Africa; (b) most of their state and community conservation areas lack capacity to promote themselves, and; (c) the current Maputaland conservation planning system does not include new community proposals for ecotourism on their land. Without tackling this, the recently completed tarred roads and Maputo–Katembe Bridge will increase the spread of agriculture and habitat loss, rather than boost visitor numbers and encourage communities to set aside important areas for biodiversity and ecotourism. In response, this projects aims to:

1. Expand the Izele online conservation social network (www.izele.org), which was launched in South Africa in August 2017 as the first online social network for conservation, so that it includes Eswatini and Mozambique, building capacity so their conservation areas and ecotourism enterprises can share information and expertise.

2. Empower practitioners to promote their conservation area- and community-based ecotourism enterprises through Izele, creating growth in wages and job opportunities.

3. Identify priority areas for biodiversity and community-based ecotourism to inform ongoing transfrontier conservation initiatives, updating the Maputaland conservation planning system and building capacity so it becomes an important component of decision making.

The project is based in the Maputaland Centre of Endemism in Southern Africa. Most of the work focuses on the Eswatini and Mozambican sections, although the Maputaland conservation planning system and zoning plan will also include the South African section.

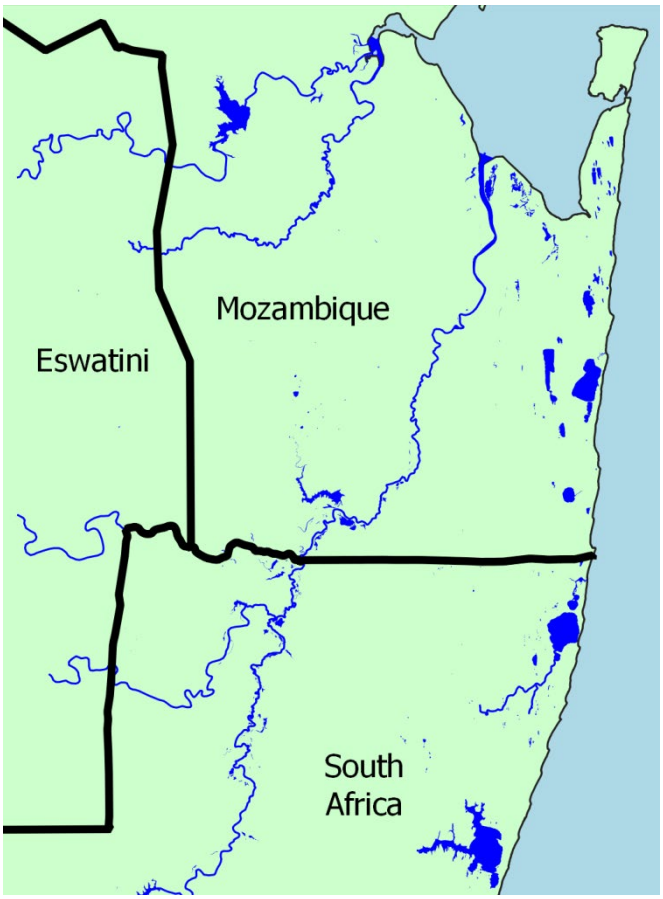

Figure 1: Maps showing the project location in Eswatini, Mozambique and South Africa.

2. Project partnerships

Background

The project is a partnership between eight main organisations. The Durrell Institute of Conservation and Ecology (DICE) at the University of Kent is the lead partner, and responsible for leading on project management and capacity building. Izele CIC is the other UK-based organisation and is responsible for maintaining the Izele online social network and building its functionality. The remaining six organisations have distinct responsibilities, three in both of the project range states. Our NGO partners are All Out Africa (Eswatini) and KUWUKA JDA (Mozambique) and their role is to sustain the development of the Izele networks in Maputaland, encouraging and providing training and technical support so the different conservation areas, groups and businesses can create pages. This also includes collecting data on where local communities are interested in conserving land to support ecotourism, and collecting monitoring data on ecotourism to measure the impact of adding ecotourism ventures to Izele. Our academic partners are the University of Eswatini (UNESWA) and Universidade Eduardo Mondlane (UEM) in Mozambique, and their role is to lead the spatial analysis component of the

project to update the Maputaland conservation planning system and produce the land-use zoning plans. Our government partners are the Eswatini National Trust Commission (ENTC) and Administração Nacional das Áreas de Conservação (ANAC) in Mozambique. They are responsible for helping create Izele page for the state protected areas and providing input and advice into developing the Maputaland conservation planning system and producing the land-use zoning plans.

The partnership developed from one that formed as part of a previous Darwin Initiative project that involved the two government and three academic partners. They recognised the need to update the Maputaland planning system that was developed in the previous project, and to include relevant data on community-based conservation areas and ecotourism. The Eswatini and Mozambique partners suggested that the two NGO partners would be best suited to work on a joint project, and supported the inclusion of Izele CIC as recommended by DICE. All the partners developed the project proposal and are involved in planning, monitoring and evaluation and decision making.

Achievements and challenges in Year 1

The project partnerships in Year 1 have been generally successful. DICE, Izele CIC, All Out Africa and KUWUKA JDA worked together to develop the Izele online social network in Maputaland and support stakeholders to create pages. This was supported by ENTC and ANAC, although ANAC sometimes lacked the capacity to be able to attend meetings and workshops. We plan to address this in Year 2 by using our resources to hold meetings and events in Mozambique that will be led by ANAC and will publicly explain their key role in our project, and their support for our activities, outputs and outcome.

UNESWA and UEM also supported the development of the Izele social network in Maputaland and began the process of updating the Maputaland conservation planning system, together with DICE. There was one setback in that Dr Bruno Nhancale, the person from UEM who we had planned to lead this part of the project, moved to a post at the World Bank. While he continues to support the project in his new position, we had to find a new person from UEM to lead on the conservation planning component. Fortunately, Dr Cornelio Ntumi, the Head of the Department of Biological Sciences at UEM, stepped into this role. Dr Ntumi was also a partner on the original Maputaland project, partnered with DICE on subsequent conservation planning projects and has led a number of spatial conservation planning projects in the region. This means that we continue to have strong partnerships underpinning the conservation planning component of the project, although there were delays in signing the contract with UEM.

At the same time, Hermenegildo Matimele, Curator of Mozambique's National Herbarium and Co-chair of the IUCN-SSC Southern African Plant Specialist Group, began his PhD at DICE on Important Plant Areas and spatial conservation prioritisation in Mozambique. We decided that part of his thesis should focus on Maputaland and he has agreed to support much of the day-to-day planning of the conservation planning component of the project. Hermenegildo's PhD is funded by the Royal Botanic Gardens, Kew and co-supervised by Dr Iain Darbyshire. This means we are pleased to add Kew as one of our project partners.

We plan to hold a project meeting in May 2019 to discuss the next steps of the project and revisit the planned outputs and outcomes. This will further cement these partnerships and ensure that future activities are informed by our experiences in Year 1.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1 activities: increased promotion of conservation areas using Izele

We produced a list of conservation areas and groups in Maputaland and used it to identify organisations that we encouraged to create pages in Izele. Izele CIC staff then trained All Out Africa and KUWUKA JDA to create pages in Izele, starting with creating their own pages. We then ran two workshops for conservation practitioners in Eswatini (at the Simunye Country Lodge on November 7th 2018) and Mozambique (at the Matutuíne Local Government office in

Bela Vista on November 2nd 2018), where we introduced the project and Izele, trained people to create pages for their organisations and sought feedback on how to improve the Izele website (Annex 4A). We then followed this up with 1-to-1 training in Eswatini and Mozambique to work with stakeholders to create new Izele pages and improve existing ones. Finally, we promoted Izele and the Darwin project using Facebook and Twitter to encourage people to sign up and publicise our work.

Based on stakeholder feedback, we updated Izele so that the pages were more functional and appealing to visitors (Annex 4A). In particular, we revamped the page creation system having watched people during the two workshops, so that it is now much easier to create new pages (Figure 2A). We also updated the species tab to make it more visually appealing (Figure 2B).

A) B)

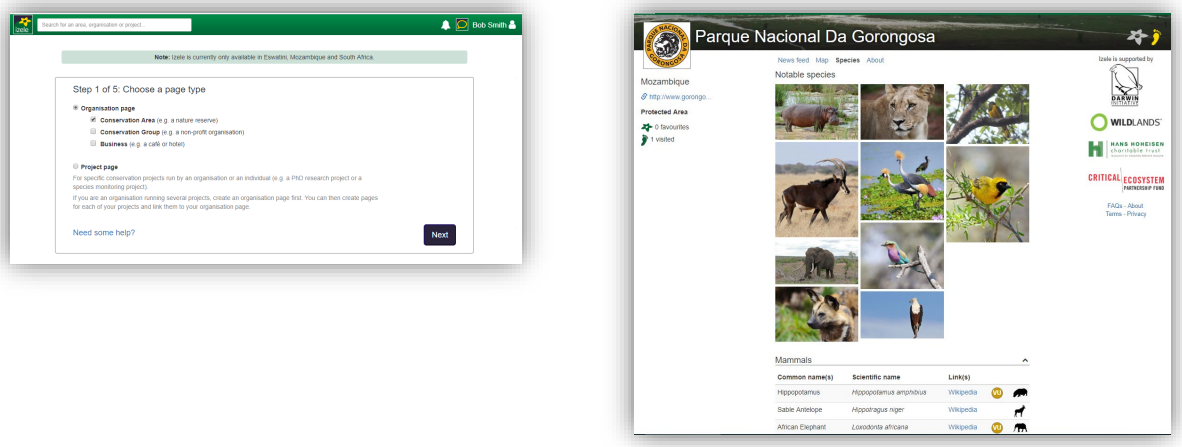

Figure 2: Izele screenshot showing (A) revised page creation functionality and (B) updated Species Tab.

