

Darwin Initiative Main Project Annual Report

Important note: To be completed with reference to the Reporting Guidance Notes for Project Leaders:

it is expected that this report will be no more than 10 pages in length, excluding annexes

Submission Deadline: 30 April

Darwin Project Information

Project Reference	21-019
Project Title	Strengthening marine protected areas and marine ecotourism benefits in Sudan.
Host Country/ies	Sudan
Contract Holder Institution	Equipe Cousteau
Partner institutions	Wildlife General Conservation Administration; Sudan Development Initiative (SUDIA)
Darwin Grant Value	£ 300,000
Funder (DFID/Defra)	Defra
Start/end dates of project	01 st April 2014-31 st March 2017 Note: Defra accepted (4 th November 2014) a no-cost extension of 6 months extending the final deadline until 30 th September 2017.
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	01 st April 2015-31 st March 2016 Annual Report 2
Project Leader name	Tarik Chekchak and Rebecca Klaus
Project website/blog/Twitter	http://www.cousteau.org/projects/protect-sharks-and-rays-of-the-red-sea/
Report author(s) and date	Rebecca Klaus, Tarik Chekchak, Abdel Rahman 30 th April 2016

1. Project Rationale

Globally, although the total number of MPAs declared has increased, many are failing to protect biodiversity or to realise economic/social benefits for local communities. Such failures may be due to many reasons but often they are underpinned by a lack of capacity, financial resources and competing priorities for limited budgets. In politically unstable countries, biodiversity conservation often comes low on the national agenda, and this presents a particular challenge, which can be further aggravated by restricted access to funding from external sources.

Sudan borders the Red Sea, one of the most diverse tropical seas, and supports large aggregations of manta rays and large schools of scalloped hammerheads sharks among other species on the offshore reefs. Despite the fact that Sudan has experienced a prolonged period of instability following independence, the country recognised the importance of the biodiversity found within their EEZ and designated two MPAs. The MPAs cover coastal and marine environments that remain in a relatively pristine state and that host healthy populations of

globally threatened elasmobranch species. This effort and the globally significant reservoir of biodiversity that is supported by Sudan has yet to be fully recognized internationally.

Shark and rays are enigmatic flagship species with the potential to generate revenues for local communities through ecotourism and diving tourism, and attract further investment in MPA management. The current DI project was designed to improve knowledge about these endangered/vulnerable elasmobranch species, and to build local capacity to monitor and manage these resources and support new nature-based livelihoods to help alleviate poverty.

The current project is supporting the local management authority, the Wildlife Conservation General Administration (WCGA), to help them to be able to better manage their existing MPAs and threatened species through providing new equipment, renovating existing infrastructure and providing staff with additional training.

The project will gather new information about the movement and residency patterns of shark and ray species which will be used to update spatial management plans for Sudan's Red Sea coast and the wider region. The information will also be used to support the development of sustainable eco-tourism activities to assist local communities to realize economic benefits from the wise use of their marine biodiversity resources. Community members inside DMNP in Sudan will be provided with access to microfinance to support self-employment and income-generating opportunities.

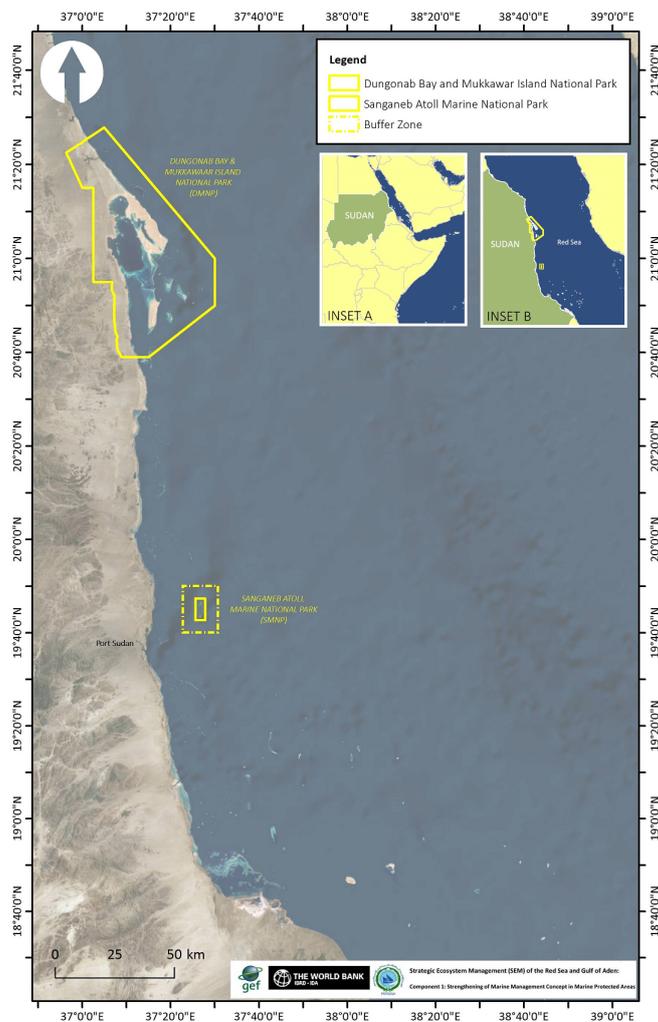


Figure 1: Map showing the location of Sudan's two national parks, Dungonab Bay and Mukkawar Island National Park (DMNP) and Sanganeb Marine National Park (SMNP).

2. Project Partnerships

The project had two key national partners at the outset, which included SUDIA and the Wildlife Conservation General Administration (WCGA). The project has recently prepared two new Memorandum of Understanding (MOU) with two new partners namely, the Red Sea University (RSU), which is based in Port Sudan and has a Marine Faculty, and the Governor of the Red Sea State, which is the local government authority. The role of each of these partners in the project is described below:

SUDIA: Founded in 1996, SUDIA (Sudanese Development Initiative) is a pioneering Sudanese non-governmental organization working with a broad cross-section of stakeholders for greater stability, development, and good governance in Sudan by enhancing livelihood, reducing violence, empowering youth and advancing the role of the media and civil society. The role of SUDIA in the project is to provide logistical support to facilitate the work in country, particularly related to livelihoods, but also in relation to animating workshops and training sessions. SUDIA are responsible for establishing and training community-based microfinance committees for the villages of Dungonab and Mohammed Qol, facilitating access to loan capital, providing support to the committees and monitoring their performance, ensuring repayment and reporting conditions are met. SUDIA have faced a number of unexpected challenges over the past year, the most critical of which has prevented them from being able to operate freely in the RSS where the project is based. This was one of the reasons why the project needed to establish new formal partnerships with other organisations based in the RSS to help provide logistical support and facilitate the field work.

The Wildlife Conservation General Administration (WCGA): The WCGA is the Sudanese government authority that is legally mandated with the responsibility for the management of nationally declared terrestrial and marine protected areas in Sudan, including Dungonab Bay and Mukkawar Island National Park and Sanganeb Atoll Marine National Park. The WCGA is therefore a key partner and their involvement in this project will help secure the long-term legacy. The WCGA are also responsible for facilitating and providing logistical support for field operations. As such the WCGA are also the main project beneficiary for the capacity building and capital investments that the project is making in the MPAs. There has been an ongoing issue with regards the role of the WCGA in the management of these MPAs which has recently been resolved. The WCGA has very limited resources, for example, they do not have many computers in their offices in the RSS which means that communications have to be done by mobile phone. There are also language barriers, as the majority of staff do not speak English, which is where our partners such as SUDIA and RSU are needed to assist in translation.

Red Sea University (RSU): A new MOU was signed with the RSU on 25th February 2016. This MOU served to formalise pre-existing arrangements with the staff at the University in relation to training and field work. The MOU specifies the arrangements related to training of RSU students / staff (e.g. coral reefs, elasmobranchs, ecotourism), equipment, data sharing, and publishing of scientific results.

Red Sea State (RSS) and RSS Ministry of Tourism and Environment (RSS-MTE). During 2016, there were important political changes in the Red Sea State, the most significant of which was the appointment of a new Governor. As a result of this change, the DI project Principal Investigator needed to travel to Sudan to meet the new regional authorities. During this field mission the PI met with the new Governor of the Red Sea State, the newly appointed RSS Minister of Tourism and Environment and RSS Minister of Finance. Following these meetings and at the request of the Governor of RSS, a new Memorandum of Understanding (MoU) was prepared by the DI team with the RSS and submitted to the RSS on 25th February 2016. This MOU defines the area of partnerships between Cousteau and the RSS with regards the working arrangements for the community based livelihood activities planned for implementation under the DI project.

As mentioned previously, the project has been challenged by various bureaucratic issues. This is partly due to the need to work between different government institutions, a lack of clarity in the mandate of these organisations that can be further complicated by the hierarchical

structures and sometimes unclear division of responsibility between the Federal and State level administrations. This means that administrative procedures are more time consuming than might otherwise be expected. For example, a technical agreement signed between the WCGA and SUDIA which described the project activities and the roles of each partner had to pass through a number of departments at the WCGA and took upwards of nine-weeks to be signed. They were, and they still are, various problems linked to getting the necessary permits to go on the field from the security services. Working in Sudan has become increasingly difficult for NGOs, because of the political context of the country.

3. Project Progress

3.1 Progress in carrying out project activities

The following report describes progress on the Darwin Initiative project “Strengthening marine protected areas and marine ecotourism benefits in Sudan” from April 2015 to March 2016. It was necessary to put certain activities temporarily on hold due to the fact that the DI project team and Sudanese counterparts were having difficulties obtaining the security permits needed to undertake field work as explained in HYR1 and YR1 and HYR2. The team worked hard to resolve this issue as described in the HYR2. The signing of the new MOUs has allowed the majority of the project activities to start as described below.

Output 1:

The following provides an update on progress on the activities under Output 1 between April 2015 and March 2016.

1.1 A community visioning workshop for the Dungonab Bay Marine Park,

The First Meeting of the Advisory Committee for the Conference on the Future of Sudan's Marine Protected Areas (MPAs) was held on 5th July 2015.

The meeting was well-attended by 7 out of the 8 invitees including representatives from: The Regional Organisation for the Red Sea and the Gulf of Aden (PERSGA), UNEP, UNESCO Man and Biosphere Reserve Coordinator, Red Sea State Ministry of Tourism and Environment (RSS MTE), Dean of Faculty of Marine Science Red Sea University (RSU), UNESCO / Cousteau Eco-technie chair (hosted by Future University in Khartoum), and the ex-Director from the Haggar Foundation.

The meeting outcomes were as follows:

- **Need:** All participants agreed about the urgent need for a conference that brings together all stakeholders relevant to Sudan MPAs.
- **Location and Timing:** Red Sea State, this year, when the weather/climate in Port Sudan is cooler (November–December 2015) and to allow time for preparation.
- **Participants:** Representatives from the following stakeholder groups, Academia, INGOs/Donors, Private sector, Civil Society, Local Community, Government, Scientists, UK Embassy in Sudan. 8-9 representatives from each group making a maximum of 63 participants.
- **Format:** A mix of papers/presentations on the first day, and then working group sessions and plenary a on the following day (maybe 2).
- **Sponsorship:** The involvement of government representatives is crucial. RSU will try to secure the Governor and the RSS as the principal co-sponsor for the event. Other co-sponsors can include private sector (Haggar Foundation) and a reputable INGO (maybe UNDP or UNESCO).
- **Next steps:** A 2 page concept describing the conference and what it intends to achieve will be drafted by SUDIA; Meeting attendees to act as an Advisory Committee for the conference; SUDIA in partnership with RSU will look into planning and implementation

requirements; Further meetings to be held with principal stakeholders in the planning / supervisory committee for the visioning workshop.

The outline concept for the conference is attached to this report (see **Annex 04_21-019 Output 1.1_01**).

The Second Meeting of the Advisory Committee for the Conference on Future of Sudan's MPAs was held on 20th September 2015.

The main outcomes from this meeting were as follows:

- The Advisory Committee now has 10 institutional members.
- Credit/recognition was given to Cousteau and DI for funding the meetings of the AC and for contributing towards the overall costs of the conference.
- Conference format: The conference will be a combination between a symposium and a conference.
 - Day 1: On the first day there will be presentations by experts on: biodiversity, governance and management, and ecotourism potential.
 - Day 2-3: On the second and third day there will be the opportunity for the participants to discuss and articulate a common agenda.
 - Side events will be organised that include a film screening, a day trip to Sanganeb and an exhibit of women's handicrafts.
- Conference participants: These will include representatives from the local communities (e.g. Umda (community leaders) from Mohammed Qol and Dugonab), government stakeholders, academics, NGOs, and INGOs, Private Sector, individuals and other stakeholders.
- Budget and funding: The budget will need to cover the preparation of papers that will be commissioned, travel for participants, meals and refreshments, visibility and documentation, and facilitators.
- Venue: The first day of the meeting will be held in Al-Salam Hall, which is a government owned conference venue. There will be between 60-80 participants. The conference on the following 2 days will be held in the Coral Hotel.
- Language and title: The conference and the papers will be prepared in Arabic, and translators will be provided for English speakers.
- Timing: Although the initial plan was to hold this conference in December 2015 the Advisory Committee recommended that the conference be held in January / February 2016.
- Title: the participants agreed on the title for the conference as being "The Future of Marine Protected Areas in Sudan".

The minutes from this meeting are attached (**Annex 04_21-019 Output 1.1_02**).

