Darwin Initiative
Final Report

*To be completed with reference to the Reporting Guidance Notes for Project Leaders (http://darwin.defra.gov.uk/resources/) it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)*

Darwin project information

Project Reference	20-009
Project Title	**Delivering an MPA network for fisheries and biodiversity for Central Africa (Republic of Congo & Gabon)**
Host country(ies)	Republic of Congo & Gabon
Contract Holder Institution	University of Exeter (**UoE**)
Partner Institution(s)	Conkouati-Douli National Park, Congo (**CDNP**)
	Ministry of Forest Economy and Sustainable Development (**MEFDD**)
	Wildlife Conservation Society, Congo Programme (**WCS-RoC**)
	Agence National des Parcs Nationaux, Gabon (**ANPN**)
	Partenariat pour les Tortues Marines du Gabon (**PTMG**)
	Wildlife Conservation Society, Gabon Programme (**WCS-GAB**)
Darwin Grant Value	£294,226
Funder (DFID/Defra)	DFID
Start/End dates of Project	April 2013 – October 2015 (30 months)
Project Leader Name	Prof. Brendan J. Godley and Dr. Matthew Witt
Project Website	http://darwininitiativecentralafrica.wordpress.com/
	http://www.seaturtle.org/tracking/?project_id=924
	http://www.seaturtle.org/tracking/index.shtml?project_id=1047
Report Author(s) and date	Dr Kristian Metcalfe, Prof. Brendan J. Godley and Dr Matthew J. Witt – 29th January 2016

1   Project Rationale

The Problem: The Republic of Congo and Gabon (***Figure 1***) have significant natural resources with potential for poverty alleviation. However, whilst significant efforts have been focused on land, marine biodiversity is largely neglected, despite substantial industrial and artisanal fishing pressure.

Key biodiversity includes:
- **Major fishing resources:** currently exploited through industrial and artisanal fleets. There is marked under-capacity for spatial management and assessment/mitigation of bycatch.

- **Globally important, yet understudied, marine mammal populations**: Multiple species subject to bycatch in industrial and artisanal fisheries.
- **Globally important marine turtle populations:** Foraging area and/or migratory route for four species of sea turtles all subject to illegal take and incidental capture in fisheries.
- **Globally important, yet understudied, shark populations**: Multiple shark species taken by artisanal fisheries in large numbers as both target and incidental catch.
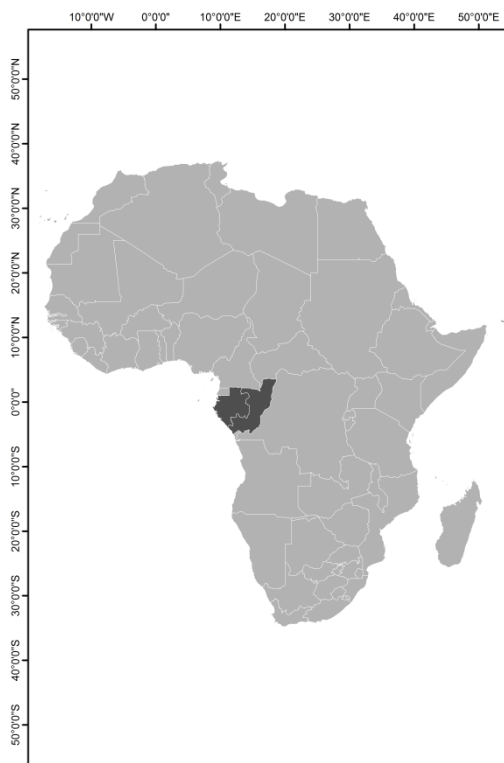

Figure 1 Location of the Republic of Congo and Gabon (dark grey filled polygons) on the west coast of Central Africa.

Project Aim: To improve the management of marine resources, secure access to important fishing grounds for fisheries-dependent communities, and promote sustainable livelihoods and the conservation of globally important marine vertebrate populations many covered by CITES and CMS (e.g. marine mammals and marine turtles).

Objectives: To address these aims there are clear needs to: (i) improve capacity and develop the existing knowledge and skills base in-country; (ii) characterise small-scale artisanal fisheries due to their essential role in food security, employment, and its potential role in poverty alleviation; (iii) fill key knowledge gaps related to marine biodiversity of regional importance; (iv) integrate available information on the spatial distribution of biodiversity and threats; and finally (v) identify priority areas for conservation zoning. More specifically, the overall aim of the project is to increase awareness among stakeholders to the importance of marine biodiversity and sustainable fisheries in the region; and support the development of a scientifically evidenced, representative MPA network that meets national and international conservation targets, whilst minimising impacts on competing sectors. In particular, this project has a strong focus on maintaining access to important fishing areas, improving profitability, sustainability and resource management to conserve and augment biodiversity and artisanal fisher livelihoods.

2 Project Achievements

2.1 Outcome

The overall purpose was to lead to *"Integrated and effective management of marine ecosystems in Central Africa (Congo and Gabon) as a result of a scientifically informed network of interconnected Marine Protected Areas (MPAs) that enhance ecological integrity while contributing to food security and poverty reduction in coastal communities in the region".* To do this, the project set out to implement a series of inter-connected research, implementation, training and awareness raising activities. The outputs of these activities made a significant contribution to regional efforts to improve the conservation of marine biodiversity and resources particularly in Gabon, where a new network of MPAs including community and industrial fishing zones was announced. Whilst a network of MPAs was not yet established in Congo, significant progress has been made to ensure that the identification of candidate sites was based on

robust scientific evidence that was previously lacking. With further investment, it is likely that this goal will be reached in Congo too.
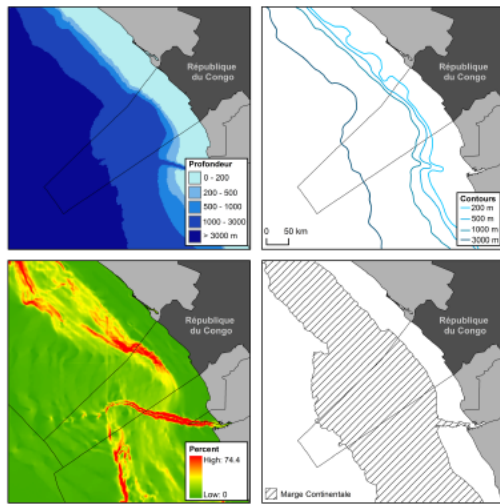
2.2   Impact: achievement of positive impact on biodiversity and poverty alleviation