Most of these activities were carried out in the manner and time planned, although the workshops happened in the second half of the year, instead of the first. There have been delays in the number of conservation areas creating pages though, especially in Mozambique, and we have plans to speed up this process in Year 2. Some of the conservation area and organisation pages also need improving, as they lack images and contain little information. This problem has been subsequently reduced through 1-to-1 guidance from All Out Africa staff, so we plan to continue this in Year 2. We have been less successful at encouraging people to make comments and share information on forum pages, partly because the network of users has not reached critical mass, and will put more effort into encouraging this in Year 2.

Output 2 activities: increased promotion of ecotourism using Izele

We produced and updated a database of ecotourism ventures in Eswatini and Mozambique, using this to invite people to attend the two workshops we held in November where they created new Izele pages. This was followed by 1-to-1 guidance from All Out Africa and KUWUKA JDA staff to add new pages and improve existing ones. Through this we collected a wealth of information on how to improve Izele and add better functionality for ecotourism, which we captured and began to implement (Annex 4A). We also contacted a number of these ventures to collect data on their number of staff and revenue as monitoring data, which we can use to measure the impact of promoting their businesses on Izele.

Most of these activities were carried out in the manner and time planned, although we decided to include people working for ecotourism ventures in our first two workshops, partly for logistical reasons and partly because most conservation areas also supported ecotourism. We also received a wealth of feedback on how to improve Izele from stakeholders and it has taken time to implement these changes, so we decided to delay the launch of the ecotourism functionality workshop to early in Year 2. The first of these workshops will take place in Ponta do Ouro, Mozambique in May 2019, and that will also help increase the number of Mozambique ecotourism pages.

Output 3 activities: producing the Maputaland conservation land-use zoning system

We began to collect and update the relevant data needed for the Maputaland conservation land-use zoning system, including new data on the distributions of a number of endemic and near-endemic plant species. Collecting the plant data involved extracting all the information on each species from herbaria databases, which included the Royal Botanic Gardens - Kew Herbarium in the UK, the National Herbarium of Mozambique and Eduardo Mondlane University Herbarium in Mozambique, and the Pretoria National Herbarium, Buffelskloof Nature Reserve Herbarium, and KwaZulu-Natal Herbarium in South Africa. This resulted in aggregating more than 900 records for the 55 species (Annex 4C). This was followed by an exercise of checking taxonomic accuracy and updating the species names where needed. In addition, geographic coordinates were assigned for records where this information was missing, based on the description notes on the locality extracted from specimens' label. Additional data were sourced from the Flora of Eswatini's database but this is still in the process of being checked.

Most of the activities relating to Output 3 take place in Year 2 and Year 3, but the activities planned for Year 1 were delayed by change in staff at UEM. This took a while to resolve but we now have a very strong team to take things forward.

Output 4 activities: building capacity in conservation social networking and planning

We trained project staff and stakeholders to create Izele pages during the workshops in November, through 1-to1 training and email support. At all times we needed to make sure we gave enough additional training for people to create and maintain pages, while also ensuring that the pages were intuitive enough for people to work out how to use them themselves. This meant that we decided not to produce detailed tutorials but instead watched people use the website and then asked for their feedback. We then updated the Izele pages accordingly, adding in-page help to make it more user-friendly, and translated them into Portuguese. We also produced an online help system (https://izele.org/help/) that provides guidance for people who need step-by-step guidance to achieve particular tasks.

Our original plan was to gather feedback on this training as part of the workshops but realised that this was better done after the workshops, when people had added further information to their pages. Unfortunately, this data collection process has been delayed because of slow uptake in Mozambique, which we will resolve in May/June of Year 2. Thus, we will only be able to measure the effectiveness of this training in Year 2.

Bob Smith from DICE updated the CLUZ plugin so that it could be used in the latest version of QGIS (QGIS 3), as this would be important for achieving activities related to Output 3. He also published a short research article on CLUZ (Smith et al, 2019, *Research Ideas and Outcomes* **5**, e33510).

DICE, UNESWA and ENTC began the process of identifying a suitable person to undertake the MSc in Conservation Biology, beginning in September 2019.

In September 2019 Hermenegildo Matimele began his PhD in Biodiversity and Management on a fully funded scholarship from Kew Gardens. Part of his project will involve co-leading the spatial conservation zoning component of our project and in Year 1 of the project he learnt about the background to systematic conservation planning and using the Marxan conservation planning software.

Most of the other activities relating to Output 4 take place in Year 2 and Year 3, but Bob Smith attended a workshop at the University of Queensland in Australia from March 25th to 29th to meet with other people involved in developing training modules for the Marxan and Marxan with Zones spatial conservation prioritisation software. They agreed to develop shared training materials and Bob Smith plans to update CLUZ so that it could link to Marxan with Zones, given that this software will be used later in the project and the current software interfaces are becoming obsolete.

Most of these activities were carried out in the manner and time planned, apart from delays in translating the Izele help section into Portuguese. This was because we updated much of Izele's functionality after user feedback, so only had time to translate the in-page text to Portuguese. This has not been too problematic, as the website is designed so that people do

not need to go through tutorials to make pages, but we will translate all the relevant content in Year 2.

3.2 Progress towards project Outputs

Output 1: increased promotion of conservation areas using Izele

We successfully ran two workshops, one in Eswatini and one in Mozambique, to promote the Izele online social network and encourage conservation practitioners and ecotourism businesses to create pages on Izele. We followed this up with 1-to-1 discussions to encourage additional people to sign up and create pages. There were 37 people (including 16 women) in Eswatini and 41 in Mozambique (including 15 women) at the two workshops to create Izele pages (Annex 4A) and an additional 24 people (including 10 women), 16 in Eswatini and 8 in Mozambique at the 1-to1 sessions. This is a total of 102 people but only 41 women, falling short of our target to include 50 women. We will continue to run workshops and individual training sessions in Year 2 to promote Izele, increase the number of people receiving training with a particular focus on participation by women, and encourage groups to sign up.

Figure 3: Photos from the two training workshops in Mozambique and Eswatini.

Through this promotion and training, a total of 12 conservation areas in Maputaland produced Izele pages, but only in Eswatini (Annex 4B). In addition, 8 protected areas outside of Maputaland (1 in Mozambique, 7 in Eswatini) and 2 Eswatini conservation agencies created pages. This meant we fell short of our target of producing 16 Maputaland conservation area pages by Year 1, mostly because none of the stakeholders in Mozambique produced pages. We are confident that we will meet our target that Izele will contain pages for at least 16 Maputaland conservation areas by the end of Year 2. Of the 12 Maputaland conservation area pages, 7 have included data showing their conservation area boundary or centre point and 7 have included data on their bird and mammal species. In Year 2 we will work with page managers who have not included that information on their pages to add these details.

Izele CIC added, removed or changed 285,000 lines of code to the Izele code base to add the new page, species and ecotourism functionality to the Izele website.

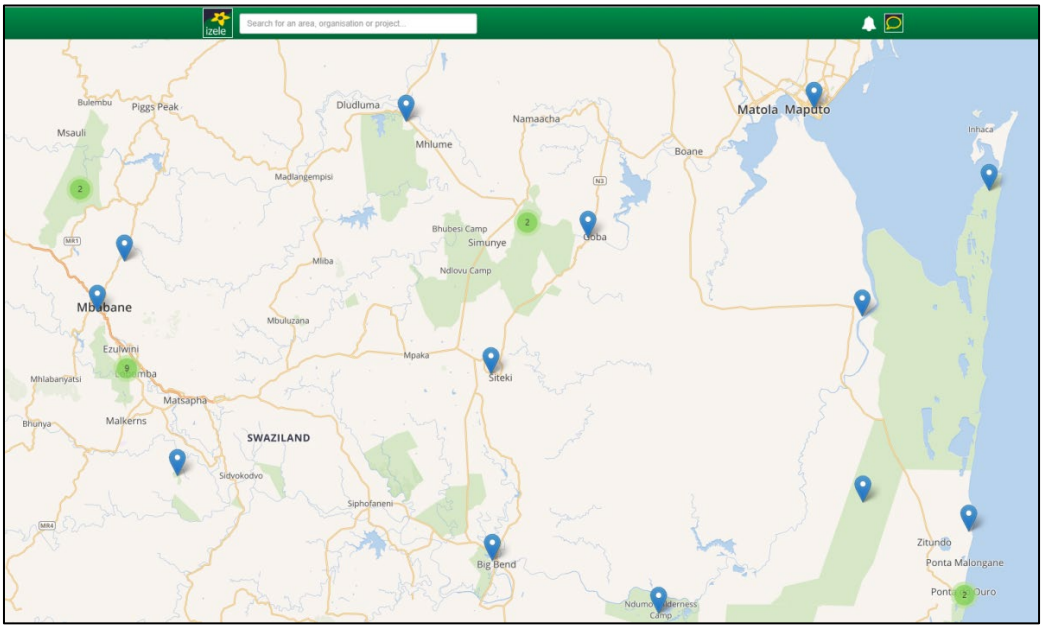

Figure 4: Map from Izele showing the location of newly added pages for conservation areas and ecotourism ventures in Eswatini and Mozambique. This map includes pages from central and western Eswatini found outside of Maputaland. An additional 17 conservation areas and ecotourism ventures created pages but did not add spatial data to show their location.

20 users from Maputaland posted comments on the Izele website during Year 1, as shown by the Izele website monitoring system, but most of these were single comments produced by people when creating their own pages. This means that, while we are on course to meet our target of 100 users by the end of Year 2, this indicator needs to be revisited as it may not be the best way to measure interactions with the website. We will discuss this at our project meeting in May 2019.