1.2 Renovation of existing building to serve as both a ranger station and a visitors centre

Following the field visit described in the YR1 report, a committee comprised of SUDIA Project Operations Officer, a representative from the Wildlife Conservation General Administration and an engineer from the Ministry of Interior reviewed and selected the winning bid for the renovation work. A contract was drawn up and the work was scheduled for Q2/2015. The work was put on hold pending the resolution of the security issues and is now expected to commence by the end of Q2/2016. In the meantime, the WCGA was successful in securing additional funds from Federal government and has commenced some of the needed renovation works. The works completed to date include cleaning the building, renovating some of the walls, the purchase of a new smaller generator that will be more cost efficient to operate, the establishment of an office, with a desk and a chair. The buildings are now sufficiently functional

as to be able to accommodate 12 of the 22 WCGA rangers that are stationed in the Red Sea state. The rangers are stationed on a two-week rotation.

1.3 Procuring small vessels and other equipment needed for monitoring, control and surveillance.

Quotes for the purchase of two (2) boats equipped with outboard engines (**Annex 04_21-019 Output 1.3_01**) were solicited and an Egyptian vendor was selected. A purchase order was issued with delivery of the boats scheduled for Q2/2015. The purchase order was then temporarily placed on hold but the delivery of the boats is now expected to be in Q1/Q2 2016. Prior to the purchase order being released the details were checked again with the staff from WCGA. During these discussions they requested a change to the specifications. It was preferred that rather than purchasing the semi-rigid inflatables which were being ordered from the Egyptian vendor the preference was for fibre-glass boats with outboard engines that were produced locally in Sudan. These would require less maintenance than the semi-rigid inflatables and Wildlife Officers are already familiar with these types of boats. A new purchase order has now been prepared with delivery expected to be completed by the end of Q2/16 (**Annex 04_21-019 Output 1.3_02**).

1.5 Meeting with WCGA Officers at the start and end of the project to complete MPA Management Effectiveness Assessments (using WWF-World Bank Scorecard method or equivalent).

The staff of the WCGA were trained in how to complete the WWF-GEF MPA Scorecard assessment for management effectiveness in January 2015. The staff completed the MPA Scorecard for Dungonab Bay and Mukkawar Island National Park and the total score achieved was 21% in January 2015 (**Annex 04_21-019 Output 1.5_01**). The MPA Scorecard was repeated in January 2016 by the DI project team (**Annex 04_21-019 Output 1.5_02**). The results show that the overall score for management effectiveness has doubled over the past year, increasing from the initial score of 21% in January 2015 to 43% in January 2016. There are increases in each of the six key management processes. The greatest gains have been achieved in 'Planning' and 'Inputs', while the lowest gains have been achieved in Outcomes. Nevertheless, the overall trend is an improvement in management effectiveness of 22% within the past year.

Output 2

The following provides an update on progress on the activities under Output 2 between April 2015-March 2016.

2.1 Acoustic telemetry equipment procured and shipped to Sudan and deployed in-water in Year 1 and maintained through Year 3. Focal species tagged in Year 1 and 2.

The three year supply of batteries that will be needed for the telemetry work was imported into Sudan and these are currently stored by SUDIA. The VR2W monitors that were previously deployed on Sudanese offshore reefs were recovered and the monitors are now stored on two dive boats in Port Sudan (Don Questo and MY Elegante). The monitors need to be serviced and the batteries replaced before being redeployed. This will happen during the next field phase, which will now be implemented jointly with staff from the University of Windsor, Cousteau, The Deep Aquarium and staff from the Red Sea University (RSU), which is anticipated to be in Q2/2016. The MOU formalising the arrangements with the RSU with regards fieldwork was signed on 25th February 2016 (**Annex 04_21-019 Output 2.1_01**).

2.2. Continuous data derived on spatial movements, residency, home range and migration patterns of focal flagship elasmobranch species through telemetry techniques.

Pending. As above this activity will be implemented jointly by the DI project in partnership with the Red Sea University staff as per the new MOU that was signed on 25th February 2016 (**Annex 04_21-019 Output 2.1_01**).

2.3. Training of Sudanese partners in telemetry field methods for elasmobranchs (x3), telemetry array maintenance and data download and organisation.

Pending. As above, the training in telemetry will be provided to students / staff at the Red Sea University as per the new MOU that was signed on 25th February 2016 (**Annex 04_21-019 Output 2.1_01**). A training will be delivered at the RSU which will provide the opportunity for more staff / students to learn about these techniques through a combination of lectures and lab-based practicals. Three student / staff member will then be provided with the opportunity to participate in the field surveys and thereby gain more direct experience in these techniques.

2.4. Data compilation, analysis and reporting of elasmobranch movement data (telemetry).

The data on manta ray movement patterns that were obtained from the satellite tagged mantas has been analysed. The data on the bottom monitors needs to be downloaded. Other activities pending the completion of 2.1-2.3.

2.5. Training of Sudanese staff member to liaise with regional dive industry over Divers Aware of Sharks monitoring project

The staff member was identified and employed until May 2015. The TOR for this staff member is provided in Annex 04_21-019 Output 2.6_01. His contract was suspended when the obstacles presented themselves and an alternative more senior SUDIA staff member has been fulfilling this role in the interim in order to assist in resolving the issues with security supported by a part time staff member based in Port Sudan.

2.6. Data compilation analysis and reporting of DAS monitoring survey results.

Three dive operators have continued to collect data for the DAS monitoring programme. A Master student from the University of Cardiff (UK) compiled the existing DAS data and has now completed and been awarded his MSc. The new data collected by the dive operators has been compiled and reformatted and is in the process of being analysed.

2.7. 4 x WCGA Officers / Students trained and qualified SCUBA divers by the end of Year 1 and able to participate in monitoring surveys in Year 2 and 3.

4 x WCGA Officers and 3 x students from the Red Sea University have been trained in SCUBA diving. The training was completed in October 2015, and all students have been certified as PADI open water divers. Photographs of the training are provided in **Annex 04_21-019 Output 2.7_01**. The training certificates will be submitted once they are received from PADI.

2.8. 4 x Sudanese nationals trained in Year 1 and able to implement coral reef monitoring surveys by end of Year 3.

During the course of 2015, the DI project team found that the Red Sea University (RSU) in Port Sudan had been awarded a contract by the Regional Organisation for the Red Sea and Gulf of Aden (PERSGA) to undertake coral reef monitoring surveys in Dungonab Bay and Mukkawar Island National Park as part of a new World Bank GEF funded regional project called "Strategic Ecosystem-based Management (SEM) for the Red Sea and Gulf of Aden". Dungonab Bay and Mukkawar Island National Park is one of the demonstration sites within this project.

The RSU survey team commenced the surveys and completed a 4 day field mission between 7th-10th October 2015. During this survey the RSU team surveyed 5 out of the 18 previously permanently marked monitoring sites. One of the DARWIN Initiative team (Rebecca Klaus) was in the field at the same time which allowed her the opportunity to better assess capacity and to discuss and refine training needs. The training needs identified includes: training in species identification (corals, seagrasses and other benthic organisms including macroinvertebrates), data handling and management and data analysis techniques.

An initial training to start to cover these skills gap was scheduled for RSU staff for December 2015 and will now be run during the next field survey in Q2 2016.

2.9 Data compilation, analysis and reporting of coral reef monitoring surveys.

Archive field data have been compiled and catalogued. Although not specifically mentioned in the DI project document, this work has variously included transferring the old video survey data that was stored in on Hi8 and microCV tape format into digital formats to ensure that they are more easily accessible and organising the other datasets.

2.10. Preparation of geodatabase to consolidate existing and new monitoring datasets (e.g. DAS data, telemetry data, coral reef monitoring etc), and satellite derived environmental characteristics (e.g. sea surface temperature, chlorophyll) providing the basis for spatial planning and re-zoning of DMNP.

A geodatabase has been prepared and the process of populating the geodatabase with the archived coral reef monitoring data and other already available spatial datasets has commenced. In addition to this, a time of series different remotely sensed satellite data showing different environmental has also been downloaded and organised. These datasets will form the basis for the management planning and zoning activities. Some examples of the maps being prepared using these data are shown in Figures 2 and 3.

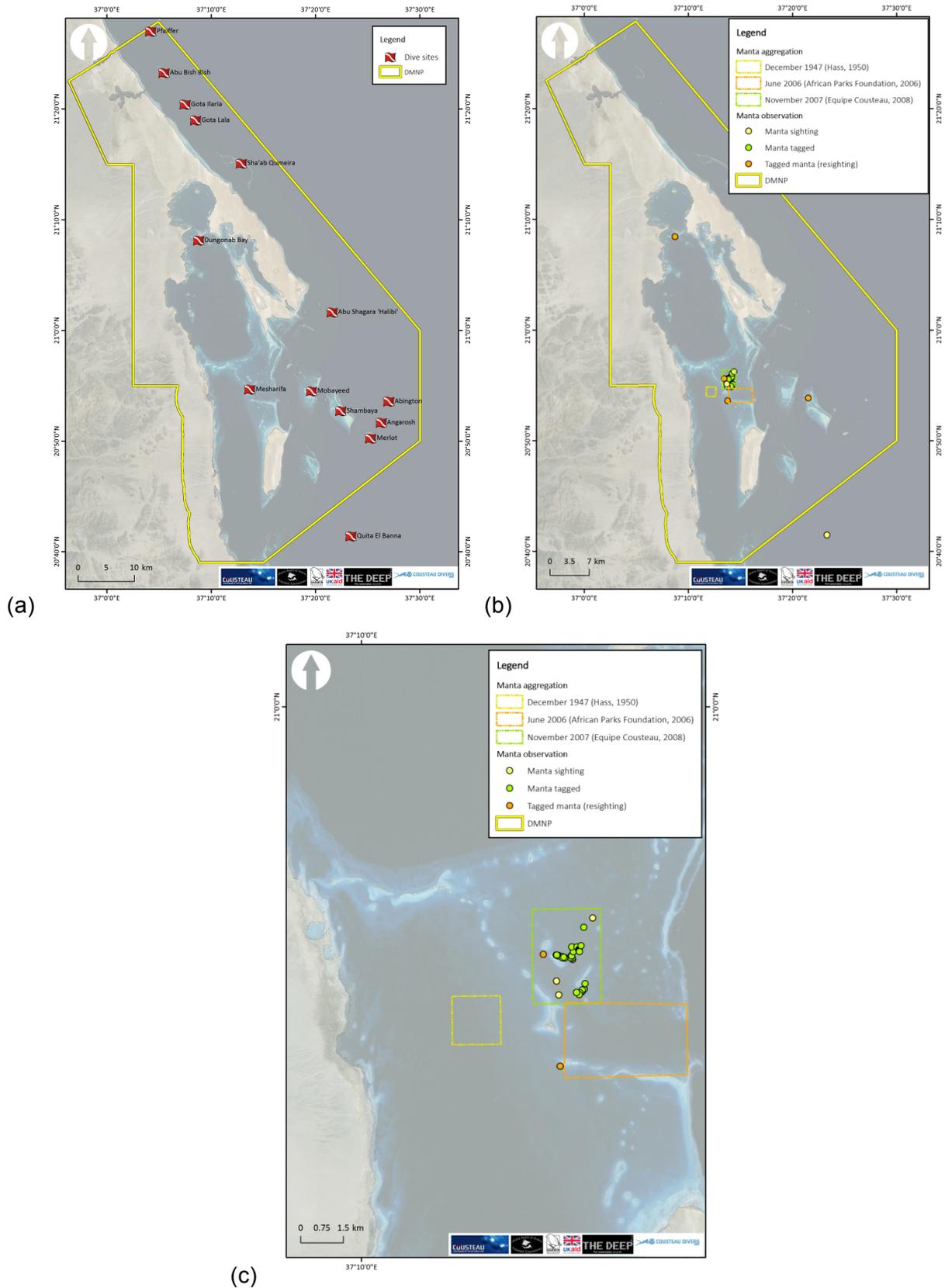


Figure 2: Map showing (a) the location of dive sites within DMNP, (b-c) manta ray sightings recorded in December 1947 by Hans Hass (Hass 1950), during 2006 (APF 2006), and in October / November 2007 (Cousteau 2013) and re-sightings from Divers Aware of Shark (DAS) surveys.

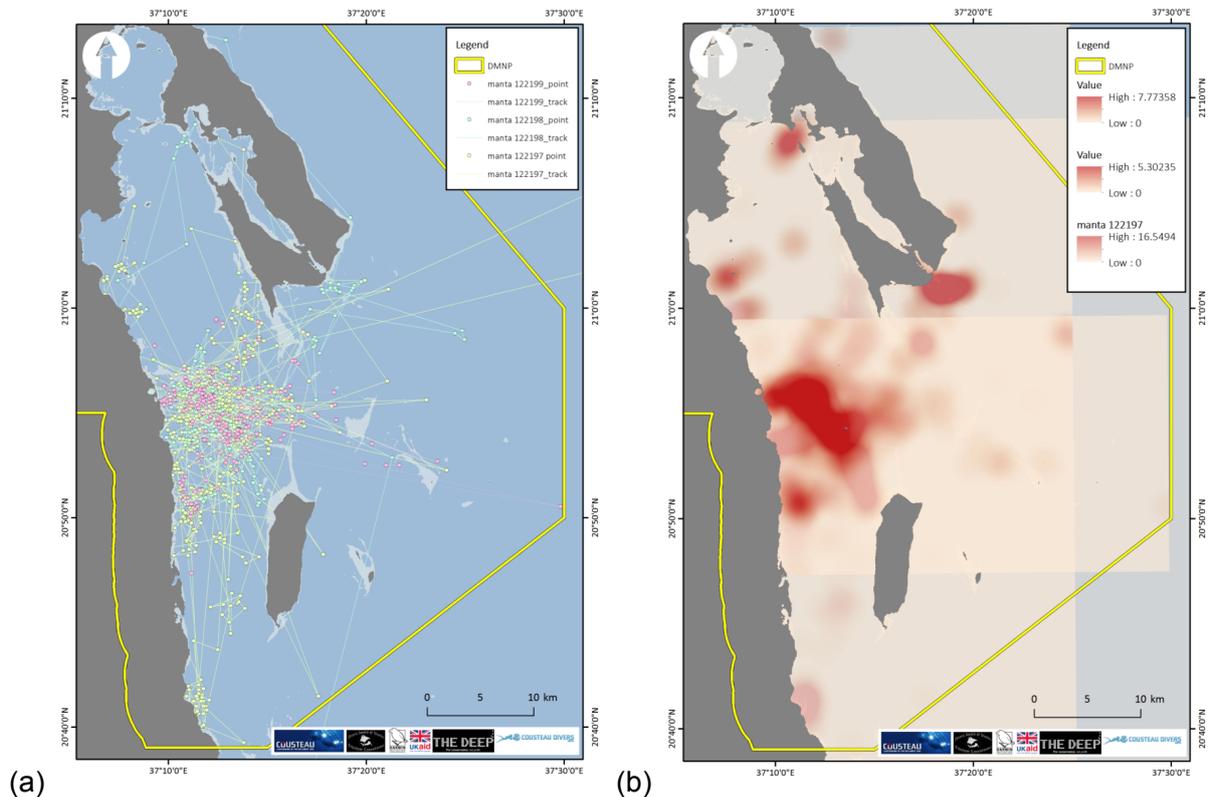


Figure 3: Maps showing the movement tracks of satellite tagged manta rays that were tagged between 15th October-13th November 2012 (Tag IDs: 122197, 122198, 122198) and (b) distribution hotspots (kernel density map) for all three tagged mantas.