The higher level impact of the Darwin Initiative Project was: *"Poverty alleviation, increased food security, and sustainable use of marine biodiversity through an effective marine protected area network in Congo and Gabon".*

In Gabon, there is clear evidence that the scientific and participatory research conducted during the project has made a significant contribution towards achieving this goal. This is demonstrated by a recent announcement to create a new network of marine protected areas (*see speech by His Excellency The President of Gabon Ali Bongo Ondimba in Sydney at the 2014 IUCN World Parks Congress*). The network will consist of ten marine parks covering over 18,000 square miles (46,000 square kilometres), equivalent to 23% of Gabon's territorial waters and EEZ (Exclusive Economic Zone) – far exceeding the standard 10% target. In addition to increased protection of marine biodiversity, data collected on the spatial distribution and patterns of fishing effort with fisheries-dependent communities was incorporated into the decision making process, leading to the announcement that the Government will also establish a network of community and industrial fishing zones. These designations will maintain access to important fishing areas (as highlighted by GPS tracking undertaken during the project) and through the designation of new industrial fishing zones will ensure food security (by reducing illegal and unregulated fishing effort) and so enhance livelihoods of fishers operating in this sector. The Government's commitment to conservation of marine biodiversity and the sustainable use of marine resources is also further evident following the creation of a new organisation known as the Conseil Nationale de la Mer (National Council of the Sea). The primary role of this organisation will be to coordinate government action in three key areas: (1) maritime safety; (2) protection of the marine environment; and (3) the sustainable management of natural (fisheries, oil and mineral) marine resources.

In Congo, the project has made significant progress towards achieving this goal. In particular, the Marine Biodiversity Atlas for the Republic of Congo provides a comprehensive overview of the data available to support more effective marine spatial planning efforts (***Figure 2***). Engagement with fisheries-dependent communities far exceeded planned project targets (4 focal communities) with data on the spatial distribution and patterns of fishing effort collected from 23 of the 26 (88%) communities operating along the coast (***Figure 3***). To date these and other key data have been utilised to highlight the application of marine spatial planning to assess a range of policy scenarios that consider the important role of the petrochemical and fisheries sectors in supporting the local and national economy (***Figure 4***). Furthermore, socio-economic data (i.e. dependency, operating costs, annual income, earnings and profitability) collected as part of the Darwin Initiative Project will serve as a baseline from which future interventions, management changes and designation of marine protected areas can be evaluated (***Figure 5***).
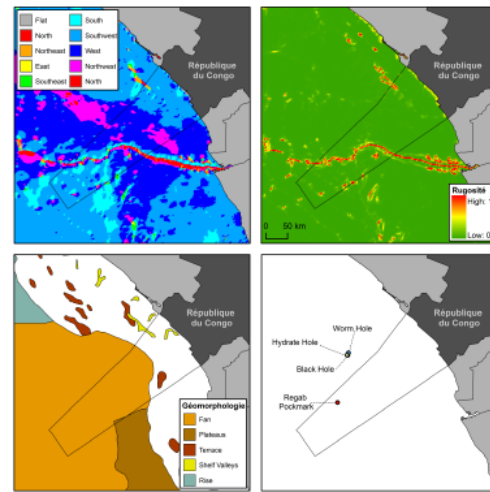
Overall, this project has greatly improved the understanding and awareness of the importance of the regions marine biodiversity, such as sea turtles and the pressure they face from the diverse fisheries sectors that operate in these waters (*see Annex 5 Publications*). The project has also highlighted key knowledge gaps and has created strong interest in an evidence-based approach to effectively address marine biodiversity conservation issues and the long-term sustainability of the marine (fisheries) resources.