Output 2: increased promotion of ecotourism using Izele

Instead of running one workshop on ecotourism, we combined this with the two conservation area workshops that were held in November 2018. This was because many of the ecotourism professionals were also based in conservation areas and because this allowed us to have one workshop in English and another in Portuguese. The workshop was attended by 25 ecotourism practitioners (13 from Eswatini and 12 from Mozambique) and representatives from 6 communities who provided advice and guidance on adding ecotourism functionality to Izele. Thus we met our target of 20 ecotourism practitioners attending (although some of them were the same people included in the Output 1 count).

We received a wealth of feedback at these workshops to guide the ecotourism functionality. Part of this feedback was based on the difficulty of creating new pages, both for ecotourism ventures and conservation areas, and so we focused on addressing these issues first (as illustrated in Figure 2A). We then added new functionality to let ecotourism businesses display a wider range of contact details and social media links. This, together with the added page creation and species functionality, involved adding, removing or changing 285,000 lines of code to the Izele code base. The next stage is to produce a specific “Amenities” tab for ecotourism pages and this is currently being developed by Izele CIC (a draft version is shown in Figure 5).

The rest of the Output 3 components will take place in Years 2 and 3 and we are confident that we will achieve them by project close.

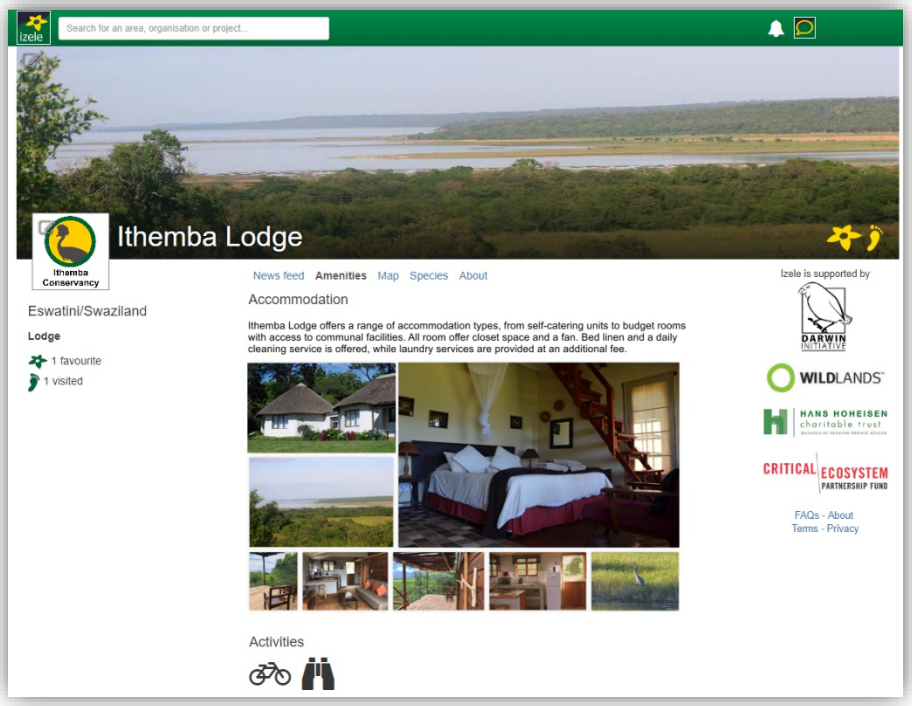

Figure 5: Screenshot of demonstration version of Amenities tab that will let ecotourism ventures add more details about their businesses to Izele.

Output 3: producing the Maputaland conservation land-use zoning system

Most of the Output 3 components will take place in Years 2 and 3 and we are confident that we will achieve them by project close, despite delays caused by needing to work with new people at UEM because of staff turnover. We do now have updated data on the different conservation areas in Maputaland and distribution data on 55 endemic and near-endemic plant species (Annex 4C).

Output 4: building capacity in conservation social networking and planning

We built the capacity of conservation and ecotourism stakeholders in Maputaland so that they could produce their own Izele pages, as evidenced by this group producing 74 pages in Year 1 (Annex 4B). Based on user feedback, we made the pages more user-friendly, partly by adding in-page help sections, and translated them into Portuguese. We also produced the help section on the Izele website, which consists of 18 pages and has been viewed 155 times during Year 1 (Annex 4B). This help section has needed constant updating to reflect the changes we have made to Izele based on user feedback, so we have delayed producing the Portuguese version and YouTube videos until Year 2 when the content is more fixed. The remaining Output 4 components related to will take place in Years 2 and 3 and we are confident that we will achieve then by project close.

The CLUZ plugin for QGIS3 produced as an additional output of this project has been downloaded by 973 people (https://plugins.qgis.org/plugins/cluz/), acting as a user-friendly interface for the Marxan conservation planning software.

Hermenegildo Matimele produced a poster summarising his PhD research aims, which include supporting the spatial conservation zoning component of our Darwin Project, and presented it at the Student Conference on Conservation Science in Cambridge in March 2019 (Figure 6)

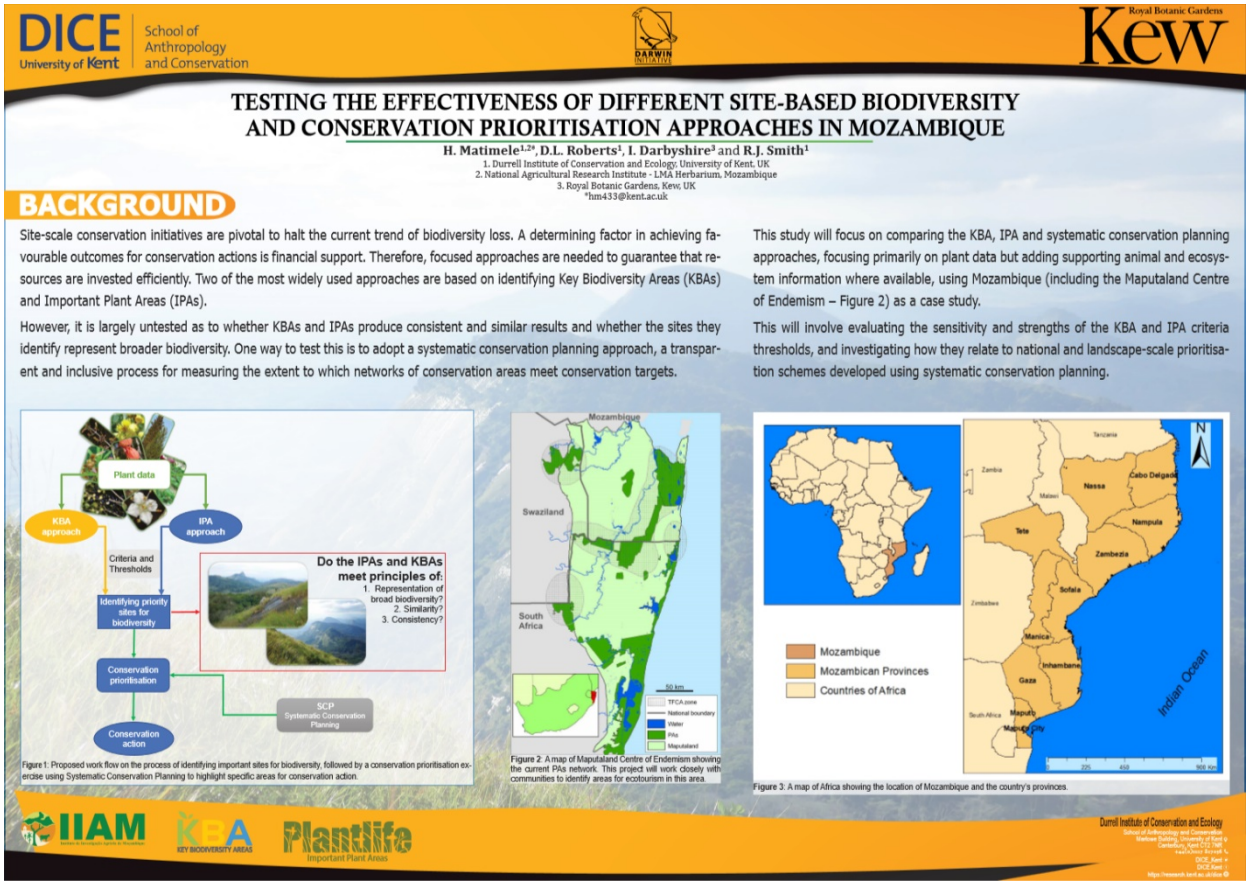

Figure 6: Poster presented by Hermenegildo Matimele at 2019 Student Conference on Conservation Science in Cambridge.

3.3 Progress towards the project Outcome

Our project outcomes is to reduce poverty and increase conservation capacity in Maputaland through building online social networks to strengthen and promote conservation areas and ecotourism, and stakeholder-led planning to identify biodiversity-rich community-based ecotourism zones.

We have progressed towards this outcome in Year 1, mostly by building capacity to expand the Izele network so that Maputaland's conservation areas and ecotourism enterprises can raise their profile, share information and in future increase their number of visitors/customers. We are confident that we will meet our target that 16 conservation areas will produce pages on Izele, although this will take place in Year 2 and not Year 1 as planned (currently 12 of these conservation areas have Izele pages). We also met our target for training local conservationists to use Izele, training 102 people so far), but we did not meet our target of training 50 women and that will be addressed through further workshops in Year 2. We are confident that we will help boost ecotourism in Maputaland by increasing publicity for the ecotourism ventures there, especially community-based ecotourism, although we will discuss the indicators for this at our project meeting in May, as it has been more difficult to collect the data on visitor and staff numbers than anticipated (we currently have data from 10 ecotourism enterprises in Eswatini). The activities to build conservation capacity and identify conservation and ecotourism zones will take place during Year 2.