Output 3.

The following provides an update on progress on the activities under Output 3 between April 2015 and March 2016.

3.1. Field visit to refine coastal livelihood assessment

The field visit was completed by four people and the project operations officer and project director between January and February 2015. The report from this assessment is now completed (**Annex 04_21-019 Output 3.1_01**).

3.2 Business plans for nature-based ecotourism livelihood opportunities

A number of potential nature-based and eco-friendly development options have been identified. An ecotourism consultant specialist has been recruited to consult on these concepts and to further develop them into business plans for nature-based ecotourism livelihoods.

The terms of reference for the consultant to prepare these business plans is included in **Annex 04_21-019 Output 3.2_01**.

The tourism consultant ran a 4-day Sustainable Tourism Training Workshop between 20th to 23rd March 2016 at the El Khabeer International Conference Hall of The Red Sea University in Port Sudan. The opening ceremony was chaired by the Representative of the Wali (governor) and Minister of Finance as well as by Vice Chancellor of the Red Sea University and Dean of the Marine Science and Fisheries Faculty of the Red Sea University. The Head of the Department of Biological Oceanography Faculty of Marine Sciences & Fisheries of Red Sea University was the Master of Ceremony.



Figure 4. Opening Ceremony of the Sustainable Tourism Training

The training enabled participants to learn about sustainable tourism for development including ecotourism. The course focused on the evolution of the tourism industry towards sustainability as well as on the fundamental tools and practices linked to sustainable tourism development.

The course was taught through a combination of seven different sessions of lectures (slides), case studies, discussions, and individual and group exercises. A total of **24 participants** attended the workshop including representatives from Red Sea University, Red Sea State Ministry of Environment and Tourism, Ministry of Tourism, Wildlife Conservation Police, NGO and the private sector (list of participants in annex). The workshop report, attendance list and training certificates are included in **Annex 04_21-019 Output 3.2_02**.

The tourism consultant also spent time learning more about Port Sudan and the existing and apparently growing tourism market. The consultant found that Port Sudan welcomes many national tourists; honeymooners, business and MICE* tourists (*Meetings, Incentives, Conferences and Exhibitions*), end of year tourists, etc. She had the opportunity to explore the Red Sea University Aquarium, the Red Sea Museum of Heritage & Antiquities, the corniche in front of the port and the sea front near the Sigala fish market with its restaurants, craft vendors, and boat excursions. The Sigala fish market has become increasingly popular and attracts many people on a daily basis with a peak of visitors over the weekends, mainly with families and groups of friends. These attractions can play an essential role in the Sudan Marine Protected Areas conservation, through providing opportunities for interpretation for non-specialists and public awareness programme for MPAs.



Figure 5. Visitor at The Red Sea University Aquarium (©Dominique Verdugo)



Figure 6. Visitors at the Red Sea Museum of Heritage & Antiquities (©Dominique Verdugo)



Figure 7. Glass-bottom boat tour to the coral reef (©Dominique Verdugo)

The tourism consultant also had the opportunity to meet with several dive operators during her visit, including Maria Cristina, who operates from the boat the *Dolce Vita*, Lorenzo who operates from the *Don Questo* and Claudio, who operates from the *Elegante*.

The tourism consultant discussed the possibility of the dive operators joining forces and the setting up an umbrella organisation or an association so that there is 'one voice' through which they can communicate with the Sudanese authorities. The dive operators were receptive to the concept and this will be discussed further during the ecotourism consultant next visit.

One of the dive operators (Maria Cristina) is starting to prepare a sea/land safari for this next year. An 'Ambassador' (resource person) has been identified in Dungonab. This person is an ex-seaman who previously worked on a dive boats and fisherman. One of the business plans will be to strengthen his current offering for the Sudanese / Khartoum market.

3.3 Develop ecotourism guidelines and deliver training to familiarise WCGA rangers, dive operators and local communities with guidelines

The ecotourism guidelines have been drafted in English for manta rays, sharks and dugongs, (**Annex 04_21-019 Output 3.3_01**). Two additional guidelines are in the process of being finalised for coral reefs and sea turtles. Once the guidelines have been prepared the graphics will be added and they will then be translated into French and Arabic, and possibly Beja. The guidelines will also be used to prepare a short infographic film / powerpoint presentation for use in the training dive operators and local communities. The DI team will also approach the international (e.g. FlyDubai and EgyptAir) and the various domestic airlines that land in Port Sudan to see if they would be willing to show the info-graphic film before landing.

3.4 Support the development of community-based initiatives that deliver collaborative livelihoods and income generating activities (through access to microfinance).

New MOU with the Red Sea State now signed. SUDIA has already held discussions with the Red Sea branch of the Central Bank of Sudan and they indicated their readiness to work on and provide capital for small loans.

Output 4:

The following provides an update on progress on the activities under Output 4 between April 2015 and March 2016.

4.1 Sudanese staff recruited and trained to lead day-to-day project activities and communications with stakeholders.

A Sudanese staff member was contracted as Operations Officer as of January 2015. The job description for the staff member is attached as an annex to this report. (**Annex 04_21-019 Output 4.1_01**).

4.2 Bi-annual Project Steering Committee meetings for Darwin Project to discuss project progress and monitor delivery.

The SUDIA Director, Abdel-Rahman El Mahdi and a senior staff member Ahmed Hanafi have been holding Steering Committee meetings with relevant stakeholder to discuss the organisation of the conference.

4.3 Preparation of bi-annual Darwin Initiative Project reports.

This report constitutes the projects second end of year report (YR2).

4.4 Annual Stakeholder Workshops held with a broad group of stakeholders to keep them up to date on Darwin Initiative project findings (x3)

Please see Output 1, Activity 1.1.

4.5 Prepare a poster summarising key project outcomes for distribution to dive operators and other organisations in Red Sea State of Sudan.

A poster was prepared explaining about the MPAs in Sudan. 10 copies of this poster were printed and distributed to key stakeholders in Sudan. A copy was also given to the representatives from the British Embassy in Sudan in October 2015. A new poster is being prepared and this poster will be translated into Arabic and more copies printed for distribution during the conference (**Annex 04_21-019 Output 4.5_01**).

4.6 Prepare scientific paper(s) for submission to peer-reviewed journals and present findings at international conference.

A short correspondence was published in Nature in October 2014 highlighting the issues facing the conservation of biodiversity in politically unstable regions, resulting from conversations with Wildlife Conservation General Administration staff in Khartoum (May 2014).

Hussey et al. (2014) Conservation: Sanctions derail wildlife protection, Nature, 514, 305.

(Annex 04_21-019 Output 4.6_01)

Following this the DI Project team members have also published another review paper on animal telemetry in the aquatic environments.

Hussey et al. (2015) "Aquatic animal telemetry: A panoramic window into the underwater world" Science. 34 (6240) 1255641-1.

(Annex 04_21-019 Output 4.6_02)

4.7 Prepare media statements and popular articles to communicate interesting findings/actions to national, regional, and international newspapers and TV.

An initial press release has been prepared and shared with key media. A radio interview broadcast was organized with one of the local FM Radio channels in Khartoum State. Interest has been expressed by both the BBC and Aljazeera to cover the fieldwork. There is also interest from the BBC Natural History Unit to do either a short-form, long-form or web-based news article about the project.

A leaflet presenting the project in English and Arabic has been prepared and distributed to key stakeholders (**Annex 04_21-019 Output 4.7_01**).

4.8 Prepare dedicated project website to disseminate project news/results, and broadcast updates using social media (Twitter, Facebook).

A series of domain names for the website were registered. Following a research through potential web agencies able to deliver in both English and Arabic for the site, SUDIA appointed Graphix Design, an agency based in Sudan with an outstanding list of website produced in both languages. The budget proposal (32.500 SDG) was above our original budget estimation, however we decided to select them due to the quality of the work and well organized project schedule and the possibility of having easily the translation in Arabic done. The contract was signed and details and content for the web site drafted (**Annex 04_21-019 Output 4.8_01**). The draft MPA website is now accessible temporarily available at this address:

http://graphix-hosting.com/projects/marine/?page_id=4&lang=en.

The website content needs further copy editing and additional content will be added before the pages are translated into Arabic and made publically available.

3.2 Progress towards project outputs

Output 1:	National capacity to effectively manage two existing MPAs in Sudan strengthened through building a common future vision among a wide range of stakeholders, renovating existing infrastructure, procuring new equipment and using the scientific results to update the DMNP zoning plan.			Comments (if necessary)
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 1.1 Common vision for the future of the MPAs agreed among a broad number of stakeholders by end of Year 3.	No common vision for the MPAs of Sudan.	In progress.	Annex 04_21-019 Output 1.1_01 Annex 04_21-019 Output 1.1_02	The workshop will be held in Q3/2016
Indicator 1.2 DMNP Management Headquarters and Visitors Centre renovated and functional by end of project.	DMNP Management HQ in a state of disrepair and no visitors centre	Plan for the renovation works was prepared, and is now being revised.	Annex 04_21-019 Output 1.2_01	WCGA has already commenced some of the renovation works.
Indicator 1.3. 2 x vessels and other equipment needed for monitoring, control and surveillance procured and operating in DMNP by end of Year 2.	WCGA did not have any working boats or equipment for monitoring control and surveillance.	Two boats have been ordered; delivery expected in the next 2 months.	Annex 04_21-019 Output 1.3_01 Annex 04_21-019 Output 1.3_02	The purchase order was revised as WCGA updated their specifications for the boats.
Indicator 1.4. Zoning plan for DMNP updated to include additional biodiversity hotspots identified using the results of scientific elasmobranch telemetry work (Output 2) by the end of the project.	The local communities were not consulted on the zoning plan from the PERSGA/GEF Master Plan 2004.	Local communities were consulted on the 2004 zoning plan; further participatory mapping work completed; and new zoning plan in preparation.		The re-zoning will be completed in the final year.
Output 2:	Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for			Comments (if necessary)

	monitoring is strengthened by training in scientific and participatory monitoring methods, generating data for use in biodiversity planning and management.			
Indicator 2.1. Acoustic monitors procured and shipped to Sudan and deployed in-water in Year 1 and maintained to project end. Focal species tagged in Year 2 and 3.	An array of bottom monitors was installed in 2012 and animals tagged using satellite and acoustic tags.	New acoustic monitors, batteries and tags were procured and shipped to Sudan; the existing monitors were recovered, these and new monitors will be deployed during the next field phase.	Annex 04_21-019 Output 2.1_01 Annex 04_21-019 Output 2.1_02	Next field phase scheduled for in Q2/2016.
Indicator 2.2. Data derived on spatial movement patterns of key elasmobranch species.	An array of bottom monitors was installed in 2012 and animals tagged using satellite and acoustic tags.	Data from the satellite tagged manta rays has been analysed. Data recovered from the existing monitors waiting to be analysed; new data will be collected during the next field phase.	Fig.2 and Fig. 3	
Indicator 2.3. 3 x Sudanese students trained and participating in telemetry fieldwork to generate data on the spatial ecology of focal elasmobranchs in Year 3.	No Sudanese students trained and participating in telemetry fieldwork.	No Sudanese students trained and participating in telemetry fieldwork. Training to be completed during the next field phase.	Annex 04_21-019 Output 2.1_02	
Indicator 2.4. Elasmobranch telemetry data collated and analysed annually (after each field survey) and report summarising results prepared in Year 3, and shared with relevant government stakeholders.	Field survey in elasmobranch telemetry completed in 2012.	Existing data collated and new data to be collated after next field phase.	Annex 04_21-019 Output 2.1_02	
Indicator 2.5. At least 50% of dive operators (5 out of the 10 companies) currently operating in Sudan reporting daily results to Divers Aware of Sharks (DAS) monitoring programme by end of Year 1 and continuing through to Year 3.	Three out ten companies collecting DAS data.	Three out eight companies are continuing to collect DAS data. Data from 2007 to 2012 analysed by MSc student. New data in the process of being analysed.	Annex 04_21-019 Output 2.5_01	The number of dive operators has gone down from 10 to 8 over the past year.
Indicator 2.6. Sudanese staff member regularly liaising with dive operators and collecting DAS results.	No staff	Full time staff was employed in Port Sudan; a part-time staff member is currently employed.	Annex 04_21-019 Output 2.6_01	
Indicator 2.7. 4 x WCGA Officers / Students trained and qualified SCUBA divers by the end of Year 1 and able to	No WCGA officers with dive qualifications	4 x WCGA staff and 3 x students from RSU trained in diving.	Annex 04_21-019 Output 2.7_01.	