Figure 2 Example of four extracts from the 53 page Darwin Marine Biodiversity Atlas for the Republic of Congo. *Source: Metcalfe, K., Abernethy, K.E., Bitsindou, A., Collins, T., Dengui, J.C., Fay, M.J., Fisher, J.A., Formia, A., Gately, M., Maxwell, S.M., Mboumba, R., Rainey, H.J., Parnell, R.J., Pikesley, S., Tilley, D., Turner, R.A., VanLeeuwe, H., Witt, M.J., Godley, B.J. (2015) Atlas de la Biodiversité Marine de La République du Congo. Marine Biodiversity Atlas of the Republic of Congo. Version II September 2015. Defra Darwin Initiative Project 20-009. University of Exeter, UK. 53 p.*
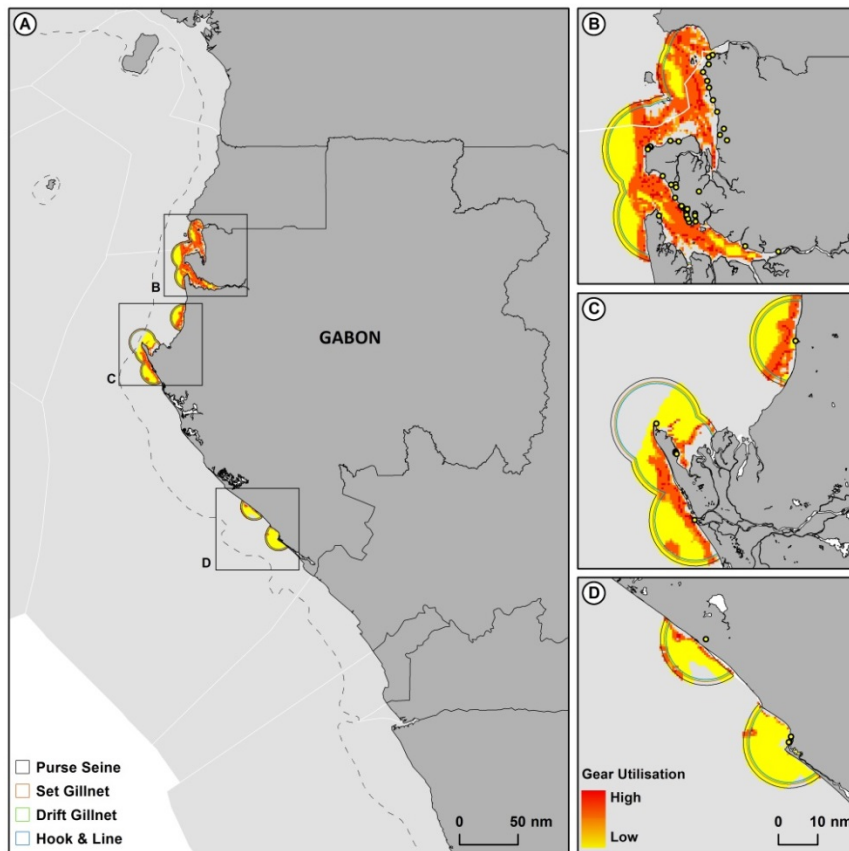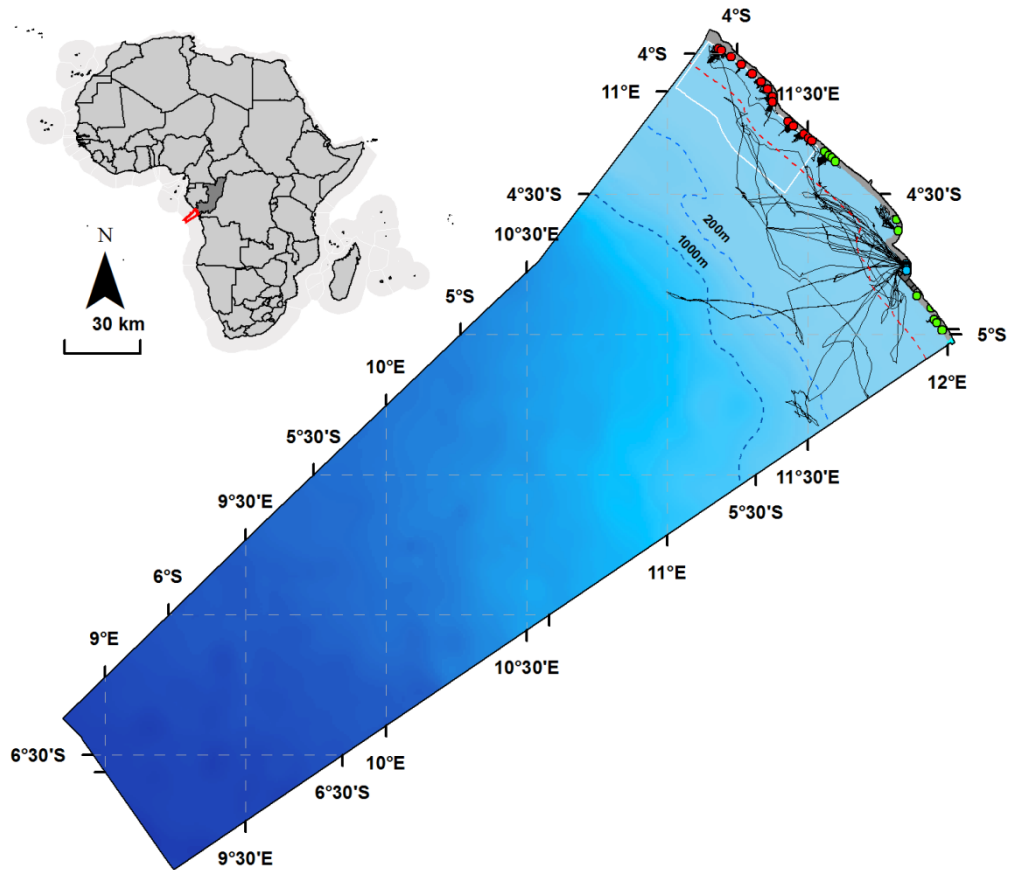
Figure 3 Top spatial footprint of small-scale fisheries in Congo, and spatial footprint and cumulative utilisation (fishing pressure) by different gear types along the coast of Gabon derived using GPS tracking.
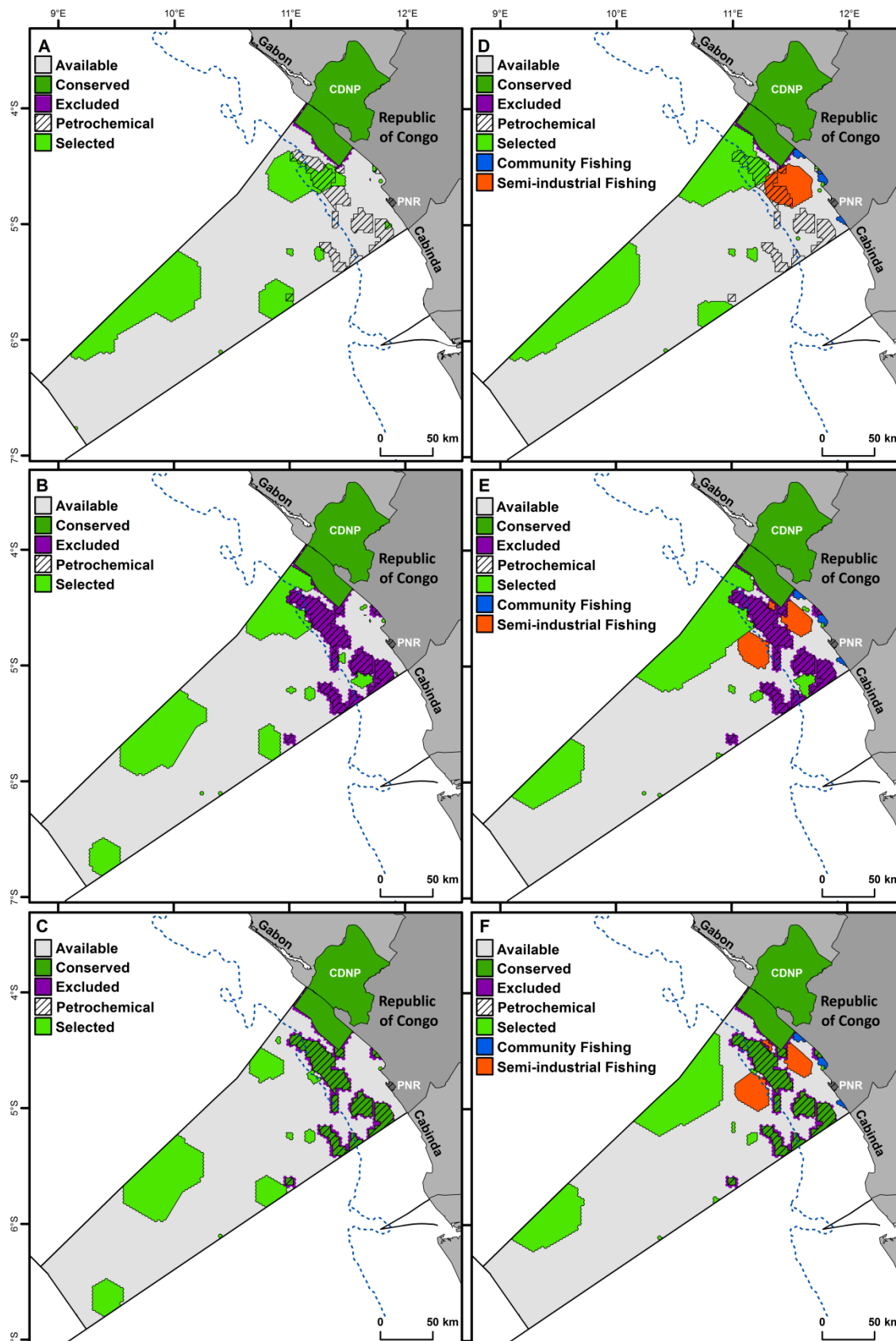
Figure 4 Identifying priority areas for conservation zoning when considering differing socio-economic and political objectives: (a) location of priority areas irrespective of existing economic activities (i.e. petrochemical exploration; (b) location of priority areas when excluding areas allocated to other economic activities (i.e. petrochemical exploration); (c) location of priority areas when co-locating marine protected areas within areas allocated to resource extraction (i.e. petrochemicals); and (d), (e) and (f) represent the same scenarios but factoring in community and industrial fishing zones.
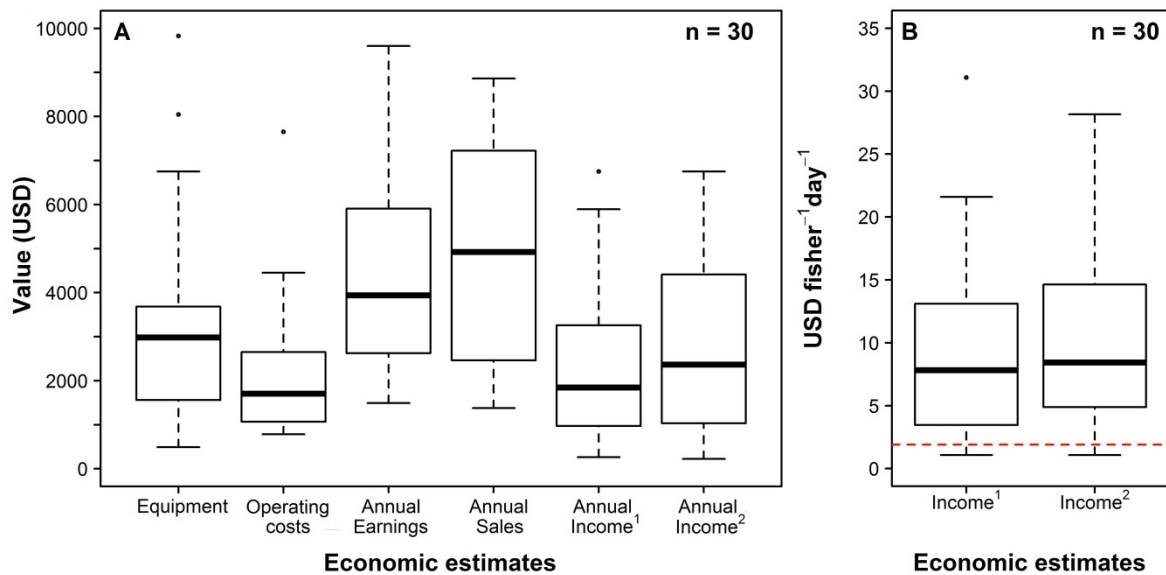
Figure 5 Baseline socio-economic estimates in USD derived from 25% of fishers (n = 30 respondents) operating in Conkouati-Douli National Park: (A) value of equipment owned by fishers', annual operating costs, income (derived from estimates of earnings and catch sales) and net annual income; and (B) income in USD per fisher per day derived from fishing. Annual income[1] and Annual income[2] derived by subtracting operating costs from annual earnings, and operating costs from annual sales, respectively. These annual estimates were then scaled to reflect duration of fishing season provided by each fisher to generate two estimates of daily income. Dashed red line indicates global poverty line of $1.90 per day (WorldBank, 2015; IMF, 2015).