We think it is highly likely that we will achieve the conservation area capacity building and ecotourism zoning components of the project by the end of funding. We are also very confident that our project will publicise and build capacity in the ecotourism sector in Maputaland, especially for community-based enterprises. This will then definitely help achieve our poverty-reduction outcomes but measuring the extent of this within the project timeline may be more difficult, so we plan to revisit this during our project meeting in May 2019.

3.4 Monitoring of assumptions

We have listed below all our Outcomes assumptions, together with the Output assumptions that are not repeated from the Outcomes assumptions.

- *Outcomes Assumption 1: Relevant governments remain stable and continue to view transfrontier biodiversity conservation as a priority and provide the necessary permissions to undertake project activities.* Comments: This still holds true.

- *Outcomes Assumption 2: Continued support from conservation areas, conservation groups and ecotourism enterprises.* Comments: This still holds true, although receiving official approval has taken longer than expected in some cases.

- *Outcomes Assumption 3: Project partners continue to have good Internet access on their computers and smart phones (as confirmed by the project partners).*Comments: This still holds true.

- *Outcomes Assumption 4: Smart phone coverage and access continues to be excellent along tourist routes and in towns, and good along minor roads and in villages (as confirmed by the project partners).* Comments: This still holds true, although some of our stakeholders have very old smartphones and this makes updating their Izele web pages more difficult than anticipated.

- *Outcomes Assumption 5: Self-guided tourism continues to be important and these tourists continue to have good Internet access at home when making plans, and while visiting Maputaland's tourist routes and towns.* Comments: This still holds true.

- *Output Assumption: Trained staff members continue to work for the relevant conservation organisations.* Comments: This still holds true.

- *Output Assumption: Project partners continue to support the conservation planning process in Maputaland.* Comments: This still holds true.

- *Output Assumption: Project partners continue to support their staff receiving training.* Comments: This still holds true.

In response to the issues with Outcomes Assumption 3 we have developed a revised approach that involves working 1-to-1 with conservation organisations that are more remote and/or have lower technical capacity to create Izele pages. This has been successfully implemented in Eswatini and will be rolled out in Mozambique in Year 2.

3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

Our project's planned impact is based on reducing Maputaland's poverty levels and increasing the sustainable management of biodiversity through effective transnational conservation, supported by global online conservation social networks, increased ecotourism and targeted expansion of community-based conservation areas (CAs).

Our project will have poverty alleviation impacts by increasing the number of people earning income through ecotourism, especially linked to community-managed conservation areas. This is because Maputaland has high levels of poverty and ecotourism is one of the few industries that can create jobs that do not have negative impacts on local ecosystem services, in particular water provision, medicinal plants and cultural services. We will achieve this by updating and expanding the Izele online social network to include ecotourism enterprises, especially community-based activities, thus helping increasing visitor numbers by giving these groups a higher online presence and improving their marketing effectiveness. 29 of these

ecotourism ventures have already created pages and in Year 1 we have also started adding new functionality to Izele so that it is more suitable for ecotourism organisations.

Our project will have biodiversity conservation impact by helping to conserve important ecosystems and species in Maputaland, which is part of the Maputaland-Pondoland-Albany biodiversity hotspot and a Centre of Endemism. We will achieve this in two ways. First, we will help Maputaland's conservation areas create pages on the Izele online social network, so that they can better communicate and share information with their neighbours, stakeholders and visitors. We have already begun to achieve this impact, with 12 Maputaland conservation areas creating Izele pages in Year 1. Second, we will update the Maputaland conservation planning system and work with stakeholders to identify new conservation areas that can be used for ecotourism whilst also meet targets for important biodiversity. The conservation area plans we produced as part of our previous Darwin project was used to inform protected area projects and conservation investment funds in Maputaland, and we are confident that our new project outputs will be similarly influential in guiding conservation action.

4. Contribution to the Global Goals for Sustainable Development (SDGs)

Our project is creating an online social network to increase community-based ecotourism that will help eradicate extreme poverty (SDG1) and create jobs and encourage the formalisation and growth of micro-, small- and medium-sized enterprises (SDG 8). It is also producing land-use zoning plans that will help protect and restore water-related ecosystem (SDG 6), conserve terrestrial and inland freshwater ecosystems and their services (SDG 15). Both the online social network and zoning plans will support participatory and representative decision-making at all levels and public access to information (SDG 16) and promote targeted capacity-building and the diffusion of environmentally sound technologies (SDG 17).

In Year 1 of the project we have launched the Izele social network in Maputaland so that 50 organisations in Eswatini, 17 organisations in Mozambique and 7 transfrontier/international organisations have created a page. Of these organisations, 36 are sharing location data, 6 are sharing documents and 26 are sharing data on species distributions. These new pages included 29 for eco-tourism based organisations (19 in Eswatini and 10 in Mozambique). We began to produce the land-use zoning plans by beginning to collect the available landcover, land-use and biodiversity data, with new distribution data on 55 plant species.

5. Project support to the Conventions, Treaties or Agreements

Our project is designed to help the governments of Eswatini, Mozambique and South Africa meet their obligations under the Convention on Biological Diversity. The Izele conservation social network will make people more aware of the values of biodiversity and the steps they can take to conserve it (Aichi Target 1). The Maputaland conservation planning system will ensure biodiversity values have been integrated into local development and poverty reduction strategies and processes (Aichi Target 1), help identify the best places for establishing new conservation areas (Aichi Target 11), help conserve threatened species (Aichi Target 12), and safeguard important ecosystem services (Aichi Target 14).

In Year 1 of this project our main outputs have been launching the Izele social network and encouraging conservation areas to create pages. We now have 19 conservation areas in Eswatini and 1 conservation area in Mozambique with pages in Izele (including those outside Maputaland).

We also began to collect biodiversity data to inform the conservation zoning plans, including new data on 55 plant species that are endemic or near-endemic to Maputaland (Annex 4C).

Project partners include the SBSTTA National Focal Point and the Programme of Work on Protected Areas National Focal Point for Eswatini. We have yet to contact the Primary National Focal Points to the Convention on Biological Diversity in the three countries.

6. Project support to poverty alleviation

Our project aims to have direct impacts on poverty alleviation by increasing the number of customers for ecotourism enterprises in Maputaland, especially community-based ecotourism, and thus boost wages and increase employment. We will do this by adding ecotourism functionality to the Izele online social network and so let these businesses show their locations on the map, share their contact information and give details of their amenities and biodiversity. There will also be indirect benefits by identifying priority areas for meeting conservation targets that are also suitable for ecotourism, thus helping people to conserve areas that will maintain a wealth of ecosystem services that many people on Maputaland rely on. In Year 1 we met with people from the ecotourism sector who gave us advice on how best to add ecotourism functionality to Izele, and we also trained training and support so that 29 organisations created pages on Izele.

7. Project support to gender equality issues

We have worked to ensure that participants in our workshops and training included 50% women, although we fell short of our target and only achieved 41%. Therefore, we will work harder in Year 2 and Year 3 to achieve parity. We are in the process of selecting someone from Eswatini to undertake the MSc in Conservation Biology at DICE and the current leading candidate is a woman, which would help reduce the gender bias of the conservation planning team. A current DICE MSc student who is undertaking her research project on community-based ecotourism in Maputaland should provide us with important information on the role of women, helping inform our future work. It is by building the capacity of these community-based ecotourism enterprises that we aim to reduce gender equality, by supporting the women who work in this sector and increasing opportunities to support their livelihoods.

8. Monitoring and evaluation

We established monthly calls between the project partners, normally on Skype but also in person during the visit of DICE and Izele CIC to Eswatini and Mozambique in November 2018. This was a largely successful approach, although it was not usually possible to find a time when all project partners were available. During these meetings we discussed progress, set action points and talked about the different issues that arose during the previous month.

Much of the monitoring and evaluation of the project is relatively straightforward, as Izele provides a wealth of quantitative data on the number of pages and visitors, while the Maputaland conservation planning system makes it easy to quantify the data collected to inform the conservation zoning exercise. The most difficult part of the project has been collecting the quantitative data on ecotourism employment and income. Ten groups in Eswatini have been willing to provide the data they collect, although this is sometimes patchy, and we are waiting to get final approval from government departments in Mozambique before we can collect these data in that section of Maputaland. This will be a key topic for discussion in the 1 day partner meeting in May 2019 during Bob Smith's visit, when will we discuss options for adapting and improving our M&E approach for measuring our poverty reduction impacts.

We will also discuss our plans to improve the qualitative aspects of our M&E programme, as we need to improve our documentation of comments from stakeholders on the Izele website and its impacts. In particular, we will design and implement a new questionnaire that measures the effectiveness of training people to create pages in Izele, as this was put back by the delay in Mozambique conservation areas creating pages. This will help us demonstrate that the project outputs and activities have contributed to the project Outcome.

9. Lessons learnt

We are generally satisfied with the progress of our project. The project partners have worked well together and we are pleased with how Izele has grown in Maputaland and the enthusiasm there is for developing this social network and producing the updated conservation planning system and ecotourism zoning maps.

One initial lesson learnt was over how long it took to formalise the agreements between the project partners, as the delays were longer than expected and impacted by changes in staff at UEM. Fortunately, we were able to build on the existing links between DICE, UEM and UNESWA and so the project will be unaffected in the long-term, although the spatial conservation planning component will be produced a little later in Year 2 then initially planned.

Our monthly meetings have worked well for discussing issues and monitoring progress but it has been a constant battle to find times when everyone is available, and then to make the technology work so everyone is able to talk. One response has been to supplement these meetings with ones for smaller groups of partners, which make it easier.