participate in monitoring surveys by the end of the project.				
Indicator 2.8. 4 x Sudanese nationals trained and able to implement coral reef monitoring surveys by the end of the project.	RSU staff trained in ReefCheck monitoring techniques.	Skills gaps identified and additional training in coral identification and video data analysis to be completed during the next field phase.	Annex 04_21-019 Output 2.1_02	
Indicator 2.9. Coral reef monitoring data collated and analysed annually (after each field survey) and report summarising results prepared by Year 3 and shared with relevant government stakeholders.	Archive field data stored on Hi8 and microDV tapes.	Archive field data have been compiled, catalogued; video transect data transferred from tapes into digital format.	Data catalogue will be submitted with YR3 report.	
Indicator 2.10. Geodatabase populated with existing and new datasets.	Existing data stored in different formats, and not in an easily accessible format.	Existing spatial data now better organised and stored in a geodatabase. New datasets prepared using satellite derived variables.	Data catalogue will be submitted with YR3 report.	
Output 3:	Livelihood diversification and improved socio-economic resilience of the communities of Mohammed Qol and Dugonab achieved through providing access to micro-finance to support alternative sustainable IGAs, with a particular focus on IGAs associated with the dive industry, leading to an increased understanding of the economic value and benefits of healthy marine ecosystems.			Comments (if necessary)
Indicator 3.1 Two Community-Based Microfinance Committees established for communities living inside DMNP (Dugonab and Mohammed Qol), results in increased self-employment in nature-based livelihood activities and generate revenue in both Dugonab and Mohammed Qol coastal villages.	No community based microfinance committees	Report on coastal livelihood assessments completed. Establishment of community based micro-finance committees pending. MOU with RSS signed.	Annex 04_21-019 Output 3.1_01 Annex 04_21-019 Output 3.1_02	
Indicator 3.2. Gender-balanced business plans for nature-based ecotourism livelihood opportunities prepared by the end of Year 1.	No business plans	Ecotourism consultant contracted and in process of preparing business plans.	Annex 04_21-019 Output 3.2_01. Annex 04_21-019 Output 3.1_02	
Indicator 3.2B. Ecotourism training delivered to 10 to 15	No one in RSS trained in ecotourism.	Ecotourism consultant delivered training.	Annex 04_21-019 Output 3.2_02.	

Sudanese stakeholders in Year 3.			Annex 04_21-019 Output 3.1_02	
Indicator 3.3. Ecotourism guidelines developed by the end of Year 2, and training provided to 10 x dive operators and 10 x local community representatives by end of Year 3.	No ecotourism guidelines (except the DAS survey manual)	New ecotourism guidelines are in preparation.	Annex 04_21-019 Output 3.3_01.	
Indicator 3.4 Support the development of community-based initiatives that deliver collaborative livelihoods and income generating activities (through access to microfinance).	Previous projects have established community-based initiatives but only one that is currently operational.	New MOU with RSS.	Annex 04_21-019 Output 3.1_02.	
Indicator 3.9 Percentage of dive boat operators and/or number of tourists engaging in community-based income generating activities (guided village tour, guided sea tour on a traditional fishing boat, purchasing items from local artisans, camel tour, etc.), increases from 0%(0) baseline in Year 1 through to 20%(XX) the end of Year 3.	No dive boats working with local communities.	One dive boat operator in the process of preparing a land/sea safari, to commence shortly.	Report from tourism consultant to be delivered shortly.	
Output 4:	Increased awareness of the globally significant marine biodiversity and flagship species found in Sudan's Red Sea among a broad range of national, regional and international stakeholders			Comments (if necessary)
Indicator 4.1. Sudanese Project Coordinator recruited in Year 1, leading day-to-day implementation of project activities through to Year 3.	No project coordinator	Project coordinator recruited January 2015.	Annex 04_21-019 Output 4.1_01	
Indicator 4.2. Project Steering Committee (existing), composed of representatives of key partner organisations, support the implementation of the Darwin Initiative project helping to monitor progress and delivery from Year 1 to Year 3.	No project steering committee meetings	Steering Committee meetings with relevant stakeholders held to discuss the organisation of the conference.		
Indicator 4.3. Bi-annual Darwin reports summarising project findings and reporting on progress and delivery of	No reports	This report constitutes the projects second end of year report (YR2).		

project outputs.				
Indicator 4.4. Annual Stakeholder Workshop participant lists and feedback forms (x3).	No stakeholder workshops	Please see Output 1, Indicator 1.1.		
Indicator 4.5. 500 x Poster about the project produced in Year 2 distributed to tourist establishments, dive operators, schools and other Red Sea State government departments by the end of the project.	No poster.	A poster has been and 10 copies were printed and distributed to stakeholders in Sudan. A new poster will be prepared for distribution during the conference.	Annex 04_21-019 Output 4.5_01	
Indicator 4.6. At least two peer-reviewed paper submitted to a peer-reviewed scientific journal by the end of Year 3; Results presented at one or more international scientific conferences by the end of Year 3;	No papers.	Two papers published in scientific journals; two papers submitted and; two papers in preparation.	Annex 04_21-019 Output 4.6_01 Annex 04_21-019 Output 4.6_02	
Indicator 4.7. Number of press releases to national radio, newspapers and TV in Sudan, UK and internationally in Year 1, 2 and 3.	No publicity	1 x press release was shared with media. 1 x radio interview with a FM radio station. BBC has expressed interest in a news piece and the Natural History unit is interested in a short- or long- format piece.	Annex 04_21-019 Output 4.7_01	
Indicator 4.8. Project website established and accessible online by end of Year 1 with regular updates broadcast through other forms of social media (e.g. Facebook, Twitter) in Year 2 and 3.	No website for the Sudanese MPAs	Draft website for the Sudanese MPAs now live.	Website	

3.3 Progress towards the project Outcome

Outcome:	To strengthen Sudan's MPA management capacity, increase knowledge and awareness of marine biodiversity and flagship species, and assist two local communities to realise biodiversity benefits through sustainable nature-based livelihoods.			Comments (if necessary)
	Baseline	Change by 2016	Source of evidence	
Indicator 0.1 National capacity to effectively manage MPAs, as measured using a standard MPA Management Effectiveness Assessment method (e.g. WWF-World-Bank MPA scorecard or GEF METT equivalent) increases from the baseline score achieved in Year 1 by at least 20% by Year 3.	The WWF-World Bank MPA Scorecard had never been completed in Sudan before the project started. In January 2015 the total score was 21%. One year later, in January 2016, the total score was 43%.	Management effectiveness has increased by 22%.	Annex 04_21-019 Output 1.5_02	The WWF-MPA Scorecard is an internationally recognised method for monitoring management effectiveness. The baseline target of 20% has already been exceeded.
Indicator 0.2 Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for monitoring is improved during the course of the project from Year 1 to Year 3.	Baseline scientific data were available from surveys completed in 2002, 2006, 2007 and 2012.	DAS data and other archived scientific data have been consolidated and are now in a more easily accessible format and a new geodatabase has been prepared. Dive training has been provided to 7 people to allow them to participate in monitoring surveys.	DAS data used in an MSc thesis University of Cardiff. Annex 04_21-019 Output 2.7_01.	Measuring an increase in 'scientific knowledge' and 'monitoring capacity' are conceptually challenging, this will be
Indicator 0.3 Percentage of the 250 households in Dunganab and Mohammed Qol who take up the community-based microfinance initiative reporting improvements in livelihood diversification and income generating capacity as a result, increases from a target of 15% of all households in Year	No access to micro finance initiatives and no diversification of income generating activities	Possible alternative income generating activities identified. Report on coastal livelihood assessments completed. Establishment of community based micro-finance committees pending. One dive boat operator in the process of preparing a land/sea safari in	Annex 04_21-019 Output 3.1_01 Annex 04_21-019 Output 3.1_02	Output indicators have been revised downward and this change has been accepted by DEFRA. We suggest to modify the outcome indicator as follow : 15 % of all household by the end of year 3. A more realistic target.

2 to a target of 30% of all households by Year 3.		partnership with the local communities, to commence shortly.		
Indicator 0.4. Awareness of the globally significant importance and value of marine biodiversity and flagship species in Sudan increased at the local, national, regional and international level by Year 3.	DMNP was previously recognised by Birdlife International as an Important Bird Area (IBA) and as a marine IBA. DMNP was also on the tentative list for UNESCO Man and Biosphere Reserve, while SMNP was on the tentative list as a marine World Heritage site.	DMNP and SMNP have been accepted by the CBD as an Ecologically and Biologically Sensitive Area (EBSA). The DI project has supported the process for DMNP and SMNP to be nominated as the first marine World Heritage site in the Red Sea. The fiche has been submitted for consideration. A website for the MPAs has been prepared. The content is in the process of being edited before it is translated into Arabic. Two scientific papers have been published in international journals, two new publications have been submitted, a book chapter and other scientific papers are under preparation.		The project has been supporting increased recognition of the MPAs of Sudan international processes. The project is also building increased recognition at the national and local level.

3.4 Monitoring of assumptions

Assumption 1.1 Experienced facilitator for the visioning workshop who is able to work with a diverse range of different stakeholders and bring them to a common vision.

Comments: An experienced facilitator is available to run the workshop.

Assumption 1.2 WCGA rangers and officers willing and able to undertake needed renovation works. Running costs of the building ensured.

Comments: WCGA rangers and officers are willing to undertake renovation works. WCGA is also contributing some of the costs of the renovations works.

Assumption 1.3 Proper sea skills trainings can be provided locally (motor boats permits and safety at sea). Capacity to maintain the vessels ensured.

Comments: The Navy school in Port Sudan can provide this type of training and the project team are now investigating who can be sent on this training.

Assumption 1.4 Data from scientific surveys collated and catalogued into geodatabase in a timely manner to enable zoning plans to be updated.

Comments: The data from the previous scientific surveys has been organised and catalogued.

Assumption 1.5 MPA Management Effectiveness Assessments are completed in through discussions with WCGA officers, and the persons involved remain in the same institution at least for the duration of the project.

Comments: The General Manager for the MPAs, and the Manager for DMNP and Manager for SMNP have been trained in how to complete the MPA management effectiveness method.

Assumption 2.1 No logistical problems encountered with transporting the equipment to Sudan.

Comments: The equipment was safely received in Sudan.

Assumption 2.2 Able to recover monitors and no failures in the equipment

Comments: Some of the monitors have been recovered, but due to issues with the security permits there are others that are still in the water.

Assumption 2.4 Suitable candidates are identified for the elasmobranch scientific telemetry training and remain in the same institution at least for the duration of the project

Comments: Suitable candidates will be selected from the students / staff at the RSU.

Assumption 2.5 Staff member employed is approachable and good at outreach work

Comments: The staff member is approachable and good at outreach work.

Assumption 2.6 Commitment and consistency of participating dive operators.

Comments: The dive operators that the project has been working with have supported the Divers Aware of Sharks programme since 2007, and they continue to collect data.

Assumption 2.7 Suitable candidates are identified for the dive training (able to swim and snorkel competently and keen to learn).

Comments: There were 4 x WCGA staff and 3 x students from the RSU that were provided with dive training.

Assumption 2.8 Suitable candidates are identified for the coral reef monitoring training and remain in the same institution at least for the duration of the project

Assumption 2.9 Results of the scientific and monitoring surveys collated into a geodatabase and available for use in re-zoning DMNP and identifying biodiversity hotspots for long-ranging species.

Comments: The existing scientific and monitoring data has been organised and catalogued.

Assumption 3.1 Socio-cultural and economic environment flexible enough to accommodate change.

Comments: The project is finding that there is scope for change, the local communities are interested as are the dive operators.

Assumption 3.2 Resilience of the local communities considered (capacity to cope with abrupt changes - no more tourism coming because of extreme events).

Comments: The local communities are already extremely resilient and cope under extreme circumstances. The introduction of new activities, such as eco-tourism, will need to be done gradually and limited in terms of the duration of access per day, so as to not disrupt the normal day-to-day routines of these communities.

Assumption 3.3 Local interest in the development of eco-tourism initiatives, socio-political stability ensured.

Comments: The project is consulting with the local communities to ensure that they are interested and accepting of the activities developed.

Assumption 3.4 Local interest in establishing CB-MFC, trust established and participants stay committed to this goal.

Comments: The local communities are interested in CB-MFC. But given that the project has been delayed it is not known if it will be possible to implement these activities within the project timeframe.

Assumption 3.5 Local acceptance of gender equity in the composition of trainees.

Comments: There is local acceptable of the need for gender equality in these types of activities, and the need to provide training to men and women separately.

Assumption 3.6 Access to loan capital successfully facilitated from local banks and/or MFIs operational in Red Sea State.

Comments: The project has already established that the local banks are interested in supporting the activities. But given that the project has been delayed it is not known if it will be possible to implement these activities within the project timeframe.

Assumption 3.7 Local acceptance and understanding of the purposes and governance of the MFI

Comments: Given that the project has been delayed it is not known if it will be possible to implement these activities within the project timeframe.

Assumption 3.8 Support provided is sufficient to ensure that repayment and reporting conditions are met.

Comments: Given that the project has been delayed it is not known if it will be possible to implement these activities within the project timeframe.

Assumption 4.1 Suitable local project coordinator with relevant skill base and expertise can be found and employed person is committed to the overall goals of the project.

Comments: Yes a suitable local project coordinator has been found.

Assumption 4.2 Project Steering Committee (existing) continues to provide guidance and support for the successful implementation of Darwin Initiative project

Comments: The project has discarded the need for a steering committee and instead established MOUs with key partner organisations.

Assumption 4.3 No disturbance to project activities due to political unrest.