2.3 Outputs

The project largely achieved all its outputs as detailed in the logical framework, meeting all targets and greatly exceeding most (e.g. level of community engagement, spatial data incorporated into Marine Biodiversity Atlases, and in-country expert time). Knowledge surrounding pressures on the regions marine biodiversity and small scale fisheries sector has been greatly expanded as evidenced by the resulting publications and spatial data incorporated into subsequent analyses. Awareness of the importance of the region's marine biodiversity and need for a scientifically evidenced and well managed network of MPAs was also greatly enhanced through technical training, leading to announcement of a new network of marine protected areas in Gabon exceeding the 10% target (i.e. 23% of EEZ). Baseline estimates of bycatch have been established revealing that sharks constitute a significant proportion of catches; mitigation trials have been identified and discussed with fishers in focal communities leading to agreement to deploy nets further offshore.

3 Project Partnerships

The lead partner for the project was the University of Exeter (**UoE**), which was comprised of a team with a broad range of technical and analytical skills from conservation science and policy, education, spatial ecology, fisheries, social science and community engagement. The role of the University of Exeter was to coordinate all project activities including research and training as well as to provide technical and analytical support to deliver project outputs. Research, training and awareness raising initiatives were facilitated in-country by several partner organisations, including: (1) Wildlife Conservation Society Gabon and Congo Country Programmes (**WCS-GAB**, **WCS-RoC**), who provided logistical and technical support for all aspects of the project, acting as facilitator with government agencies, and fund administrator for

the local side of the project; (2) the NGO Partenariat pour les Tortues Marines du Gabon (**PTMG**), who led awareness raising initiatives and supported training workshops in marine biodiversity monitoring; and (3) several national government agencies including, the Ministry of Forest Economy and Sustainable Development (**MEFDD**) and Conkouati-Douli National Park, Congo (**CDNP**) in the Republic of Congo, and the Agence National des Parcs Nationaux (**ANPN**) in Gabon, who facilitated research by contributing vehicles and staff to training, research and awareness raising and engagement activities.

The relationship with project partners was maintained throughout by substantial periods of in-country field work undertaken by the Darwin Research Fellow (**DRF**) Dr Kristian Metcalfe (*Gabon 26 weeks; Congo 36 weeks*). During periods where the **DRF** was not present in-country regular communication between partners was maintained through conference calls, meetings in the UK and email circulation lists. In addition, monitoring and evaluation of progress towards project outcomes was supported by regular annual in-country meetings with all project partners and the Project Lead Professor Brendan Godley (*Gabon 4 weeks; Congo 4 weeks*).