Another less learnt is that we need to be more careful about making messages clearer, which have mostly arisen through the Project Leader not speaking Portuguese. This has caused problems when explaining some of the technical details relating to budgeting to the Mozambican partners, which were compounded by relying on Skype calls and emails. In future, we have recognised that more care is needed when explaining aspects of the project and we are fortunate that Hermenegildo Matimele has joined the project, as we now have a Mozambican national based at DICE who is able to share information more clearly.

We have also been limited by the amount of time that DICE and Izele CIC staff members were able to spend in Maputaland during Year 1 because of logistical reasons. This made it difficult to meet all the project partners in person and to meet with some of the key stakeholders. There are a large number of related ongoing conservation projects in Maputaland, especially in the Mozambique section, and at present we have not been able to build partnerships with these other projects, despite willingness on both sides. We will be able to address these limitations in Year 2, partly by the Project Leader spending more time in Maputaland and partly by all the other project members focusing on building these links. This will be made easier as the Izele network continues to expand and the website continues to add functionality, as this will make the benefits of joining Izele even clearer to stakeholders and potential partners.

10. Actions taken in response to previous reviews (if applicable)

Not applicable as this is the first annual report.

11. Other comments on progress not covered elsewhere

We have not changed the methods or exit strategy but will discuss this at our meeting in May. We do not think the project faces any particular risks, other than those outlined in the logframe.

12. Sustainability and legacy

The project has a high profile in the conservation sector in Eswatini, partly because it builds on an existing Darwin-funded project and partly because this sector is relatively small and well-connected. Raising the profile in Mozambique has been more challenging because the conservation sector is more dispersed and more dependent on a few key government players. Having said that, all of the major conservation organisations in Mozambique are aware and supportive of the project, and we look forward to translating that into greater buy-in to Izele and the project in Year 2. We have also worked to promote the project in the ecotourism sector, both by working directly with ecotourism entrepreneurs and meeting with representatives of tourism groups in both countries.

Evidence of increasing capacity comes from the number of people who have been able to create pages on Izele and the number of times people have downloaded the CLUZ plugin.

In terms of our open access plan, anyone in Eswatini, Mozambique and South Africa can create their own content on the Izele online social network. Similarly, the CLUZ spatial conservation prioritisation plugin for QGIS is open source, with the code available on GitHub, and the publication describing CLUZ is open access and available free of charge to all.

Our planned exit strategy is still valid, although we will discuss this in more detail at our project meeting in May 2019. Our legacy is based on building capacity and producing products that are valued by stakeholders. Thus we expect that conservation areas and ecotourism enterprises will maintain their Izele pages and that Maputaland's decision makers and conservation scientists will continue to use and update the conservation planning system to produce priority areas maps for biodiversity and ecotourism. In addition, this project will ensure that Izele continues to grow and becomes a global conservation online social network, earning revenue through advertising to ensure it remains a free resource for conservationists and the public.

13. Darwin identity

We have publicised the Darwin Initiative in the following ways:

1) The Darwin Initiative logo is featured prominently as a supporter on the Izele website, both on the homepage and on every page created by a conservation area, organisation or project (Figure 7). This logo links to the Darwin Initiative page on Izele, which shares Darwin Initiative tweets and also links back to the main Darwin Initiative website. Google Analytics shows that 1,400 different users visited pages 5,326 times on the website during the first year of the project and so would have seen these logos.

2) The Darwin Initiative logo is featured prominently on dialog boxes in the CLUZ plugin for QGIS (Figure 8), which has been downloaded 973 times.

3) The Darwin Initiative was described and thanked during the two workshops run in November 2018 in Eswatini and Mozambique, where participants learnt about our project and produced Izele pages for their conservation area and organisation.

4) The Darwin Initiative has been mentioned in tweets sent by Bob Smith and DICE.

5) The Darwin Initiative has been mentioned as the funder supporting Izele in the monthly newsletter that is sent to all Izele page managers and posted on Facebook and Twitter.

6) The Darwin Initiative was listed as the funder of the CLUZ plugin in the article published in the journal *Research Innovation and Outcomes*.

7) The Darwin Initiative logo was listed as the funder on the poster produced by Hermenegildo Matimele for the Student Conference in Conservation Science at the University of Cambridge in March 2019.

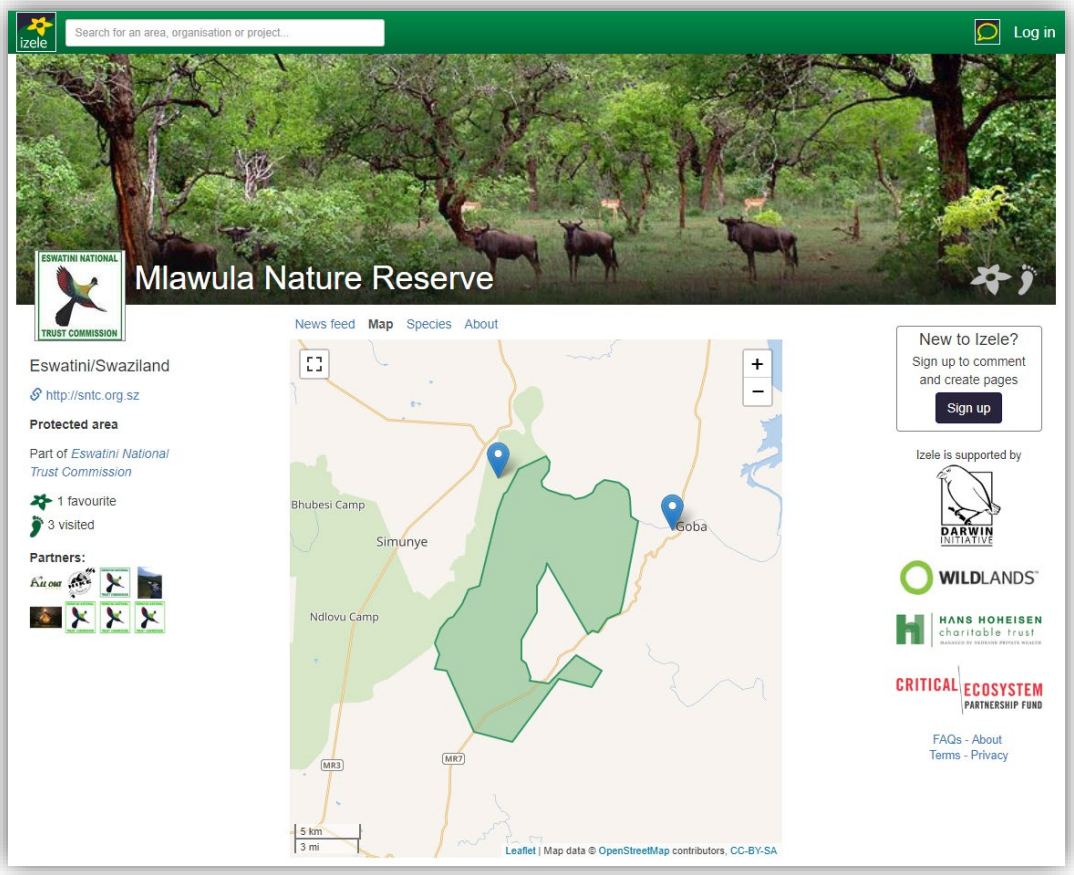

Figure 7. Screenshots showing an Izele page with the Darwin Initiative logo.

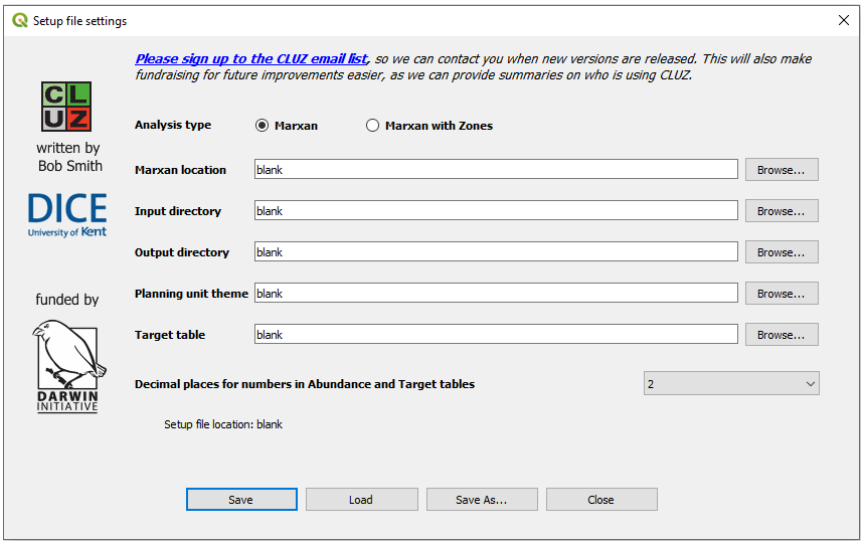

Figure 8. Screenshots showing the CLUZ dialog box showing Darwin Initiative logo.

All of the work we are undertaking in Eswatini and Mozambique is funded through the Darwin Initiative project and so it has been clear to our partners and stakeholders in these countries that this makes up a distinct project with a clear identity. There is a high level of awareness about the Darwin Initiative in the conservation sector in Eswatini and a medium level of awareness in the conservation sector in Mozambique, partly through our previous Darwin-funded project (Ref 12006).