Comments: This remains a risk, although it has not yet caused set-backs in the project.

Assumption 4.4 Support provided to ensure that local communities can participate in Annual Stakeholder Workshops;

Comments: The project has discarded the need for a steering committee and instead established MOUs with key partner organisations.

Assumption 4.5 Poster is informative and translated into Arabic, and people display in their respective establishments.

Comments: The existing poster is informative however a new poster is now being prepared and will be translated into Arabic for distribution at the conference.

Assumption 4.6 Results of sufficient quality to be of interest to the broader scientific community.

Comments: The collection of new data through the project has been delayed but it will be of interest. The existing data is definitely of interest and the results are in the process of being published.

Assumption 4.7 Interesting results and scientific findings from the Darwin Initiative project are clearly communicated to the media and scientific community.

Comments: The BBC is interested in doing pieces on the project and this will likely happen in 2016.

Assumption 4.8 Web-pages are translated into Arabic to make them accessible to the local community and Red Sea region.

Comments: The website is now ready but requires final editing before it is translated into Arabic.

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

The DI project has been supporting increased recognition of the Sudanese MPAs at the international level through supporting processes to get the MPAs recognised as Ecological and Biologically Significant Areas (EBSA) and as UNESCO World Heritage sites. Scientific papers highlighting the important biodiversity contained within these protected areas have been published and new papers have been accepted to international journals, which will increase recognition of areas.

With regards livelihoods, the DI project undertook a thorough review of previous livelihood related initiatives that have previously been implemented within DMNP. The DI project team consulted with the two local communities' resident in DMNP in an effort to identify suitable alternative income generating activities that they would be interested in pursuing.

The DI project has also provided training to key stakeholders in the RSS in sustainable tourism and ecotourism development. The tourism consultant that delivered this training is now in the process of preparing business plans that will support the involvement of local communities in ecotourism related activities. These will include activities that build links between the dive operators that visit the MPAs and the local communities that live within them, thereby providing an alternative income generating activity for the communities living inside DMNP.

4. Contribution to SDGs

The project is contributing to several Sustainable Development Goals (SDGs). As the project focus is on strengthening the MPAs of Sudan, the first and foremost SGD that the project is supporting is Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development). The improved management of the coastal and marine environment and the use of MPAs as a tool to achieve this also contributes towards Goal 13 (Take urgent action to combat climate change and its impacts).

Through supporting the development of alternative income generating activities the project is supporting Goal 1. (End poverty in all its forms everywhere), Goal 3. (Ensure healthy lives and promote well-being for all at all ages) and Goal 5. (Achieve gender equality and empower all women and girls). Providing support for the development of ecotourism related activities also contributes towards Goal 8. (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) and Goal 9. (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation).

5. Project support to the Conventions, Treaties or Agreements

The project directly contributes to the objectives of all three biodiversity conventions:

CBD: Sudan signed the CBD the 1992/06/09 (ratified 1995/10/30). At the project outset it was expected that the project would increase the capability of Sudan to directly contribute towards the Aichi Biodiversity Targets: 12 and 6 through improving the conservation status of threatened species; 1 and 2, by increasing biodiversity awareness linked to poverty reduction strategies; 11 MPA network planning but also; Targets 10, 14, 17 and 19.

The DI project was invited to attend a regional workshop hosted by the CBD in Dubai between the 19-25 April 2015. The core objective of this meeting was to identify and facilitate the description of Ecologically or Biologically Significant Marine Areas (EBSAs) in the North-West Indian Ocean, Red Sea and Adjacent Gulf Areas.

The workshop was used the scientific criteria for identifying ecologically or biologically significant marine areas in need of protection in open-ocean waters and deep-sea habitats that was adopted at the ninth meeting of the Conference of the Parties to the CBD (COP 9) which adopted the scientific criteria which are as follows:

1. Uniqueness or Rarity
2. Special importance for life history stages of species
3. Importance for threatened, endangered or declining species and/or habitats
4. Vulnerability, Fragility, Sensitivity, or Slow recovery
5. Biological Productivity

6. Biological Diversity

7. Naturalness

At COP10 it was recommended that areas found to meet the EBSA criteria may require enhanced conservation and management measures, and that this can be achieved through a variety of means, including marine protected areas and impact assessments.

Both the project manager Tarik Chekchak and Dr Rebecca Klaus were invited to contribute to the EBSA meeting as experts. Although only Tarik Chekchak was able to attend the meeting in person, he and the other DI team members helped the Sudanese representative (Dr Dirar Nasr) to complete the EBSA templates for Sudan. As a result of this three EBSA proposals were prepared for Sudan, which included the MPAs that the DI project is currently supporting:

- Sanganeb Atoll Marine National Park and Sha'ab Rumi
- Dungonab Bay and Mukkawar Island National Park
- Suakin Archipelago and the Deep South of Sudan.

All three of the EBSA prepared for Sudan were accepted by the CBD. This is an important international process and significant step forward for the project MPAs to be recognized as being of regional and global significance. The fact that DI project was involved in this process and helped prepare the proposals certainly attracted the interest of the workshop participants.

The focal point in Sudan of the CBD is:

Prof. Haider Elsafi Mohamed Ali Shapo
Secretary General
Higher Council for Environment and Natural Resources (HCENR)
Gamaa Street
P.O. Box 10488
Khartoum
Sudan

CITES: Two species of manta rays and the scalloped hammerhead shark, all recently listed on CITES Appendix II, are abundant in Sudanese waters and form the focus species of this project. Awareness raising over CITES regulations and compliance is required at state and federal levels. Project data will feedback directly to the CITES coordinator in Khartoum with whom contact has been established.

CMS: The project will generate knowledge of relevance to the MOU on Migratory Sharks. There is a paucity of data on the residency and movement patterns of large elasmobranchs in the Red Sea region. The focus species, are designated as vulnerable and endangered (IUCN Red list) and are considered highly migratory. This spatial movement data will feed directly into spatial management planning of migratory species and formalise Sudan's commitment to CMS (not yet signatory - range country). Sudan has however signed the CMS MOU on Sharks, MOU on Dugong, and Birds of prey / raptors. During the CBD workshop, the CMS secretariat requested the support of the project leader to convince Sudan to sign the CMS.

6. Project support to poverty alleviation

The coastal livelihoods assessment that was carried out in early Jan/Feb 2015 was the first step the project took towards tackling issues related to poverty alleviation. During the fieldwork the two park communities (Mohamed Qol and Dungonab) and their traditional leaders discussed the challenges and difficulties facing their livelihoods. The discussions identified a number of areas where the project may be supportive and contribute to poverty alleviation. This year the project sub-contracted tourism consultant to assess the viability of developing Sudan and the MPAs as a tourism destination. The consultant ran a workshop to introduce the concept of sustainable tourism including eco-tourism to key stakeholders in Port Sudan. The

consultant will take the lead on developing business plans for the development of small scale ecotourism. These plans will consider in detail the potential direct and indirect impacts of the proposals on the local communities.

7. Project support to Gender equity issues

The local partner SUDIA has previous experience of mainstreaming gender issues and is familiar with the local communities' resident inside DMNP. The communities within DMNP are Beja and these societies are generally patriarchal. Women can work and earn money but would preferably do so from within their homes. There are two women's societies and two women's centres, one in each of the main villages that were established with the support of previous projects. These societies are the organisations through which the DI project can work with the women in the local communities. The women's centres are poorly equipped but they do provide an alternative location where the women feel comfortable to do work together. Consultations with the women's societies that were carried out earlier this year have identified several potential livelihoods related activities that the women would be interested in pursuing (e.g. improving handicrafts, such as jewellery making, weaving and sewing, rearing poultry for eggs and meat, making cakes and pastries). Further consultations are now needed with the women's societies to better refine these ideas. The products that the women's society produce could be sold through the visitors' centre. These further consultations and any training needs to be done by women as it is considered to be culturally inappropriate to speak to men outside of the immediate family.

8. Monitoring and evaluation

After the first Darwin Initiative workshop, the different partners involved have prepared together Monitoring and Evaluation Plan defining indicators, data sources, frequency, templates and responsibilities. It has been updated when the two change requested with have submitted to DEFRA have been accepted.

We use also a web-based tool named "Basecamp" where every partner could share key information and production under the relevant activities. Basecamp offers to-do lists, wiki-style web-based text documents, milestone management, file sharing, time tracking, and a messaging system. All key documents and templates are also available on this web based management platform. We have also regular skype meetings between UK, Canada, France and Sudan.

9. Lessons learnt

The project has faced a number of challenges since the outset, the main one being the sudden passing of Mohammed Younis during the first year of the project.

What has worked well over the last year has been the efforts the project has taken to strengthen the existing partnership arrangements and to create new partnerships. The project has created MOUs to formalise the arrangements with two national entities. While these organisations were already informal partners in the project, the MOUs clearly state the roles and responsibilities of these organisations, which has helped to clarify how they will help the project and how they will benefit from doing so.

The other activities that have worked well are those where the project team have provided to the national authorities in engaging in international processes (e.g. EBSA and World Heritage). These processes are an important way to increase the recognition and status of these MPAs. Other projects could similarly offer their support to the national authorities responsible for MPAs in engaging in these types of processes.

It is important for a project such as this to be able to adapt to the changing circumstances. The project has had to shift the timing of field work and other activities on a number of occasions.

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

During the last DI review, it was suggested that we simplify some indicators and activities. As a

result of this suggestion and the feedback resulting from the recent political changes in Sudan (among them, the nomination of the new Governor of the Red Sea State), we requested changes to a suite of activities and their related indicators. The Change Request has been accepted by DEFRA the 8th March 2016.

11. Other comments on progress not covered elsewhere

The DI project has had to delay the implementation of a number of activities due to bureaucratic issues, in particular related to the obtaining the necessary security permissions. These bureaucratic challenges began just after the project started, when the lead partner Brigadier Mohammed Younis suddenly passed away. Mohammed Younis had previously been personally responsible for handling all of the various administrative matters in Sudan on behalf of the Cousteau Society. So his passing was a huge loss practically as well as personally. Since then the DI project team and national partners have been working hard to resolve these issues, as reported in the HYR2. One of the other key partners then faced their own set of bureaucratic challenges which meant it was hard for them to operate freely in the RSS. To address this issue, the DI project has established new MOUs with other partners in the RSS.

On 9th October 2015, Mr Tarik Chekchak (Principle Investigator) met with the newly appointed Governor (Wally) of the Red Sea State (RSS), and Dr Moamer El Tayeb, the Dean of the Faculty of Marine Science at the Red Sea University (RSU), Port Sudan. The purpose of this meeting was to discuss the need to renew the formal collaboration between the Cousteau Society and RSS and the RSU. During this meeting it was agreed that:

- Two new Memorandum of Understanding (MOU) would be prepared, one between Cousteau and the RSS and the other between Cousteau and the RSU for the Darwin Initiative project.
- The MOU with the RSS would establish the arrangements for the community based livelihood activities, through a specific partnership with the RSS Ministry of Tourism and Environment (RSS-MTE). This MOU will also define area of possible partnerships between Cousteau and the RSS in integrated coastal and ocean management.
- The MOU with RSU would establish the arrangements for the scientific activities planned for implementation under the DI project to be done in partnership with the RSU.
- These MOUs would also establish the arrangements for the provision of training of RSU and RSS-MTE staff (e.g. coral reefs, elasmobranchs, ecotourism) and the arrangements with regards equipment, data, and the publishing of scientific results.

Initially it was planned that these agreements would be signed in early December 2015. The MoU with the RSU was signed on 25th February 2016. The Governor (Wally) of the RSS and the Dean of Marine Sciences were confident that these MOUs would be sufficient to alleviate the security issues that the project has been facing over the previous few months.

12. Sustainability and legacy

The DI project team has been invited to attend two high profile events this year, and jointly organised and hosted a third event:

- CBD Ecologically and Biologically Significant Area (EBSA) Workshop
- UNESCO Marine World Heritage for the Arab States
- UNESCO Strengthening the Scientific Partnerships for the Marine Protected Areas of Sudan.

The MPAs are now recognised as an EBSA and the proposal for these sites to become the first Marine World Heritage site in the Red Sea has been submitted for consideration to UNESCO.

13. Darwin Identity

All the presentations that the DI project team have given at the international events mentioned above have included the use of the Darwin Initiative and UK Aid logos. The project has produced a leaflet and poster which also properly recognise the support given. In Sudan, the relevant authorities responsible for the MPAs (WCGA) now recognise the Darwin Initiative project as a distinct entity, as well as the local administrative authority, the Red Sea State, the Red Sea University, as well as various other organisations. The project is in the final stages of preparing the website for the DI project, which is focussed upon the MPAs of Sudan. The project does not currently have a Twitter / Instagram / Flickr / Blog /YouTube account but will be establishing the use of these communication tools over the coming year.

14. Project Expenditure

Changes were accepted by DEFRA in the budget allocation the 8th March 2016:

- April to March 2015-2016: £42,000 instead of £93,750
- April to March 2016-2017: £95,400 instead of £93,750
- April to September 2017-2018: £50,100 instead of £0

Justification : A 6 month no-cost extension was accepted by DEFRA on 4th November 2014. The no-cost extension was accepted without a budget re-allocation for the activities that will occur during the last 6 months of the project. Our project is due to finish in September 2017 instead of April 2017 and we requested this budget reallocation to ensure that we can finance the activities that will be completed during the final 6 months of the DI project.

As a result, there are sometimes significant variances compared to the original budget and we have assumed that it was more relevant to indicate the global variance (at the end of table) compared to what has been accepted by Defra.