Additional Unforeseen Collaborations: Through several in-county partners the Darwin Initiative Project developed several new links and collaborations with a range of educational and non-governmental organisations that promote biodiversity conservation in the region.

In Gabon these included:
- **Aventures sans Frontières (ASF):** a local NGO based in Libreville working on marine vertebrate research and environmental education.
- **Fondation Liambissi:** a local NGO based in Port Gentil carrying out work in turtle conservation, coastal erosion and environmental education.
- **Ibonga:** a local NGO based in the Gamba area working with local communities on environmental education, sustainable management, and sea turtle monitoring.
- **World Wide Fund for Nature, Gabon Programme (WWF-GAB):** based in the Gamba area working on environmental education and sea turtle monitoring provided logistical support and staff to support extended biodiversity surveys.

In the Republic of Congo these included:
- **Comité de Gestion des Ressources Naturelles (COGEREN):** a local NGO based in Conkouati-Douli National Park (CDNP) comprised of local stakeholders involved in the development of the parks management plans. Representatives from COGEREN also helped local staff extend research initiatives beyond the CDNP, with a specific focus on ensuring that all fishing communities are incorporated into future decisions.
- **Association de Conservation de la Biodiversité (Rénatura):** a local NGO that promotes sustainable development through biodiversity conservation and outreach activities, using sea turtles as a flagship species.
- **Project for the Application of Law for Fauna Republic of Congo (PALF):** a local NGO dedicated to improving legal protection, law enforcement and reducing corruption.

At the end of the project, the partnerships demonstrated great strength, with communication and collaboration of all parties leading to collaborations that will continue beyond the current Darwin Initiative Project. Many of the collaborations that emerged during the project are representative of a nascent, growing interest in the themes addressed and the Darwin Initiative was the vehicle that served to draw these groups together. Given the natural overlaps of many of these groups' interests we are confident that partners will remain in contact. In many cases follow-up projects are already underway and some collaborations have been formalised, with the University of Exeter (**UoE**) requested to provided analytical (GIS) and scientific advice to

Rénatura. The **UoE** also continues to work closely with staff from **ANPN** and both the **WCS** Gabon and Congo Country programmes to fill research gaps that address current political needs to help support the development of an extensive national MPA network and its effective management.

4   Contribution to Darwin Initiative Programme Outputs

4.1   Project support to the Conventions (CBD, CMS and/or CITES)

The project was designed to contribute broadly to obligations under the Millennium Ecosystem Assessment (MEA), Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species (CITES), and the Convention on Migratory Species (CMS). In particular, capacity building, participatory research with fisheries-dependent communities and awareness raising initiatives contributed to *CBD Articles 5, 6, 7, 8, 10, 12, 13, 14, 16,* and *17*. More specifically, the data gathered as part of the project was used to help fulfil obligations to the Strategic Plan for Biodiversity 2010 – 2020 including *Aichi Biodiversity Targets 1, 2, 11* and *14* (*See Annex 4 Aichi Targets*). For example, the data developed as part of this project (i.e. Darwin Marine Biodiversity Atlases) contributed to the identification and announcement of an extensive network of new MPAs that that protect >2**0%** of Gabon's coastal and marine key biodiversity areas, as well as the creation of community fishing zones to help ensure the livelihoods and well-being of the poorest (i.e. fisheries-dependent communities) are safeguarded. Furthermore, field work to date have contributed significantly to the existing knowledge base on the importance of Central Africa for sea turtles, and so will ensure both countries have the latest information to inform status assessments that are currently lacking in this region (*See Annex 5 Publications*).

4.2   Project support to poverty alleviation

4.2.1   Programme indicators

In response to the following:

- *Did the project lead to greater representation of local poor in management structures of biodiversity?*
  A substantial component of the Darwin Initiative Project was focused on ensuring that fisheries-dependent communities were represented in decision making processes (*see Output 1 and 2 in Annex 1 logframe)*. This was achieved by focusing on two key areas: (1) mapping the spatio-temporal distribution of fishing effort (*Figure 3*); and (2) gathering baseline socio-economic data (i.e. dependency, operating costs, annual income, earnings and profitability; *Figure 5*), which would serve as a baseline from which future interventions, management changes and designation of MPAs, community and industrial fishing zones can be evaluated.

- *Were any management plans for biodiversity developed?*
- *Were these formally accepted?*
  In Gabon, the marine spatial planning analyses undertaken during the project informed the location of priority areas, of which the Government announced 10 new MPAs, as well as community and industrial fishing zones. These new marine parks will come under the remit of Agence National des Parcs Nationaux (National Parks Agency; **ANPN**) and the newly created Conseil Nationale de la Mer (National Council of the Sea), with data collected as part of the project currently being used to develop management plans for each of the proposed sites. In Congo, preliminary analyses have identified a number of priority areas for conservation zoning (*Figure 4*), and

disseminated to partner organisations and government institutions. These outputs were designed to highlight how marine spatial planning can be used to investigate a range of scenarios that consider the important role of the petrochemical and fisheries sectors in supporting the local and national economy. **WCS** is working closely with relevant government agencies in Congo to understand which of these scenarios warrants further exploration, and to fill data gaps identified during the decision making process.

- *Were they participatory in nature or were they 'top-down'? How well represented are the local poor and women, in any proposed management structures?*
All aspects of this project were focused on: (1) reducing poverty and vulnerability; (2) increasing the resilience of fisheries-dependent communities; and (3) ensuring the conservation and sustainable use of marine biodiversity and resources. Data collection on spatio-temporal distribution of fishing effort by fisheries dependent communities was therefore participatory, aimed at revealing actual patterns of resource use and the economics underlying the sector.

- *Were there any positive gains in HH income as a result of this project?*
- *How many HH saw an increase in their HH income?*
- *How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?*
In Gabon, new MPAs have been announced and in Congo substantial efforts have (and still are) been made to identify priority areas using robust data that was previously lacking. Therefore, the impact of these new MPAs is still not yet known, however, baseline socio-economic (***Figure 5***), gathered during the project will allow partner organisations to establish the impact (positive or negative) of these new sites on fishers dependency, operating costs, annual income, earnings and profitability following implementation.