14. Project expenditure

Please expand and complete Table 1. If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

Table 1: Project expenditure during the reporting period (1 April 2018 – 31 March 2019)

Project spend (indicative) since last annual report	**2018/19 Grant (£)**	**2018/19 Total Darwin Costs (£)**	**Variance %**	**Comments (please explain significant variances)**
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Impact Maputaland's poverty levels are reduced and biodiversity sustainably managed through effective transnational conservation, supported by global online conservation social networks, increased ecotourism and targeted expansion of community-based conservation areas (CAs).		In Year 1 we created and expanded the Izele online conservation social network in Eswatini and Mozambique, including some ecotourism pages, and began collecting the data needed to inform the expansion of the community-based conservation areas.	[redacted]
Outcome Reduced poverty and increased conservation capacity in Maputaland through building online social networks to strengthen and promote conservation areas and ecotourism, and stakeholder-led planning to identify biodiversity-rich community-based ecotourism zones.	0.1 >80% of the 20 state, private and community conservation areas in the Mozambique and Swaziland sections of Maputaland create pages in the Izele online social network by yr1, using them to share news and information. 0.2 Increased publicity through Izele for ecotourism enterprises leads to growth in wages and/or job opportunities for 150 households through a 5-10% increase in visitor numbers by yr3, compared to baselines. 0.3 Stakeholder-led process uses updated planning system to identify >100,000 ha of priority areas for conservation and community-based ecotourism by yr3, thus guiding ongoing regional conservation action, zoning and investment. 0.4 100 local conservationists (including 50 women) trained to use Izele (yr1); 10 local conservationists (including 5 women) proficient in using Maputaland planning system and software (yr2).	0.1 60% (12) of the 20 conservation areas in Maputaland with Izele pages, but only in Eswatini. **Additional**: 8 protected areas outside of Maputaland (1 in Mozambique, 7 in Eswatini) and 2 Eswatini conservation agencies. 0.2 29 ecotourism organisations have created pages on Izele, 19 in Eswatini and 10 in Mozambique. We have also begun to collect data on 10 ecotourism ventures in Eswatini. 0.3 We began to collect the biodiversity data needed to inform the Maputaland conservation planning system, which will guide ongoing regional conservation action, zoning and investment. 0.4 We trained 37 people (16 women) in Eswatini and 41 in Mozambique (15 women) at two workshops to create Izele pages. We also carried out 1-to-1 training for another 24 people (10 women), 16 in Eswatini and 8 in Mozambique. This is a total of 102 people but only 41 women.	0.1 Continue to expand Maputaland network through 1-to-1 training. Work led by ANAC to increase number of conservation areas in Mozambique. 0.2 Add new ecotourism functionality to Izele and encourage more ecotourism ventures to sign up. Publicise that Izele has become an important source of information for ecotourists, monitor changes in ecotourism numbers by working with ecotourism ventures to collect data. 0.3 Produce the updated distribution maps for the 53 ecosystem types and 55 species in the original planning system and bring together all the conservation area data. 0.4 Continue to train people to create Izele pages and content, including for the new ecotourism functionality.

Output 1. Increased promotion of state, private and community conservation areas, and increased capacity to share news, information and expertise with practitioners, stakeholders and visitors, by expanding the Izele online social network to include the Mozambique and Swaziland sections of Maputaland (yr1, yr2)	1.1 Two workshops (one in Mozambique, one in Swaziland) and site visits with >100 Maputaland conservation practitioners (including 50 women) to train them how to create and use their own Izele page. We will ensure members of the seven communities involved in ecotourism are invited and represented (yr1). 1.2 At least 16 state, private and community CA produce pages on Izele, showing the CA boundary, important species and describing the site (yr1). 1.3 Comments and shared information from at least 100 Izele users on the CA pages and forums (yr2).	1.1 We held two workshops in November 2019 at the District Government of Matutuíne offices in Bela Vista, Mozambique and the Simunye Country Club, Eswatini. These were attended by 78 people, including 28 women (Section 3.2, Annex 4A – separate documents). We trained an additional 24 people, including 8 women in 1-to-1 sessions. Members of all seven communities were invited and five participated. 1.2 Twelve of the 20 conservation areas in Maputaland with Izele pages, but only in Eswatini (Section 3.2, Annex 4B). 1.3 20 users posted comments on the conservation area pages in Year 1 but did not post in forums.	
Activity 1.1. Produce and update a database of conservation areas and groups within Maputaland, which will be used to contact each organisation to encourage them to create pages on Izele and to link to the pages produced by their partners and donors. The data will also be used for monitoring Izele page uptake.		Completed first version, which identified 66 possible conservation areas and organisations.	We will continue to update the list, based on new information.
Activity 1.2. Train the KUWUKA JDA and All Out staff so they can support conservation areas and groups to produce their own Izele pages.		Completed. Staff learnt during the workshops and became proficient by helping other organisations.	We will update these project members about changes to Izele so their knowledge stays up-to-date.
Activity 1.3. Workshop for representatives from all conservation organisations in Maputaland to celebrate the launch of the Izele network in their region, demonstrate how the social network functions, encourage them to create pages and collect their feedback.		Completed (Annex 4A – separate document).	We will continue to encourage groups to create pages in Izele, especially in Mozambique, and to collect feedback.
Activity 1.4. Publicise Izele, encourage the creation of new pages and support page development by contacting groups and social media.		We have publicised Izele through our contact networks and on social media.	We will continue with this action.
Activity 1.5. Create and support Izele forum pages on relevant topics so the different conservation areas and groups share information, advice and documents.		We created forum pages but with little take-up.	We will work to grow the network and then encourage people to use the forums.
Output 2. Increased visitor numbers and tourist revenue for conservation area- and	2.1 One workshop with 20 Maputaland ecotourism practitioners to develop new Izele functionality, using a	2.1 The two workshops we ran in November 2018 included 25 ecotourism practitioners (13 from Eswatini and 12 from Mozambique) and representatives from 6 communities who provided advice and guidance on adding ecotourism	

community-based ecotourism in Maputaland, as well as building future revenue through increased awareness, by adding ecotourism enterprises to the Maputaland online social network in Izele (yr1, yr2, yr3).	participatory approach to guarantee the website is tailored to the needs of enterprise owners (yr1). We will ensure members of the seven community-based ecotourism enterprises (listed below) are invited and represented. 2.2 Ecotourism enterprise page functionality added to Izele (yr1). 2.3 Two training workshops (one in Mozambique, one in Swaziland) with 40 people (50% women) with Maputaland ecotourism practitioners to learn how to create and use Izele ecotourism functionality (yr1). We will ensure members of the seven community-based ecotourism enterprises (listed below) are invited and represented. 2.4 At least 80 Maputaland ecotourism pages added by enterprises (yr2), including >4 enterprises run by the Catuane, Goba and Tsakane communities in Mozambique and the Mambane, Manzinyama, Mhlumeni and Shewula communities in Swaziland (Fig 1). 2.5 At least 80% user satisfaction with the new Izele ecotourism functionality (yr2). 2.6 Comments from 100 Izele users on ecotourism pages (yr2).	functionality to Izele (Section 3.2, Annex 4A – separate documents). 2.2 We added a range of functionality to Izele for ecotourism, including a new page tab to share information on amenities, better options for including contact details and improved species list functionality (Section 3.1 and 3.2). 2.3 The two workshops we ran in November 2018 provided initial training to 25 ecotourism practitioners (including 10 women) so they could create initial pages in Izele (Section 3.2, Annex 4A – separate documents). We decided to run follow-up workshops in Year 2, once we have added the extra functionality suggested by stakeholders, so now plan to meet Indicator 2.3 in Year 2. 2.4 There are 29 ecotourism enterprises with pages in Izele, including one from the Shewula community and one from the Mhlumeni community (Annex 4B). 2.5 This will be assessed in Year 2. 2.6 This will be assessed in Year 2.	
Activity 2.1. Produce and update database of ecotourism enterprises and collect data on the type of ecotourism activities supported and the number of staff employed.		We developed an initial list of ecotourism enterprises and 10 of them have provided us with data on their number of employees.	We will continue to collect these data in Year 2 and identify new enterprises that can provide us with the data.

Activity 2.2. Workshop and site visits with ecotourism enterprises to collect feedback and advice on what type of functionality should be added to the Izele online social network.		We held two workshops in November 2018 and several site visits to collect feedback and advice, which we then documented in Trello (Annex 4A).	We will continue to solicit feedback from users on the ecotourism functionality, beginning with a workshop in Mozambique in May 2019.
Activity 2.3. Produce additional code to create and then refine ecotourism functionality to the Izele online social network.		We improved the page creation, Species Tab functionality and contact details functionality. We developed a mock-up of the Amenities tab functionality.	We will add the Amenities tab and improve the map search functionality.
Activity 2.4. Workshop to celebrate the launch of the Izele ecotourism functionality and encourage ecotourism enterprises to sign up.		We held two workshops in November 2018, with follow-up activities to add and improve ecotourism pages.	We will hold more workshops, beginning with a one in Ponto do Ouro, Mozambique in May 2019
Activity 2.5. Publicise Izele ecotourism functions and support page development through ad hoc site visits, email and telephone support.		Support was provided by Izele CIC, All Out Africa and KUWUKA JDA.	Izele CIC, All Out Africa and KUWUKA JDA will continue to provide support.
Activity 2.6. Work with communities in Mozambique and Swaziland to map their preferred areas for ecotourism activities, as part of creating their Izele ecotourism pages and to inform land-use planning.		We began to work with communities to create Izele pages that included their conservation area locations.	This activity will continue to take place in Year 2, with a greater focus on collecting detailed spatial data.
Activity 2.7. Collect monitoring data on ecotourism business staff numbers and wages, as well as data on customer profiles and how they heard about the business.		We began collecting these data and have information from 10 of them.	We will continue to collect this data, especially in the Mozambique section of Maputaland.
Output 3. 3. Updated Maputaland conservation planning system and new regional zoning plans that identify priority areas for conservation and community-based ecotourism, and are designed to inform land-use planning, national and international conservation investment strategies and the ongoing expansion of Maputaland's state-, private- and community-managed conservation area network (yr1, yr2, yr3).	3.1 Updated conservation planning system with updated biodiversity, natural capital and conservation area GIS data, plus new ecotourism GIS data (yr2). 3.2. Two workshops to bring together regional experts to improve datasets, set targets, and oversee analysis results (yr2). 3.3 Gap analysis to identify important species and ecosystem types that are under-represented in Maputaland's state, privately-owned and community CAs (yr2). 3.4 Zoning and priority area maps	3.1 We began collecting the biodiversity and conservation area data, including new data on 55 plant species (Section 3.2, Annex 4C). 3.2 This will be assessed in Year 2. 3.3 This will be assessed in Year 2. 3.4 This will be assessed in Year 3. 3.5 This will be assessed in Year 3. 3.6 This will be assessed in Year 3. **Additional** publication describing the CLUZ plugin for QGIS published in journal *Research Ideas and Outcomes* (Annex 4D).	