Table 1 Project expenditure during the reporting period (1 April 2015 – 31 March 2016)

Project spend (indicative) since last annual report	2015/16 Grant (£)	2015/16 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)		0	N.A	Change request accepted by DEFRA
<i>Lead organisation</i>	0	0		
<i>Partner organisation</i>		0		
Consultancy cost (lead+partner)			N.A	Change request accepted by DEFRA
<i>Output 1.</i>		0		
<i>Output 2</i>		0		
<i>Output 3</i>				
<i>Output 4</i>				
Overhead Costs			N.A	Change request accepted by DEFRA
Travel and subsistence			N.A	Change request accepted by DEFRA

<i>International travel</i>				
<i>National travel</i>				
<i>Fieldwork travel and subsistence</i>				
Operating Costs			N.A	Change request accepted by DEFRA
Capital items (see below)			N.A	Change request accepted by DEFRA
Others (see below)		0	N.A	Change request accepted by DEFRA
Acoustic tags (consumables)		0		
TOTAL			4%	Variance compared to the 42 000 £ accepted by DEFRA

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2015-2016

Project summary	Measurable Indicators	Progress and Achievements April 2015 - March 2016	Actions required/planned for next period
<p>Impact</p> <p>To rebrand Sudan as a global marine biodiversity hotspot and ecotourism destination, contributing to MDG and biodiversity convention targets, by ensuring local community livelihoods benefit from strengthening in biodiversity management.</p>		<p>Project has supported the increased recognition of the MPAs through international processes. The MPAs have been accepted as CBD EBSA and are nominated for the status of UNESCO marine World Heritage sites.</p>	
<p>Outcome</p> <p>To strengthen Sudan's MPA management capacity, increase knowledge and awareness of marine biodiversity and flagship species, and assist two local communities to realise biodiversity benefits through sustainable nature-based livelihoods.</p>	<p>Indicator 0.1. National capacity to effectively manage MPAs, as measured using a standard MPA Management Effectiveness Assessment method (e.g. WWF-World-Bank MPA scorecard or GEF METT equivalent) increases from the baseline score achieved in Year 1 by at least 20% by Year 3.</p> <p>Indicator 0.2. Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for monitoring is improved during the course of the project from Year 1 to Year 3.</p> <p>Indicator 0.3. Percentage of the 250 households in Dunganab and Mohammed Qol who take up the community-based microfinance initiative reporting improvements in</p>	<p>MPA management effectiveness score increased from 21% in January 2015 to 43% in January 2016.</p> <p>Compilation of existing scientific data, better organisation of those data and preparation of geodatabase; collection of existing acoustic monitors, purchase of new monitors; preparation of scientific publications submitted.</p> <p>Completion of coastal livelihood assessment report and identification of AIG; sustainable tourism training workshop and preparation of business plans. Note the indicator target may need to be modified to reflect the</p>	<p>Further support to be provided to WCGA staff during this year including provision of boats and other equipment to support monitoring, control and surveillance of MPA, training in boat handling and navigation, renovation works to buildings etc.</p> <p>Field work planned to collect more scientific data and provide training to students and staff in the use of acoustic telemetry techniques, and to refine/improve coral reef monitoring.</p> <p>Completion of business plans for AIG and provision of technical support to implement those activities.</p>

	significant importance and value of marine biodiversity and flagship species in Sudan increased at the local, national, regional and international level by Year 3.	increase the global awareness and status of the project site MPAs and the associated biodiversity these areas support (EBSA and marine World Heritage). Scientific papers produced.	the international status of marine World Heritage.
Output 1. National capacity to effectively manage two existing MPAs in Sudan strengthened through building a common future vision among a wide range of stakeholders, renovating existing infrastructure, procuring new equipment and using the scientific results to update the DMNP zoning plan.	<p>Indicator 1.1. Common vision for the future of the MPAs agreed among a broad number of stakeholders by end of Year 3.</p> <p>Indicator 1.3. DMNP Management Headquarters and Visitors Centre renovated and functional by end of project.</p> <p>Indicator 1.3. 2 x vessels and other equipment needed for monitoring, control and surveillance procured and operating in DMNP by end of Year 2.</p> <p>Indicator 1.4. Zoning plan for DMNP updated to include additional biodiversity hotspots identified using the results of scientific elasmobranch telemetry work (Output 2) by the end of the project.</p> <p>Indicator 1.5. MPA Management Effectiveness Assessment scores completed using standard scorecard method in Year 1 and repeated in Year 2, Year 3, with results showing an increase by 20% from the baseline.</p>	<p>Indicator appropriate. Completion pending the completion of the stakeholder workshop.</p> <p>Indicator appropriate. Works planned have been revised following discussions with the staff at WCGA as they have started some of the works with national budget.</p> <p>Indicator appropriate. Purchase order for boats revised following discussions with the staff from WCGA who requested a different specification for the boat.</p> <p>Indicator appropriate. Participatory mapping work completed, other work on the zoning plan for DMNP will be completed over the coming works after the field work phase.</p> <p>Indicator appropriate. WWF-World Bank MPA scorecard completed in January 2015 by staff from WCGA and repeated in January 2016. Results show a 22% increase in MPA management effectiveness over the past 12 months.</p>	
Activity 1.1. Community Visioning Workshop (x1) held with a broad group of stakeholders (local community members, businessmen, state and federal government officials), and communications on progress maintained through Output 4.		Planning meetings held on 5 th July 2015 and 20 th Sept 2015. Workshop rescheduled for Q2/2016.	
Activity 1.2. Existing park building in DMNP renovated to act as both a Ranger Station (an office, accommodation, and basic research facilities) and a Visitors Centre to act as the hub for nature-based ecotourism activities.		Contract for renovation works prepared. Works put on hold due to the issue with the security permits. Works rescheduled to commence Q2/2016.	

<p>Activity 1.3. Procure two small vessels and other equipment needed for monitoring, control and surveillance in existing 2 MPAs, and facilitate related training (skipper licence and permits).</p>	<p>Purchase order prepared for the procurement of two vessels. Purchase put on hold due to the issue with the security permits. Then WCGA requested a change in the boat specification and a new purchase order has now been completed.</p> <p>New purchase order prepared and delivery expected Q2/2016.</p>
<p>Activity 1.4. Update zoning plan for DMNP on the basis of the community visioning workshop and scientific surveys and identify key biodiversity hotspots for consideration as new MPAs for inclusion in MPA Network.</p>	<p>Community consultation on the existing 2004 zoning scheme completed.</p> <p>Participatory mapping of resource use patterns completed.</p> <p>New zoning plan in preparation to be completed by YR3.</p>
<p>Activity 1.5. Meeting with WCGA Officers at the start and end of the project to complete MPA Management Effectiveness Assessments (using WWF-World Bank Scorecard method or equivalent).</p>	<p>WCGA Officers provided with training in how to complete WWF-World Bank MPA Scorecard method in January 2015. MPA Scorecard completed.</p> <p>MPA Scorecard completed again in January 2016 and results show a 22% improvement in MPA management effectiveness over the past year.</p> <p>MPA Scorecard will be completed again in January 2017.</p>
<p>Output 2. Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for monitoring is strengthened by training in scientific and participatory monitoring methods, generating data for use in biodiversity planning and management</p>	<p>Indicator 2.1. Acoustic monitors procured and shipped to Sudan and deployed in-water in Year 1 and maintained to project end. Focal species tagged in Year 2 and 3.</p> <p>Indicator 2.2. Data derived on spatial movement patterns of key elasmobranch species.</p> <p>Indicator 2.3. 3 x Sudanese students trained and participating in telemetry fieldwork to generate data on the spatial ecology of focal elasmobranchs in Year 3.</p> <p>Indicator 2.4. Elasmobranch telemetry data collated and analysed annually (after each field survey) and report summarising results prepared in Year 3, and shared with relevant government stakeholders.</p> <p>Indicator 2.5. At least 50% of dive operators (5 out of the 10 companies) currently operating in Sudan reporting daily results to Divers Aware of Sharks</p> <p>Indicator appropriate. Acoustic monitors and tags procured. Existing monitors recovered and awaiting collection. New monitors and tags to be deployed in Q2 and Q3 / 2016.</p> <p>Indicator appropriate. Pending completion of field phase.</p>

	<p>(DAS) monitoring programme by end of Year 1 and continuing through to Year 3.</p> <p>Indicator 2.6. Sudanese staff member regularly liaising with dive operators and collecting DAS results.</p> <p>Indicator 2.7. 4 x WCGA Officers / Students trained and qualified SCUBA divers by the end of Year 1 and able to participate in monitoring surveys by the end of the project.</p> <p>Indicator 2.8. 4 x Sudanese nationals trained and able to implement coral reef monitoring surveys by the end of the project.</p> <p>Indicator 2.9. Coral reef monitoring data collated and analysed annually (after each field survey) and report summarising results prepared by Year 3 and shared with relevant government stakeholders.</p> <p>Indicator 2.10. Geodatabase populated with existing and new datasets.</p>	<p>Indicator appropriate. Pending completion of field phase.</p> <p>Indicator appropriate. 4 WCGA Officers trained in diving, and 3 x RSU students.</p> <p>Indicator appropriate. Pending completion of field phase.</p> <p>Indicator appropriate. Compilation and organisation of existing data has been completed.</p> <p>Indicator appropriate. Geodatabase is in the process of being compiled.</p>
<p>Activity 2.1. Acoustic monitor array deployment inside DMNP and Sanganeb MPA and flagship elasmobranch species tagged.</p>		<p>Acoustic monitors and tags procured. Existing monitors recovered and awaiting collection. New monitors and tags to be deployed in Q2 and Q3 / 2016.</p>
<p>Activity 2.2. Continuous data derived on spatial movements, residency, home-range and migration patterns of focal flagship elasmobranch species through telemetry techniques.</p>		<p>Pending. As above this activity will be implemented jointly by the DI project in partnership with the Red Sea University staff as per the new MOU that was signed on 25th February 2016.</p>
<p>Activity 2.3. Training of Sudanese partners in telemetry field methods for elasmobranchs (x 3), telemetry array maintenance and data download and organisation.</p>		<p>Pending. As above, the training in telemetry will be provided to students / staff at the Red Sea University as per the new MOU that was signed on 25th February 2016</p>
<p>Activity 2.4. Data compilation, analysis and reporting of elasmobranch movement data (telemetry).</p>		<p>The data on manta ray movement patterns that were obtained from the satellite tagged mantas has been analysed. The data on the bottom monitors needs to be downloaded. Other activities pending the completion of 2.1-2.3.</p>

Activity 2.5. Training of Sudanese staff member to liaise with regional dive industry over Divers Aware of Sharks monitoring project.	The staff member was identified and employed until May 2015 the contract was suspended pending the resolution of the security issue. A staff member based in Port Sudan is continuing to work on the project part-time.
Activity 2.6. Data compilation, analysis and reporting of DAS monitoring surveys.	Three dive operators have continued to collect data for the DAS monitoring programme. A Master student from the University of Cardiff (UK) compiled the existing DAS data and has now completed and been awarded his MSc. The new data collected by the dive operators has been compiled and reformatted and is in the process of being analysed.
Activity 2.7. Training of WCGA Officers / students in SCUBA diving.	4 x WCGA Officers and 3 x students from the Red Sea University have been trained in SCUBA diving in October 2015. Further training will be delivered in Q2/Q3 2016.
Activity 2.8. Training of Sudanese partners in coral reef monitoring survey methods (Cousteau Divers, Reef Check) and field surveys (x 3) to implement monitoring.	Coral reef monitoring activities being undertaken by RSU and additional training to be provided in Q2/Q3 2016.
Activity 2.9. Data compilation, analysis and reporting of coral reef monitoring surveys.	Archive field data have been compiled and catalogued, including the transfer of old video survey data from tapes into digital formats.
Activity 2.10. Preparation of geodatabase to consolidate existing and new monitoring datasets (e.g. DAS data, telemetry data, coral reef monitoring etc), and satellite derived environmental characteristics (e.g. sea surface temperature, chlorophyll) providing the basis for spatial planning and re-zoning of DMNP.	A geodatabase has been prepared and is being populated with available data. These data and the new data collected through the project will provide the basis for the re-zoning. An introductory training in the freeware software Quantum GIS (QGIS) has been delivered (May 2016) and the data will eventually be shared in a format that can be accessed through this software.
<p>Output 3. Livelihood diversification and improved socio-economic resilience of the communities of Mohammed Qol and Dugonab achieved through providing access to micro-finance to support alternative sustainable IGAs, with a particular focus on IGAs associated with the dive industry, leading to an increased understanding of the economic value and benefits of healthy marine ecosystems.</p>	<p>Indicator 3.1 Two Community-Based Microfinance Committees established for communities living inside DMNP (Dugonab and Mohammed Qol), results in increased self-employment in nature-based livelihood activities and generate revenue in both Dugonab and Mohammed Qol coastal villages.</p> <p>Indicator 3.2. Gender-balanced business plans for nature-based ecotourism livelihood opportunities prepared by the end of Year 1.</p> <p>Indicator 3.2B Ecotourism training delivered to 10 to 15 Sudanese stakeholders in Year 3.</p> <p>Indicator appropriate. Progress in establishing the committees has been delayed by the lack of security permits.</p> <p>Indicator appropriate. Business concepts were identified in Year 1, and plans are under development.</p> <p>Indicator appropriate. This is a new indicator that was added during the last change request, submitted in March 2016.</p>