4.3   Transfer of knowledge

Extensive collaborative research has been undertaken on sea turtle, marine mammal and fisheries spatio-temporal and distribution, leading to increase knowledge surrounding pressures on the regions marine biodiversity as evidenced by the resulting publications (freely accessible at seaturtle.org *see Annex 5 Publications*) and spatial data incorporated into the subsequent marine spatial planning analyses. All data gathered as part of the project was designed to improve marine resource management and given the spatial nature of such a project have been incorporated into the each host countries marine biodiversity atlas that have been widely disseminated by partner organisations. In addition, all publications and spatial (GIS) datasets have been disseminated to the lead in-country partner **WCS** and distributed to relevant government institutions that act as a repository for scientific and research data (e.g. **Cenarest** in Gabon). A wide variety of platforms were also used to publicise research initiatives and outputs beyond partner organisations including social media, a dedicated project website including online blogs, and national press releases (*see Section 6 Darwin Identity*).

In response to the following:
   i.   *Did the project result in any formal qualifications?*
   ii. *How many people achieved formal qualifications?*
   iii. *Were they from developing countries or developed countries?*
   iv. *What gender were they?*

This project was not designed to focus on any one individual, but to provide a broad range of technical, field-based and analytical skills to local staff (male and female) at a range of levels from senior programme officers to research assistants. Whilst training did not result in any formal qualifications all training of national staff was backed by robust scientific methods to ensure rigorous data standards and quality.

4.4   Capacity building

Capacity building was an integral component of the Darwin Project. Workshops included those for biodiversity monitoring, fisheries data collection, and spatial ecology (GIS), and were delivered by staff from a range of local partner organisations. Partners receiving training have included the lead country partner **WCS**, local partner organisations **PTMG**, **CDNP**, **MEFDD**, staff at NGOs engaged during the project including **ASF, Ibonga**, **WWF-GAB** and **Fondation Liambissi**, university students, participating fishers and government officials involved in marine resource management and enforcement efforts. Most notably, local field data collection capacity has been significantly enhanced through 3 day annual marine biodiversity monitoring workshops (delivered by 2 female and 3 male staff; 80% of which are nationals) organised by **PTMG**, the number of which increased from 3 to 5 each year to address the increasing number of organisations and staff involved in biodiversity monitoring in the region. Biodiversity monitoring workshops were backed by theory but primarily focused on practical based teaching (i.e. workshops were located at key nesting beaches) to ensure rigorous data collection. In addition, significant training was provided to local staff and fishers in the field of fisheries research (community engagement, socio-economic surveys, GPS tracking and landing surveys), leading to a greater understanding about economics underlying this sector (*Figure 4*) and the spatio-temporal distribution of small-scale fisheries in the region. The datasets developed as part of this project combining community engagement and novel technologies represent a first for Central Africa (*Figure 3*), reflecting the high-level of training provided to staff involved in delivering on this aspect project as well as the level of trust and understanding of the projects objectives at a community level. All workshops, training events (and attendees) were provided with materials (e.g. notebooks, training manuals, species ID guides, marine biodiversity atlases) ensuring that resources and technical expertise would remain after project completion. In Congo, fishers operating in **CDNP** and in areas monitored by **Rénatura** continue to report and release incidentally captured species (i.e. sea turtles and cetaceans) with agreements in place to aim to reduce bycatch by implementing mitigation trials. Marine spatial planning has been strongly supported by partner organisations in Congo and Gabon with staff from **WCS** and **UoE** either seconded or liaising with government/partner organisations (e.g. Gabon Bleu) to provide technical expertise to help design and implement a national network of marine protected areas (MPAs) meeting the reporting requirements of several convention articles and targets set out in the Strategic Plan for Biodiversity 2010 – 2020 (*see Section 4.1*). In Gabon the announcement of a new MPA network and the establishment of a new institution known as the Conseil Nationale de la Mer (National Council of the Sea) reflect the success of partner efforts to improve local capacity to manage marine resources.

Increased capacity, collaboration between partners and the formalisation of new partnerships to seek new funding opportunities to improve regional conservation efforts is further evident in the submission of a Darwin Proposal currently under consideration at Stage 2 titled: ***"Transforming marine resource management in the Republic of Congo".***

In response to the following:

i. *Did any staff from developing country partners see an increase in their status nationally, regionally or internationally? For example, have they been invited to participate in any national expert committees, expert panels, have they had a promotion at work?*

ii. *What gender were they?*

This project was not designed to focus on any one individual or partner, but to provide technical training and expertise to a range of organisations to deliver the projects goal of increasing marine protection and sustainable use of marine resources. Several staff from partner organisations (male and female) have seen improvements in their employment situation (i.e. contract extensions and pay rises) to reflect their increasing role within their organisation, and a number of organisations have increased the number of research assistants to account for their increasing biodiversity monitoring efforts (most notably **Fondation Liambissi**).

4.5   Sustainability and Legacy

Each of the main project achievements (monitoring, awareness raising, training, and implementation) are likely to endure because of the efforts of the lead in-country partner in each host country, the Wildlife Conservation Society (**WCS**), which has been serving as technical advisor to both Governments for the management of their extensive network of protected areas for over two decades. Furthermore, the capacity of project partners to implement biodiversity monitoring protocols, develop marine spatial plans and manage marine resources has been enhanced as a result of training workshops and project activities.

Most notably, the announcement of a new marine protected area network, community and industrial fishing zones in Gabon has resulted in the approval of a draft decree on the creation of a new organisation known as the Conseil Nationale de la Mer (National Council of the Sea). The primary role of this organisation will be to coordinate government action in three key areas: (1) maritime safety; (2) protection of the marine environment; and (3) the sustainable management of natural (fisheries, oil and mineral) marine resources. The University of Exeter in partnership with **WCS** and **ANPN** will support this new agency by providing technical and analytical advice to support research initiatives in these areas. In addition, as part of long-standing collaboration between the University of Exeter and the Partenariat pour les Tortues Marines du Gabon (**PTMG**) a number of key outputs have been prioritised for the forthcoming year that will ensure this agency has the latest data on the status of sea turtles in this region.