	produced using the CLUZ and Marxan with Zones software (yr3). 3.5 Two dissemination workshops to explain and publicise the priority area maps and zonation plan to stakeholders (yr3). 3.6 One publication in peer-reviewed literature describing the production of the zoning plan (yr3).		
Activity 3.1. Update the GIS data in conservation planning system to reflect changes in landcover, species distributions and conservation area coverage.		We began updating the conservation planning system.	This process will begin in full in Year 2.
Activity 3.2. Produce conservation area gap analysis report by revisiting the previous conservation targets in the Maputaland conservation planning system and then measuring the extent to which the network of conservation areas meets these targets for the different ecosystem types and species.		We were not scheduled to begin these activities in Year 1 but had Skype calls to talk to the relevant experts.	This will take place in Year 2.
Activity 3.3. Workshop to set land-use zoning targets based on different land-use planning scenarios for conservation, agriculture, afforestation, ecotourism and urbanisation.		We were not scheduled to begin these activities in Year 1.	This will take place in Year 2.
Activity 3.4. Conservation land-use zoning prioritisation to identify priority areas for conservation and community-based ecotourism, producing different land-use zoning maps and writing up reports and then submitting for publication in a peer-reviewed open-access journal.		We were not scheduled to begin these activities in Year 1.	This will take place in Year 2 and 3.
Activity 3.5. Presentation of the gap analysis and land-use zoning results at two events, one in Mozambique and one in Swaziland, where project partners, decision makers, donors and high-level government representatives will be invited to learn about the results of the project and celebrate our achievements.		We were not scheduled to begin these activities in Year 1.	This will take place in Year 3.
Output 4. 3. Building capacity so that conservation practitioners in Maputaland can use the Izele online social network and transfrontier conservation planning system, through in-person training and by developing online materials that can also be used by the global conservation community	4.1 **One** new set of training materials on creating conservation area and ecotourism pages in Izele (yr1). 4.2 **One** new set of training materials on gap analysis and conservation planning, plus 2 online tutorial videos on using CLUZ and Marxan (yr2).	4.1 Initial version completed (links in Annex 4B) but will be updated based on upcoming Izele functionality changes and translated into Portuguese. 4.2. This will be assessed in Year 2. **Additional** production of the CLUZ plugin for QGIS v3 completed and available for free download. 4.3. This will be assessed in Year 2. 4.4. This will be assessed in Year 2 and Year 3 (Currently identifying suitable candidate). 4.5. This will be assessed in Year 2 and Year 3.	

(yr1, yr2, yr 3).	4.3 **10** Maputaland conservationists (including 5 women) trained in gap analysis and systematic conservation planning, with at least 80% of people gaining skills and awareness (yr2). 4.4 **One** Swazi national given in-depth training in conservation planning as part of undertaking the DICE MSc in Conservation Biology (yr2, yr3). 4.5 Online Izele materials downloaded by **200** people and online video tutorials watched by **200** people (yr3). 4.6 Online conservation planning materials downloaded by **150** people and online video tutorials watched by **150** people (yr3).	4.6. This will be assessed in Year 2 and Year 3.	
Activity 4.1. Train state, private and community conservation areas, groups and ecotourism enterprises to create and manage their own Izele pages by developing online tutorials, including YouTube videos, all of which will be translated into Portuguese.		We created in-page help sections on each page, which was translated in Portuguese, and a separate help section in Izele.	We will update and translate the Izele help section and create YouTube videos in Year 2.
Activity 4.2. Postgraduate training of a Swaziland national from the government, NGO or academic sector on DICE's MSc in Conservation Biology with their 6 month research project using the Maputaland conservation planning system.		We began the process of choosing a suitable candidate, a process led by UNESWA.	This person will come to DICE in Year 2 and graduate in Year 3.
Activity 4.3. Train conservation practitioners to use the Maputaland planning system and the CLUZ, Marxan and Marxan with Zones systematic conservation planning software using updated training materials. In addition, produce YouTube videos (with Portuguese subtitles) showing how to use CLUZ, Marxan and Marxan with Zones.		We produced a new version of CLUZ for QGIS v3.	Training will take place in Year 2, as will production of the training materials.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: (Max 30 words) Maputaland's poverty levels are reduced and biodiversity sustainably managed through effective transnational conservation, supported by global online conservation social networks, increased ecotourism and targeted expansion of community-based conservation areas (CAs).			
Outcome: (Max 30 words) Reduced poverty and increased conservation capacity in Maputaland through building online social networks to strengthen and promote conservation areas and ecotourism, and stakeholder-led planning to identify biodiversity-rich community-based ecotourism zones.	0.1 **>80%** of the 20 state, private and community conservation areas in the Mozambique and Swaziland sections of Maputaland create pages in the Izele online social network by yr1, using them to share news and information. 0.2 Increased publicity through Izele for ecotourism enterprises leads to growth in wages and/or job opportunities for **150** households through a **5-10%** increase in visitor numbers by yr3, compared to baselines. 0.3 Stakeholder-led process uses updated planning system to identify **>100,000 ha** of priority areas for conservation and community-based ecotourism by yr3, thus guiding ongoing regional conservation action, zoning and investment. 0.4 **100** local conservationists (including 50 women) trained to use Izele (yr1); **10** local conservationists (including 5 women) proficient in using Maputaland planning system and software (yr2).	0.1 Izele monitoring data on number of CA and group pages, users, forums and posts (yr1). 0.2 Izele data on ecotourism pages, users, forums and posts; collected data on staff employment and wages, visitor numbers and visitor awareness pre- and post-Izele launch inside and neighbouring Maputaland (yr1, yr2, yr3) 0.3 Planning system available online with updated maps for 53 ecosystem types and 55 species; priority area coverage obtained from GIS maps; semi-structured interviews with relevant decision makers to measure use of planning system and outputs (yr3). 0.4 Pre- and post-training questionnaires to measure skills uptake (yr1, yr2).	Relevant governments remain stable and continue to view transfrontier biodiversity conservation as a priority and provide the necessary permissions to undertake project activities. Continued support from conservation areas, conservation groups and ecotourism enterprises. Project partners continue to have good Internet access on their computers and smart phones (as confirmed by the project partners). Smart phone coverage and access continues to be excellent along tourist routes and in towns, and good along minor roads and in villages (as confirmed by the project partners). Self-guided tourism continues to be important and these tourists continue to have good Internet access at home when making plans, and while visiting Maputaland's tourist routes and towns.

Outputs: 1. Increased promotion of state, private and community conservation areas, and increased capacity to share news, information and expertise with practitioners, stakeholders and visitors, by expanding the Izele online social network to include the Mozambique and Swaziland sections of Maputaland (yr1, yr2)	1.1 **Two** workshops (one in Mozambique, one in Swaziland) and site visits with >100 Maputaland conservation practitioners (including 50 women) to train them how to create and use their own Izele page. We will ensure members of the seven communities involved in ecotourism are invited and represented (yr1). 1.2 At least **16** state, private and community CA produce pages on Izele, showing the CA boundary, important species and describing the site (yr1). 1.3 Comments and shared information from at least **100** Izele users on the CA pages and forums (yr2).	1.1 Attendance sheets, workshop and meeting reports (yr1). 1.2 Izele monitoring data on number of CA pages (yr1, yr2). 1.3 Izele monitoring data on number of comments and forum comments (yr2).	Project partners, local people and visitors continue to have good Internet access on their computers and smart phones (as confirmed by the project partners). Mobile phone access continues to be excellent along tourist routes and in towns, and good along minor roads and in villages (as confirmed by the project partners).
2. Increased visitor numbers and tourist revenue for conservation area- and community-based ecotourism in Maputaland, as well as building future revenue through increased awareness, by adding ecotourism enterprises to the Maputaland online social network in Izele (yr1, yr2, yr3).	2.1 **One** workshop with 20 Maputaland ecotourism practitioners to develop new Izele functionality, using a participatory approach to guarantee the website is tailored to the needs of enterprise owners (yr1). We will ensure members of the seven community-based ecotourism enterprises (listed below) are invited and represented. 2.2 Ecotourism enterprise page functionality added to Izele (yr1). 2.3 **Two** training workshops (one in Mozambique, one in Swaziland) with 40 people (50% women) with Maputaland ecotourism practitioners to learn how to create and use Izele ecotourism functionality (yr1). We will ensure members of the seven community-based ecotourism enterprises (listed below) are	2.1 Attendance sheets and workshop reports (yr1). 2.2. Functionality added to Izele and documented on Izele website (yr1). 2.3 Attendance sheets and workshop reports (yr1).	Continued support from ecotourism enterprises and communities involved with ecotourism enterprises. Mobile phone access continues to be excellent along tourist routes and in towns, and good along minor roads and in villages (as confirmed by the project partners). Tourists continue to plan their holidays before travelling to the most remote parts of Maputaland, so have good Internet access either at home, or while visiting Maputaland's tourist routes and towns.