	<p>Indicator 3.3. Ecotourism guidelines developed by the end of Year 2, and training provided to 10 x dive operators and 10 x local community representatives by end of Year 3.</p> <p>Indicator 3.4. Support the development of community-based initiatives that deliver collaborative livelihoods and income generating activities (through access to microfinance).</p> <p>Indicator 3.9. Percentage of dive boat operators and/or number of tourists engaging in community-based income generating activities (guided village tour, guided sea tour on a traditional fishing boat, purchasing items from local artisans, camel tour, etc.), increases from 0%(0) baseline in Year 1 through to 20%(XX) the end of Year 3.</p>	<p>Indicator appropriate. Ecotourism guidelines are in now available in draft form.</p> <p>Indicator appropriate. This is a new indicator that was added during the last change request, submitted in March 2016.</p> <p>Indicator appropriate. The monitoring of dive boat operators and their participation in community based income generating activities has commenced.</p>
<p>Activity 3.1 Field visit to refine outcomes from previously completed coastal livelihood assessment in the two villages in DBMP (Mohammed Qol and Dungonab).</p>		<p>Completed.</p>
<p>Activity 3.2 Prepare business plans for nature-based ecotourism livelihood opportunities that are both equitable and gender balanced.</p>		<p>Business concepts developed, business plans in preparation, to be completed by Q3/2016.</p>
<p>Activity 3.2B 4 days training in ecotourism strategy</p>		<p>Training workshop completed March 2016.</p>
<p>Activity 3.3 Develop ecotourism guidelines and deliver training to familiarise WCGA rangers, dive operators and local community representatives with guidelines.</p>		<p>Ecotourism guidelines drafted, graphics in preparation. Training in the use of guidelines to be completed in Q3/2016.</p>
<p>Activity 3.4 Support the development of community-based initiatives that deliver collaborative livelihoods and income generating activities (through access to microfinance).</p>		<p>New MOU with the Red Sea State now signed. SUDIA has already held discussions with the Red Sea branch of the Central Bank of Sudan and they indicated their readiness to work on and provide capital for small loans.</p>
<p>Activity 3.9 Monitoring of the economic value of the dive industry (number of boats and tourists) and tourist numbers engaging in IGAs.</p>		<p>Monitoring of the dive tourism sector has commenced in Q2/2016 and will continue through to the end of the project.</p>
<p>Output 4. Increased awareness of the globally</p>	<p>Indicator 4.1. Sudanese Project Coordinator recruited in Year 1, leading</p>	<p>Indicator appropriate.</p>

<p>significant marine biodiversity and flagship species found in Sudan's Red Sea among a broad range of national, regional and international stakeholders</p>	<p>day-to-day implementation of project activities through to Year 3.</p> <p>Indicator 4.2. Project Steering Committee (existing), composed of representatives of key partner organisations, support the implementation of the Darwin Initiative project helping to monitor progress and delivery from Year 1 to Year 3.</p> <p>Indicator 4.3. Bi-annual Darwin reports summarising project findings and reporting on progress and delivery of project outputs.</p> <p>Indicator 4.4. Annual Stakeholder Workshop participant lists and feedback forms (x3).</p> <p>Indicator 4.5. 500 x Poster about the project produced in Year 2 distributed to tourist establishments, dive operators, schools and other Red Sea State government departments by the end of the project.</p> <p>Indicator 4.6. At least two peer-reviewed paper submitted to a peer-reviewed scientific journal by the end of Year 3; Results presented at one or more international scientific conferences by the end of Year 3;</p> <p>Indicator 4.7. Number of press releases to national radio, newspapers and TV in Sudan, UK and internationally in Year 1, 2 and 3.</p> <p>Indicator 4.8. Project website established and accessible online by end of Year 1 with regular updates broadcast through other forms of social</p>	<p>Indicator may need to be reworded. The Project Steering Committee is no longer needed. Meetings are being held with a stakeholders with regard to the consultation workshop that is being planned.</p> <p>Indicator appropriate. The project is completing and submitting the required reports.</p> <p>See Output 1. Indicator 1.1.</p> <p>Indicator appropriate. 10 copies of a draft poster were printed and distributed to stakeholder. The project poster and leaflet are currently being revised and will be printed for distribution at the workshop.</p> <p>Indicator appropriate. Two papers already published in scientific journals. Two other papers have been submitted, and two are in preparation, and one book chapter.</p> <p>Indicator appropriate. One press releases has been prepared and released and one radio broadcast has been held. The BBC Natural History Unit is interested in a short or long form piece and BBC News is also interested.</p> <p>Indicator appropriate. Website available. In the process of being edited before translation.</p>
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	media (e.g. Facebook, Twitter) in Year 2 and 3.	
Activity 4.1. Sudanese staff recruited and trained to lead day-to-day project activities and communications with stakeholders.		A Sudanese staff member was contracted as Operations Officer as of January 2015.
Activity 4.2. Bi-annual Project Steering Committee meetings for Darwin Project to discuss project progress and monitor delivery.		The SUDIA Director, Abdel-Rahman El Mahdi and a senior staff member Ahmed Hanafi have been holding Steering Committee meetings with relevant stakeholder to discuss the organisation of the conference.
Activity 4.3. Preparation of bi-annual Darwin Initiative Project reports.		This report constitutes the projects second end of year report (YR2).
Activity 4.4. Annual Stakeholder Workshops held with a broad group of stakeholders to keep them up to date on Darwin Initiative project findings (x3).		Please see Output 1, Activity 1.1.
Activity 4.5. Prepare a poster summarising key project outcomes for distribution to dive operators and other organisations in Red Sea State of Sudan.		A poster was prepared explaining about the MPAs in Sudan. 10 copies of this poster were printed and distributed to key stakeholders in Sudan. A new poster is being prepared and this poster will be translated into Arabic and more copies printed for distribution during the conference
Activity 4.6. Prepare scientific paper(s) for submission to peer-reviewed journals and present findings at international conference.		Hussey et al. (2014) Conservation: Sanctions derail wildlife protection, Nature, 514, 305. Hussey et al. (2015) "Aquatic animal telemetry: A panoramic window into the underwater world" Science. 34 (6240) 1255641-1.
Activity 4.7. Prepare media statements and popular articles to communicate interesting findings/actions to national, regional, and international newspapers, radio and TV.		A radio interview broadcast was organized with one of the local FM Radio channels in Khartoum State. Interest has been expressed by both the BBC and Aljazeera to cover the fieldwork. There is also interest from the BBC Natural History Unit to do either a short-form, long-form or web-based news article about the project. A leaflet presenting the project in English and Arabic has been prepared and distributed to key stakeholders.
Activity 4.8. Prepare dedicated project website to disseminate project news/results, and broadcast updates using social media (Twitter, Facebook).		The draft MPA website is now accessible online at this address: http://graphix-hosting.com/projects/marine/?page_id=4&lang=en . The website content needs further copy editing and additional content will be added before the pages are translated into Arabic.

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
<p>Impact: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p>Outcome: To strengthen Sudan's MPA management capacity, increase knowledge and awareness of marine biodiversity and flagship species, and assist two local communities to realise biodiversity benefits through sustainable nature-based livelihoods.</p>	<p>0.1 National capacity to effectively manage MPAs, as measured using a standard MPA Management Effectiveness Assessment method (e.g. WWF-World-Bank MPA scorecard or GEF METT equivalent) increases from the baseline score achieved in Year 1 by at least 20% by Year 3.</p> <p>0.2 Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for monitoring is improved during the course of the project from Year 1 to Year 3.</p> <p>0.3 Percentage of the 250 households in</p>	<p>1.1 Progress updates reported in Darwin Initiative bi-annual reports (x 6) and minutes of Project Steering Committee Meetings (x 3); 1.2-1.3 Photographs documenting renovation works and new vessels and equipment; National press release about the opening of the Ranger/Visitor Information Centre; 1.4 New biodiversity hotspots identified and updated zoning plan for DMNP; 1.5. MPA Management Effectiveness Assessment in Year 1 and Year 3.</p> <p>2.1 and 2.2. Invoices from the procurement of acoustic tags and monitors; 2.3 and 2.4 Elasmobranch Survey/Telemetry Training Report (incl. training log); Video and photographic records; 2.5. Data collected from dive operators participating in Divers Aware of Sharks programme entered in database; 2.7 Dive certificates of trainees; 2.9. Coral Reef Monitoring Report (incl. training log); Video and photographic records; 2.10 Geodatabases with results of all monitoring and scientific surveys (e.g. derived telemetry data/coral reef surveys), existing habitat maps and other satellite derived environment variables (temperature, chlorophyll etc);</p>	<ul style="list-style-type: none"> • Relationships between Red Sea State government and WCGA remain stable; • Experienced facilitator that is able to manage a broad range of stakeholders and bring them to a common vision; • The park building is in suitable condition for renovation and there is sufficient commitment from WCGA to undertake required work; • Results of the scientific and monitoring surveys collated into a geodatabase and available for use in re-zoning DMNP; • WCGA are interested to learn about MPA Management Effectiveness Assessment methods and to monitor progress. • No problems encountered in transporting acoustic telemetry equipment to Sudan; • No significant natural or man-made impacts occur in the study region during the project that impacts the environment and /or prevents the team from undertaking required field work and training; • No significant equipment failures or losses;

	<p>Dungonab and Mohammed Qol who take up the community-based microfinance initiative reporting improvements in livelihood diversification and income generating capacity as a result, increases from a target of 15% of all households in Year 2 to a target of 30% of all households by Year 3.</p> <p>0.4 Awareness of the globally significant importance and value of marine biodiversity and flagship species in Sudan increased at the local, national, regional and international level by Year 3.</p>	<p>3.1 Updated Community Based Livelihood Assessment Report; 3.2 Business plans; 3.2B Tourism training workshop report training 3.3. Ecotourism guidelines and training workshop report. 3.4 Report on development of community-based initiatives that deliver new livelihood and income generating activities 3.9 Report on dive boat operator survey</p> <p>4.1. Staff contract 4.2. Report from Project Steering Committee 4.3. DI project reports 4.4. 3 x Annual Stakeholder Workshop Reports; Workshop participant lists and feedback forms; 4.5. Poster showing project objectives, results and biodiversity hotspots in Sudan Red Sea; 4.6. Scientific papers submitted to peer-reviewed journals; Proceedings of international conferences; 4.7. All media (newspaper, radio and TV) coverage documented and summarised; 4.8 Project webpage hosted on Cousteau website and updates to website broadcast through newsfeeds on project partners facebook pages.</p>	<ul style="list-style-type: none"> • Suitable trainees are identified and remain in the same institution at least for the duration of the project; • Commitment and consistency of dive operators participating in DAS surveys and assisting fieldwork operations; • Continued support by WCGA for all fieldwork operations. • Community based livelihood assessment identifies viable gender balanced livelihood options; • Socio-cultural and economic environment flexible enough to accommodate change; • Resilience of the local communities considered (capacity to scope with abrupt changes - no more tourism coming because of extreme events). • Suitable local project coordinator with relevant skill base and expertise can be found and employed person is committed to the overall goals of the project; • Results of sufficient quality to be of interest to scientific community; • Interesting results and scientific findings from the Darwin Initiative project are clearly communicated to the media and scientific community.
<p>Outputs: 1. National capacity to effectively manage two existing MPAs in Sudan strengthened through building a common future vision among a wide range of stakeholders, renovating existing infrastructure, procuring new</p>	<p>1.1 Common vision for the future of the MPAs agreed among a broad number of stakeholders by end of Year 3.</p> <p>1.2 DMNP Management Headquarters and Visitors Centre renovated and</p>	<p>1.1 Progress updates reported in Darwin Initiative bi-annual reports (x 6) and minutes of Project Steering Committee Meetings (x 3);</p> <p>1.2-1.3 Photographs documenting renovation works and new vessels and</p>	<ul style="list-style-type: none"> • Relationships between Red Sea State government and WCGA remain stable; • Experienced facilitator that is able to manage a broad range of stakeholders and bring them to a common vision;

<p>equipment and using the scientific results to update the DMNP zoning plan.</p>	<p>functional by end of project.</p> <p>1.3. 2 x vessels and other equipment needed for monitoring, control and surveillance procured and operating in DMNP by end of Year 2.</p> <p>1.4 Zoning plan for DMNP updated to include additional biodiversity hotspots identified using the results of scientific elasmobranch telemetry work (Output 2) by the end of the project.</p> <p>1.5 MPA Management Effectiveness Assessment scores completed using standard scorecard method in Year 1 and repeated in Year 2, Year 3, with results showing an increase by 20% from the baseline.</p>	<p>equipment; National press release about the opening of the Ranger/Visitor Information Centre;</p> <p>1.4. New biodiversity hotspots identified and updated zoning plan for DMNP;</p> <p>1.5 MPA Management Effectiveness Assessment in Year 1 and Year 3.</p>	<ul style="list-style-type: none"> • The park building is in suitable condition for renovation and there is sufficient commitment from WCGA to undertake required work and ensure that the renovated building is maintained and the running costs covered; • Results of the scientific and monitoring surveys collated into a geodatabase and available for use in re-zoning DMNP; • WCGA are interested to learn about MPA Management Effectiveness Assessment methods and to monitor progress.
<p>2. Scientific knowledge about marine biodiversity and flagship species is increased and national capacity for monitoring is strengthened by training in scientific and participatory monitoring methods, generating data for use in biodiversity planning and management.</p>	<p>2.1 Acoustic monitors procured and shipped to Sudan and deployed in-water in Year 1 and maintained to project end. Focal species tagged in Year 2 and 3.</p> <p>2.2 Data derived on spatial movement patterns of key elasmobranch species.</p> <p>2.3. 3 x Sudanese students trained and participating in telemetry fieldwork to generate data on the spatial ecology of focal elasmobranchs in Year 3.</p> <p>2.4 Elasmobranch telemetry data collated and analysed annually (after each field survey) and report summarising results prepared in Year 3, and shared with relevant government stakeholders.</p> <p>2.5 At least 50% of dive operators (5 out of the 10 companies) currently operating in Sudan reporting daily results to Divers Aware of Sharks (DAS) monitoring programme by end of Year 1 and continuing through to Year 3.</p>	<p>2.1 and 2.2. Invoices from the procurement of acoustic tags and monitors;</p> <p>2.3 and 2.4 Elasmobranch Survey/Telemetry Training Report (incl. training log); Video and photographic records;</p> <p>2.5. Data collected from dive operators participating in Divers Aware of Sharks programme entered in database;</p> <p>2.7 Dive certificates of trainees;</p> <p>2.9 and 2.10. Coral Reef Monitoring Report (incl. training log); Video and photographic records;</p>	<ul style="list-style-type: none"> • No problems encountered in transporting acoustic telemetry equipment to Sudan; • No significant natural or man-made impacts occur in the study region during the project that impacts the environment and /or prevents the team from undertaking required field work and training; • No significant equipment failures or losses; • Suitable trainees are identified and remain in the same institution at least for the duration of the project; • Commitment and consistency of dive operators participating in DAS surveys and assisting fieldwork operations; • Continued support by WCGA for all fieldwork operations.