Beyond Gabon and the Republic of Congo there is also increasing awareness and interest in the project in other countries in Central Africa. For example, the **DRF** Dr Kristian Metcalfe and colleague Dr Ana Nuno (*Darwin Plus Fellow DPLUS019: 'Socio-economic aspects of turtle conservation in the Cayman Islands'*) were invited to São Tomé and Príncipe in March 2015 by the Príncipe Trust. The principal aim of which was to provide recommendations on how to improve existing data collection to assist with marine spatial planning initiatives, with a particular emphasis on approaches to engaging fishing communities to collect data to ensure the sustainable use of marine resources. This has led to a Darwin Proposal currently under consideration at Stage 2 titled: ***"Improving marine biodiversity and livelihoods of coastal communities in Principe".***

5   Lessons learned

We highlight four areas that could improve/inform future Darwin projects: (1) the importance of a capable lead in-country partner; (2) the importance of communication at all levels and between all project partners and staff; (3) continued engagement with stakeholders, especially where projects involve isolated and/or communities with few alternative livelihood opportunities; and (4) the need to consider/review political timetables in host countries. Given the duration and size of the project, having one lead in-country partner in each host country that acted as the facilitator and fund administrator for the local side of the project was vital to ensuring that project activities stayed on schedule, and that staff, logistics and equipment were available when timetabled. Regular communication at all levels between staff and project partners also proved vital, from ensuring data integrity and effective scheduling of activities to confirming that project partners were aware of project goals, activities and outcomes in a timely manner. The importance of continued engagement between local stakeholders and staff should not be underestimated, regular meetings, workshops and focus groups are essential to maintain trust and delivery of project activities. This is important to consider even if communities/stakeholders choose not to engage at the outset of a project. Projects should also review political timetables on a regular basis - cabinet reshuffles, political referendums and local elections can influence the proposed timeline of scheduled activities.

5.1   Monitoring and evaluation

The project did not undergo any major redesign during its term. Only minor issues with timing, e.g. adjusting the scheduling of workshops and activities, materialised and these did not have a deleterious impact on project results or outcomes. Regular communication between the Project lead Professor Brendan Godley and the Darwin Research Fellow (**DRF**) Dr Kristian Metcalfe with in-country partners ensured all work was completed. Biannual reporting to the Darwin Initiative also conveyed the successes of the project and did not highlight any significant issues that needed to be addressed.

Evaluation of activities during the project was conducted by a steering committee made up of the partner organisations that were held twice a year providing partners with the opportunity to discuss current progress and the work plan for each reporting year. Such an approach allowed partners to prioritise activities to address current political needs. For example, marine spatial planning in Gabon was brought forward by one year largely due to the increased knowledge on the importance of marine biodiversity in the region and increased political will following the development of Gabon Bleu a Government programme initiated to help design and implement a national network of marine protected areas (MPAs). As a result staff from the University of Exeter (**UoE**) and **DRF** were extensively involved with partners from the Wildlife Conservation Society (**WCS)** on the provision of technical and analytical GIS advice, and in the use of Marxan to aid decision support in marine spatial planning.

Additional feedback and acceptance of research outputs was achieved through publication of scientific articles in respected journals (*See Annex 5 Publications*). A key mark of projects success and impact has been the continuation and expansion of collaborations, often through official memorandum of understanding (MoUs), between project partners, as well as the development of new collaborations with other organisations in Central Africa.

5.2   Actions taken in response to annual report reviews

The following comment was included in the review of the projects second annual report: *"How did the government of the Republic of Congo respond to Gabon's announcement to create a network of MPA's? How is the project addressing that response?"*

With regard to this comment the project partners particularly the Wildlife Conservation Society Congo Programme (**WCS-RoC**) noted that there was increased awareness regarding marine biodiversity conservation in the region at a government level. In Congo, capacity to establish a network of MPAs has been increased greatly with the establishment of the Darwin Marine Biodiversity Atlas. To help maintain momentum and increase awareness project partners disseminated this project output to several governmental agencies, non-governmental organisations, environmental consultants and extractive industries. Dissemination to extractive industries and environmental consultants has resulted in increased data sharing, leading to increase knowledge on biodiversity in offshore waters (where there efforts are largely focused) which has until recently been limited.

In addition, data presented in the Darwin Marine Biodiversity Atlas for Congo was used to investigate a range of marine spatial planning scenarios, highlighting the application of marine spatial planning to the development of policy relevant recommendations and shared among project partners and stakeholders for further evaluation.

6   Darwin identity

Extensive efforts were made to promote the Darwin Initiative throughout the project. In particular, all actions relating to the project including satellite tracking data (hosted at www.seaturtle.org), written reports, presentations, press releases and articles in popular science magazines (*See Annex 7 Verification*), scientific publications (*See Annex 5 Publications*), training manuals and resources clearly acknowledged the funding provided by the Darwin Initiative through DFID/Defra, with links and logos to their respective websites.

Research and awareness raising activities undertaken by all partner organisations were publicised through a variety of social media including twitter (using hashtag #DarwinInitiative and @Darwin_Defra to acknowledge funding sources) and on the Marine Turtle Research Group Facebook Page. The Wildlife Conservation Society Gabon and Congo Programme also promoted all project related activities and outputs in-country using twitter (@WCSGabon and @wcs_congo) and the University of Exeter (lead organisation) promoted key project milestones across its websites (i.e. announcement of new MPA network in Gabon).

The project also had a dedicated website which detailed the project aims and rationale, in country partners, ongoing research (translated into both English and French) media coverage and outputs. As of the end of the project (31st October 2015) the site had been visited ~3000 times by visitors from the UK, Belgium, Finland, France, Greece, Germany, Ireland, Jersey, Netherlands, Russia, Slovenia, Spain, Switzerland, Turkey, United Arab Emirates, French Polynesia, Brazil, Costa Rica, Peru, Uruguay, Singapore, Barbados, Cayman Islands, Canada, United States, Gabon, Madagascar, Republic of Congo, São Tomé and Príncipe, South Africa, South Sudan and Uganda (**total countries = 32**), thus highlighting that the impact and knowledge of the project (and therefore the Darwin Initiative) has been far reaching.

The Darwin Initiative support was also recognised as both a distinct project where it comprised the key funding partner in an action (e.g. biodiversity survey / monitoring / engagement efforts), and as a collaborative partner in larger programmes where actions spanned topics of established efforts such as marine mammal and sea turtle monitoring (e.g. training). Familiarity with the Darwin Initiative was present in both host countries (Republic of Congo and Gabon). However, awareness was greater in Gabon as a result of previous Darwin Initiative funded Project (17-009) with local stakeholders aware of the impact Darwin Initiative funding has had on both supporting and promoting marine biodiversity protection.