	invited and represented. 2.4 At least **80** Maputaland ecotourism pages added by enterprises (yr2), including **>4** enterprises run by the Catuane, Goba and Tsakane communities in Mozambique and the Mambane, Manzinyama, Mhlumeni and Shewula communities in Swaziland (Fig 1). 2.5 At least **80%** user satisfaction with the new Izele ecotourism functionality (yr2). 2.6 Comments from **100** Izele users on ecotourism pages (yr2).	2.4 Izele monitoring data on number of ecotourism pages (yr2). 2.5 User questionnaires from people working for ecotourism enterprises in Maputaland (yr2). 2.6 Izele monitoring data on number of ecotourism pages (yr2).	
3. Updated Maputaland conservation planning system and new regional zoning plans that identify priority areas for conservation and community-based ecotourism, and are designed to inform land-use planning, national and international conservation investment strategies and the ongoing expansion of Maputaland's state-, private- and community-managed conservation area network (yr1, yr2, yr3).	3.1 Updated conservation planning system with updated biodiversity, natural capital and conservation area GIS data, plus new ecotourism GIS data (yr2). 3.2. **Two** workshops to bring together regional experts to improve datasets, set targets, and oversee analysis results (yr2). 3.3 Gap analysis to identify important species and ecosystem types that are under-represented in Maputaland's state, privately-owned and community CAs (yr2). 3.4 Zoning and priority area maps produced using the CLUZ and Marxan with Zones software (yr3). 3.5 **Two** dissemination workshops to explain and publicise the priority area maps and zonation plan to stakeholders	3.1 Planning system uploaded to project website, together with metadata (yr2). 3.2 Attendance sheets and workshop reports (yr2). 3.3. Gap analysis results and report uploaded to project website (yr2). 3.4 Zoning maps and report uploaded to project website (yr3). 3.5 Attendance sheets and workshop reports (yr3).	Trained staff members continue to work for the relevant conservation organisations. Project partners continue to support the conservation planning process in Maputaland.

	(yr3). 3.6 **One** publication in peer-reviewed literature describing the production of the zoning plan (yr3).	 3.6 Publication uploaded to project website (yr3).	
4. Building capacity so that conservation practitioners in Maputaland can use the Izele online social network and transfrontier conservation planning system, through in-person training and by developing online materials that can also be used by the global conservation community (yr1, yr2, yr 3).	4.1 **One** new set of training materials on creating conservation area and ecotourism pages in Izele (yr1). 4.2 **One** new set of training materials on gap analysis and conservation planning, plus 2 online tutorial videos on using CLUZ and Marxan (yr2). 4.3 **10** Maputaland conservationists (including 5 women) trained in gap analysis and systematic conservation planning, with at least 80% of people gaining skills and awareness (yr2). 4.4 **One** Swazi national given in-depth training in conservation planning as part of undertaking the DICE MSc in Conservation Biology (yr2, yr3). 4.5 Online Izele materials downloaded by **200** people and online video tutorials watched by **200** people (yr3). 4.6 Online conservation planning materials downloaded by **150** people and online video tutorials watched by **150** people (yr3).	4.1 Training materials uploaded to project website; training videos uploaded to YouTube (yr1). 4.2 Training materials uploaded to project website; training videos uploaded to YouTube (yr2). 4.3 Attendance sheets; pre- and post-training questionnaires to measure skills uptake (yr2). 4.4 MSc graduation certificate (yr2, yr3). 4.5 Download and view details from the respective websites (yr3). 4.6 Download and view details from the respective websites (yr3).	Project partners continue to support their staff receiving training.

Activities (each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

Output 1. Expand Izele to include Maputaland conservation areas and groups

1.1. Produce and update a database of conservation areas and groups within Maputaland, which will be used to contact each organisation to encourage them to create pages on Izele and to link to the pages produced by their partners and donors. The data will also be used for monitoring Izele page uptake.

1.2. Train the KUWUKA JDA and All Out staff so they can support conservation areas and groups to produce their own Izele pages.

1.3. Workshop for representatives from all conservation organisations in Maputaland to celebrate the launch of the Izele network in their region, demonstrate how the social network functions, encourage them to create pages and collect their feedback.

1.4. Publicise Izele, encourage the creation of new pages and support page development by contacting groups and social media.

1.5. Create and support Izele forum pages on relevant topics so the different conservation areas and groups share information, advice and documents.

Output 2. Add state, private and state ecotourism enterprises to Izele

2.1. Produce and update database of ecotourism enterprises and collect data on the type of ecotourism activities supported and the number of staff employed.

2.2. Workshop and site visits with ecotourism enterprises to collect feedback and advice on what type of functionality should be added to the Izele online social network.

2.3. Produce additional code to create and then refine ecotourism functionality to the Izele online social network.

2.4. Workshop to celebrate the launch of the Izele ecotourism functionality and encourage ecotourism enterprises to sign up.

2.5. Publicise Izele ecotourism functions and support page development through *ad hoc* site visits, email and telephone support.

2.6. Work with communities in Mozambique and Swaziland to map their preferred areas for ecotourism activities, as part of creating their Izele ecotourism pages and to inform land-use planning.

2.7. Collect monitoring data on ecotourism business staff numbers and wages, as well as data on customer profiles and how they heard about the business.

Output 3. Produce Maputaland conservation land-use zoning system

3.1. Update the GIS data in conservation planning system to reflect changes in landcover, species distributions and conservation area coverage.

3.2. Produce conservation area gap analysis report by revisiting the previous conservation targets in the Maputaland conservation planning system and then measuring the extent to which the network of conservation areas meets these targets for the different ecosystem types and species.

3.3. Workshop to set land-use zoning targets based on different land-use planning scenarios for conservation, agriculture, afforestation, ecotourism and urbanisation.

3.4. Conservation land-use zoning prioritisation to identify priority areas for conservation and community-based ecotourism, producing different land-use zoning maps and writing up reports and then submitting for publication in a peer-reviewed open-access journal.

3.5. Presentation of the gap analysis and land-use zoning results at two events, one in Mozambique and one in Swaziland, where project partners, decision makers, donors and high-level government representatives will be invited to learn about the results of the project and celebrate our achievements.

Output 4. Build capacity in conservation social networking and planning

4.1. Train state, private and community conservation areas, groups and ecotourism enterprises to create and manage their own Izele pages by developing online tutorials, including YouTube videos, all of which will be translated into Portuguese.

4.2. Postgraduate training of a Swaziland national from the government, NGO or academic sector on DICE's MSc in Conservation Biology with their 6 month research project using the Maputaland conservation planning system.

4.3. Train conservation practitioners to use the Maputaland planning system and the CLUZ, Marxan and Marxan with Zones systematic conservation planning software using updated training materials. In addition, produce YouTube videos (with Portuguese subtitles) showing how to use CLUZ, Marxan and Marxan with Zones.

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
2	MSc in Conservation Biology		Eswatini	0				1
7	Izele online help	N/A	N/A	1				1
7	Izele YouTube videos	N/A	N/A	0				1
7	CLUZ tutorials	N/A	N/A	0				1
7	CLUZ YouTube videos	N/A	N/A	0				1
9	Conservation area gap analysis report	N/A	N/A	0				1
9	Conservation and ecotourism zoning plan report	N/A	N/A	0				1
11A	CLUZ description article	N/A	N/A	1				1
11B	CLUZ description article	N/A	N/A	1				1
11A	Maputaland spatial analysis	N/A	N/A	0				1
11B	Maputaland spatial analysis	N/A	N/A	0				1
12B	Izele online social network	N/A	N/A	1				1
12B	Maputaland conservation planning system	N/A	N/A	0				1
12B	CLUZ plugin for QGIS	N/A	N/A	1				1
14A	Training in using the Izele social	140 people (at least	Eswatini & Mozambican	2				4

	network	70 women)						
14A	Conservation area gap analysis workshop		Eswatini & Mozambican	0				1
14A	Conservation and ecotourism zoning workshop		Eswatini & Mozambican	0				1
14A	Training in using CLUZ and Marxan	10 people (at least 5 women)	Eswatini & Mozambican	0				1
14A	Project results workshop		Eswatini & Mozambican	0				1
14B	Student Conference on Conservation Science (Poster presentation by PhD student)	Male	British & Mozambican	1				1
14B	Biodiversity Planning Forum in South Africa (Presentation by PI and PhD student)	Male	British & Mozambican	0				1
14B	ICCB workshop in Malaysia (Presentation by PI)	Male	British	0				1
23	Matching funding	N/A	N/A					

In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Mark (*) all publications and other material that you have included with this report.

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
The CLUZ plugin for QGIS:	Journal article	R.J. Smith (2019). Research	Male	British	Research Ideas and Outcomes	Journal website https://riojournal.com/article/33510/

designing conservation area systems and other ecological networks		Ideas and Outcomes 5, e33510				
Testing the effectiveness of different site-based biodiversity and conservation prioritisation approaches in Mozambique	Poster	H. Matimele, D.L. Roberts, I. Darbyshire and R.J. Smith (2019)	Male	Mozambican	Unpublished.	Project website https://izele.org/projects/278/conservation-networking-ecotourism-and-land-use-planning-in-maputaland/about/ Direct link: https://izele.org/api/1/docs/?org_id=278&id=695a78af-4573-4a9e-bcd3-e02bce8892ee

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	✓
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	✓
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	✓
Have you completed the Project Expenditure table fully?	✓
Do not include claim forms or other communications with this report.	