	<p>2.6 Sudanese staff member regularly liaising with dive operators and collecting DAS results.</p> <p>2.7. 4 x WCGA Officers / Students trained and qualified SCUBA divers by the end of Year 1 and able to participate in monitoring surveys by the end of the project.</p> <p>2.8. 4 x Sudanese nationals trained and able to implement coral reef monitoring surveys by the end of the project.</p> <p>2.9. Coral reef monitoring data collated and analysed annually (after each field survey) and report summarising results prepared by Year 3 and shared with relevant government stakeholders.</p> <p>2.10. Geodatabase populated with existing and new datasets.</p>	<p>2.10 Geodatabases with results of all monitoring and scientific surveys (e.g. derived telemetry data/coral reef surveys), existing habitat maps and other satellite derived environment variables (temperature, chlorophyll etc);</p>	
<p>3. Livelihood diversification and improved socio-economic resilience of the communities of Mohammed Qol and Dugonab achieved through providing access to micro-finance to support alternative sustainable IGAs, with a particular focus on IGAs associated with the dive industry, leading to an increased understanding of the economic value and benefits of healthy marine ecosystems.</p>	<p>3.1 Two Community-Based Microfinance Committees established for communities living inside DMNP (Dugonab and Mohammed Qol), results in increased self-employment in nature-based livelihood activities and generate revenue in both Dugonab and Mohammed Qol coastal villages.</p> <p>3.2 Gender-balanced business plans for nature-based ecotourism livelihood opportunities prepared by the end of Year 1.</p> <p>3.2B. Ecotourism training delivered to 10 to 15 Sudanese stakeholders in Year 3.</p> <p>3.3 Ecotourism guidelines developed by the end of Year 2, and training provided to 10 x dive operators and 10 x local community representatives by end of Year 3.</p> <p>3.4 Support the development of community-based initiatives that deliver</p>	<p>3.1 Updated Community Based Livelihood Assessment Report;</p> <p>3.2 Business plans;</p> <p>3.2B Tourism training workshop report training</p> <p>3.3. Ecotourism guidelines and training workshop report.</p> <p>3.4 Report on development of community-based initiatives that deliver new livelihood and income generating activities</p> <p>3.9 Report on dive boat operator survey</p>	<ul style="list-style-type: none"> • Community based livelihood assessment identifies viable gender balanced livelihood options; • Interest of local community in the proposed CB-MFC and trust established; • Access to loan capital from local banks and/or MFIs operational in Red Sea State successfully facilitated; • Local acceptance of gender equity in the composition of trainees within CB-MFC; • Training and support provided to CB-MFC is sufficient to ensure that participants are able to meet repayment and reporting conditions; • Commitment of dive operators to engage their clients with local

	<p>collaborative livelihoods and income generating activities (through access to microfinance).</p> <p>3.9. Percentage of dive boat operators and/or number of tourists engaging in community-based income generating activities (guided village tour, guided sea tour on a traditional fishing boat, purchasing items from local artisans, camel tour, etc.), increases from 0%(0) baseline in Year 1 through to 20%(XX) the end of Year 3.</p>		<p>community based organisation;</p> <ul style="list-style-type: none"> • Political situation in Red Sea State remains sufficiently stable and tourist visitor numbers remains stable (or increases); • Socio-cultural and economic environment flexible enough to accommodate change; • Resilience of the local communities considered (capacity to scope with abrupt changes - no more tourism coming because of extreme events).
<p>4. Increased awareness of the globally significant marine biodiversity and flagship species found in Sudan's Red Sea among a broad range of national, regional and international stakeholders</p>	<p>4.1 Sudanese Project Coordinator recruited in Year 1, leading day-to-day implementation of project activities through to Year 3.</p> <p>4.2 Project Steering Committee (existing), composed of representatives of key partner organisations, support the implementation of the Darwin Initiative project helping to monitor progress and delivery from Year 1 to Year 3.</p> <p>4.3 Bi-annual Darwin reports summarising project findings and reporting on progress and delivery of project outputs.</p> <p>4.4 Annual Stakeholder Workshop participant lists and feedback forms (x3).</p> <p>4.5 500 x Poster about the project produced in Year 2 distributed to tourist establishments, dive operators, schools and other Red Sea State government departments by the end of the project.</p> <p>4.6 At least two peer-reviewed paper submitted to a peer-reviewed scientific journal by the end of Year 3; Results presented at one or more international scientific conferences by the end of Year</p>	<p>4.1. Staff contract</p> <p>4.2. Report from Project Steering Committee</p> <p>4.3. DI project reports</p> <p>4.4. 3 x Annual Stakeholder Workshop Reports; Workshop participant lists and feedback forms;</p> <p>4.5. Poster showing project objectives, results and biodiversity hotspots in Sudan Red Sea;</p> <p>4.6. Scientific papers submitted to peer-reviewed journals; Proceedings of international conferences;</p> <p>4.7. All media (newspaper, radio and TV) coverage documented and summarised;</p> <p>4.8 Project webpage hosted on Cousteau website and updates to website broadcast through newsfeeds on project partners facebook pages.</p>	<ul style="list-style-type: none"> • Suitable local project coordinator with relevant skill base and expertise can be found and employed person is committed to the overall goals of the project; • Project Steering Committee (existing) continues to provide guidance and support for the successful implementation of Darwin Initiative project; • Adequate support provided to ensure that a local community representatives and other key stakeholders can all participate in Annual Stakeholder Workshops; • Results of sufficient quality to be of interest to scientific community; • Interesting results and scientific findings from the Darwin Initiative project are clearly communicated to the media and scientific community.

	<p>3;</p> <p>4.7 Number of press releases to national radio, newspapers and TV in Sudan, UK and internationally in Year 1, 2 and 3.</p> <p>4.8 Project website established and accessible online by end of Year 1 with regular updates broadcast through other forms of social media (e.g. Facebook, Twitter) in Year 2 and 3.</p>		
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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)

Activity 1.1. Community Visioning Workshop (x1) held with a broad group of stakeholders (local community members, businessmen, state and federal government officials), and communications on progress maintained through Output 4.

Activity 1.2. Existing park building in DMNP renovated to act as both a Ranger Station (an office, accommodation, and basic research facilities) and a Visitors Centre to act as the hub for nature-based ecotourism activities.

Activity 1.3. Procure two small vessels and other equipment needed for monitoring, control and surveillance in existing 2 MPAs, and facilitate related trainings (skipper licence and permits).

Activity 1.4. Update zoning plan for DMNP on the basis of the community visioning workshop and scientific surveys and identify key biodiversity hotspots for consideration as new MPAs for inclusion in MPA Network.

Activity 1.5. Meeting with WCGA Officers at the start and end of the project to complete MPA Management Effectiveness Assessments (using WWF-World Bank Scorecard method or equivalent).

Activity 2.1. Acoustic monitors array deployment inside DMNP and Sanganeb MPA and flagship elasmobranch species tagged.

Activity 2.2. Continuous data derived on spatial movements, residency, home-range and migration patterns of focal flagship elasmobranch species through telemetry techniques.

Activity 2.3. Training of Sudanese partners in telemetry field methods for elasmobranchs (x 3), telemetry array maintenance and data download and organisation

Activity 2.4. Data compilation, analysis and reporting of elasmobranch movement data (telemetry).

Activity 2.5. Training of Sudanese staff member to liase with regional dive industry over Divers Aware of Sharks monitoring project

Activity 2.6. Data compilation, analysis and reporting of DAS monitoring surveys.

Activity 2.7. Training of WCGA Officers / students in SCUBA diving

Activity 2.8. Training of Sudanese partners in coral reef monitoring survey methods (Cousteau Divers, Reef Check) and field surveys (x 3) to implement monitoring.

Activity 2.9. Data compilation, analysis and reporting of coral reef monitoring surveys.

Activity 2.10. Preparation of geodatabase to consolidate existing and new monitoring datasets (e.g. DAS data, telemetry data, coral reef monitoring etc), and satellite derived environmental characteristics (e.g. sea surface temperature, chlorophyll) providing the basis for spatial planning and re-zoning of DMNP.

Activity 3.1. Field visit to refine outcomes from previously completed coastal livelihood assessment in the two villages in DBMP (Mohammed Qol and Dungonab).

Activity 3.2. Prepare business plans for nature-based ecotourism livelihood opportunities that are both equitable and gender balanced.

Activity 3.2B. 4 day ecotourism workshop.

Activity 3.3. Develop ecotourism guidelines and deliver training to familiarise WCGA rangers, dive operators and local community representatives with guidelines.

Activity 3.4. Establish 2 x Community-based Microfinance Committees (CB-MFCs), one in Dungonab and the other in Mohammed Qol.

Activity 3.5. 2 x CB-MFC trained in business skills (book-keeping, planning and financial management, marketing and quality control, legal issues) in Year 2.

Activity 3.6. Establish and maintain linkages with local banks and MF providers to support self-employment and income generation activities among park population for Dungonab and Mohammed Qol

Activity 3.7. Provision of support to the 2 x CB-MFCs and monitoring of performance, to ensure repayment and reporting conditions are met.

Activity 3.8. Livelihood impact Assessment in the two communities of Dungonab and Mohamed Qol

Activity 3.9. Monitoring of the economic value of the dive industry and tourist numbers engaging in IGAs.

Activity 4.1. Sudanese staff recruited and trained to lead day-to-day project activities and communications with stakeholders.

Activity 4.2. Bi-annual Project Steering Committee meetings for Darwin Project to discuss project progress and monitor delivery.

Activity 4.3. Preparation of bi-annual Darwin Initiative Project reports.

Activity 4.4. Annual Stakeholder Workshops held with a broad group of stakeholders to keep them up to date on Darwin Initiative project findings (x3)

Activity 4.5. Prepare a poster summarising key project outcomes for distribution to dive operators and other organisations in Red Sea State of Sudan.

Activity 4.6. Prepare scientific paper(s) for submission to peer-reviewed journals and present findings at international conference.

Activity 4.7. Prepare media statements and popular articles to communicate interesting findings/actions to national, regional, and international newspapers and TV.

Activity 4.8. Prepare dedicated project website to disseminate project news/results, and broadcast updates using social media (Twitter, Facebook)

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
TRAINING MEASURES								
2	Number of people to attain Masters qualification (MSc, MPhil etc.)	Male	UK	1	0			1
3	Number of people to attain other qualifications (e.g. Not standard measures 1 or 2 above) *			0	0			4
4A	Number of undergraduate students to receive training *			0	5			4
4B	Number of training weeks to be provided				2			1
4C	Number of postgraduate students to receive training *				5			5
4D	Number of training weeks to be provided				2			1
6 A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above) *	Male		0	7			20
6B	Number of training weeks to be provided				2			2
7	Number of (e.g., different types - not volume - of material produced) training materials to be produced for use by host country			2	2			4
RESEARCH MEASURES								
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country			1	1			2
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording			2	2			2
11A	Number of papers to be published in peer reviewed journals			0	2			2
11B	Number of papers to be submitted to peer reviewed journals							
12 A	Number of computer based databases to be established and handed over to the host country			0	0			1
12B	Number of computer based databases to be enhanced and handed over to the host country			0	0			1
13 A	Number of species reference collections to be established and handed over to the host country(ies)			0	0			1
13 B	Number of species reference collections to be enhanced and			0	0			1

	handed over to the host country(ies)							
DISSEMINATION MEASURES								
14A	Number of conferences/seminars/workshops to be organised to present/disseminate findings			0	1			4
14B	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated.			1	2			3
PHYSICAL MEASURES								
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)			17 578	2 285			74 690 (45 520 from Co- financing)
21	Number of permanent educational/training/research facilities, structures, or organisations to be established and then continued after Darwin funding has ceased			0	0			1
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased			0	0			20
FINANCIAL MEASURES								
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work			56 525	36 032	32 582	92 557	125 139

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)
Sharks and Rays of Sudan. A conservation and management programme benefiting local communities *	Leaflet in Arabic and English	Noémie Stroh, Nigel Hussey, Abdel Rahman El Mahdi, Rebecca Klaus. 2015	Female	French	Pixels Advertising (Abu Dhabi)	http://www.cousteau.org/fr/wp-content/uploads/2014/06/flyer-english.pdf http://www.cousteau.org/fr/wp-content/uploads/2014/06/flyer-arabic.pdf
EBSA area N°23: Area No. 23: Sanganeb Atoll/Shā'ab Rumi*	Report to CBD / CMS	Dirar Nasr, Tarik Chekchak, Rebecca Klaus, Nigel Hussey. 2015	Male	Sudanese	Technical report to the CBD	http://www.cbd.int/ebsa/
EBSA area N° 24 : Dungonab Bay/Mukawar Island Area*	Report to CBD / CMS	Dirar Nasr, Tarik Chekchak, Rebecca Klaus, Nigel Hussey. 2015	Male	Sudanese	Technical report to the CBD	http://www.cbd.int/ebsa/
Final Draft Management Plan for Dungonab Bay and Mukkawar Island National Park 2016-2021	Management Plan	Klaus 2016	Female	British	PERSGA	Not yet available online.