7 Finance and administration

7.1 Project expenditure

Project spend (indicative) since last annual report	2015/16 Grant (£)	2015/16 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			<10	
Consultancy costs			-	
Overhead Costs			<10	
Travel and subsistence			<10	
Operating Costs			-	
Capital items (see below)			-	
Others (see below)			>10	
Audit costs			>10	
TOTAL				

Staff employed (Name and position)	Cost (£)
K Metcalfe – Associate Research Fellow	
Congo Staff (Conkouati-Douli National Park Research Assistants)	
Congo Staff (COGEREN Research Assistants x 2)	
Gabon Staff (Research Assistants)	
TOTAL	

Capital items – description	Capital items – cost (£)
-	
TOTAL	

Other items – description	Other items – cost (£)
SPECIAL DELIVERY FOR VISA APPLICATION - 27/04/2015 PURCHASE OF SMARTCARD FOR USE WHEN CARRYING OUT FIELDWORK OVERSEAS - 07/05/2015 - [Telephone calls - business use] - SCORE CONGO TELEPHONES/FAX-CALL CHARGES	
TOTAL	

7.2   Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
Tullow Oil (Transforming the knowledge base for olive ridley (Lepidochelys olivacea) marine turtles in Gabonese waters).	
Principe Trust (Marine Conservation Priorities São Tomé and Príncipe Scoping Report).	
IUCN West and Central Africa Programme (Describing small-scale fisheries in central Africa)	
Wildlife Conservation Society Gabon Programme (GIS data analyses)	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
TOTAL	

7.3   Value for Money

In Gabon, Darwin Initiative funding has been hugely successful in contributing towards the increased management of marine ecosystems in Central Africa, with research and data collected through the project contributing to the creation of a new network of marine protected areas. The network will consist of ten marine parks including an extension to the existing Mayumba National Park and will cover a total of 18,000 square miles (46,000 square kilometres), equivalent to 23% of Gabon's territorial waters and EEZ (Exclusive Economic Zone). In addition, supported by spatial data on artisanal and industrial fishing effort the Gabonese Government announced that they will also create community and industrial fishing zones, as well as exclusion zones to protect important petroleum infrastructure. The latter exclusion zones around petrochemical infrastructure operating as additional biodiversity refuges closed to fishing and other extractive industries.

In Congo, capacity to establish a network of MPAs has been increased greatly with the establishment of the Darwin Marine Biodiversity Atlas that was used to investigate a range of marine spatial planning scenarios, highlighting the application of marine spatial planning to the development of policy relevant recommendations. In addition, the level of community engagement and participatory research undertaken with fisheries-dependent communities was far greater than previously envisaged. More specifically, participatory research with local fishing communities in the Republic of Congo led to an increase in the scope of the project from an initial target of 4 focal sites (15%) to 14 (54%) in the first year and 23 (88%) sites in the second year. This was achieved with the same budget, and as a result there is a far greater capacity to develop a sustainable fisheries management plan as well as secure access rights to important fishing grounds than would have been possible if the project had focused only on 4 sites.

Furthermore, Darwin Initiative funding often supported ground-breaking research, such as the first coastal transect of Gabon surveying ~ 600 km of coastline from Pongara National Park to the Gabon/Congo border frontier for the presence of nesting olive ridley (*Lepidochelys olivacea*) sea turtles. This transect addressed several key data gaps in this region by surveying areas that are not currently monitored, and highlighted that Central Africa supports one of the most important rookeries for this species in the Atlantic (*See Annex 5 Publications*).

Overall, the project was very well received by local stakeholders and partners and has facilitated the creation of several new partnerships among governmental and non-governmental organisations that will serve as the project's legacy.

Annex 1 Project's logframe, including indicators, means of verification and assumptions.

Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: Poverty alleviation, increased food security, and sustainable use of marine biodiversity through an effective marine protected area network in Congo and Gabon.			
Outcome: Increased and effective management of marine ecosystems in Central Africa (Congo and Gabon) as a result of a scientifically informed network of interconnected Marine Protected Areas (MPAs) that enhance ecological integrity while contributing to food security and poverty reduction in coastal communities in the region.	▪ Increased marine protection based on scientific evidence and participatory research. ▪ Increased knowledge and awareness of marine biodiversity and artisanal fisheries. ▪ Marine vertebrate bycatch in fishing communities reduced.	▪ Enhanced capacity for marine spatial planning. ▪ Continued monitoring. ▪ Continued engagement with fishing communities. ▪ Reports and publications by partner organisations.	▪ Government remains supportive of MPA designation. ▪ Fishing communities and host governments retain commitment to sustainable use of marine resources. ▪ Host countries remain politically stable. ▪ Retention of key staff / ability to appoint replacements. ▪ No major economic changes / anthropogenic disasters that could affect fisheries management.
Output 1: Marine Protected Areas Marine Protected Area networks extended to at least 10% of EEZ of Congo and Gabon based on robust research and participatory implementation.	**1.1** Enhanced capacity for marine spatial planning via Darwin Marine Atlas for Congo with 10 biodiversity/fisheries professionals trained in its use (baseline is zero). **1.2** Enhanced capacity for marine spatial planning via Darwin Marine Atlas for Gabon with 10 biodiversity/fisheries professionals trained in its use (baseline is zero).	**1.1** Darwin Marine Atlas Congo. **1.2** Darwin Marine Atlas Gabon. **1.3** Spatial Planning Report on Candidate MPA sites (Congo). **1.4** Spatial Planning Report on Candidate MPA sites (Gabon). **1.5** Peer reviewed publication on regional marine biodiversity.	**1.** Project partners, fishing communities and host governments and institutions retain commitment to sustainable use of marine resources and both nations remain politically stable.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	1.3 Increased evidence base for Marine Spatial Planning in Congo based on best available information on biodiversity, artisanal fisheries, and industrial fisheries. Facilitated by Marxan analysis leading to candidate MPA network. Minimum 20 data layers (current baseline is zero)	**1.6** Maps, Media, Government reports / legislation relating to designation.	
	1.4 Increased evidence base for Marine Spatial Planning in Gabon based on best available information on biodiversity, artisanal fisheries, and industrial fisheries. Facilitated by Marxan analysis leading to candidate MPA network. Minimum 20 data layers enhanced and/or incorporated into existing Marine Biodiversity Atlas for Gabon.		
	1.5 Increased knowledge of regional biodiversity.		
	1.6 As a result of research, awareness raising and increased capacity MPA network will begin to expand (baseline 3% EEZ Congo; 1% Gabon).		
Output 2: Artisanal Fisheries Artisanal fisheries understood across both nations and are improved as a result of more effective and sustainable fishing practices, based on participatory research and implementation in focal communities.	**2.1** Fisher engagement in research facilities multiple aspects with participatory research underway (minimum 10 – 20 fishers in 4 communities – current baseline is zero). **2.2** Baseline data assembled and potential interventions identified to	**2.1** Focus groups, participatory data collection, workshops, interim field reports. Darwin Project website updated. **2.2** Focus groups, workshops, interim field reports. Darwin Project website updated. **2.3** Artisanal fisheries action plan	**2.** Trained individuals remain in employment with partner organisations. Partners continue to collect and share data. Good working relationships are maintained with fishing communities.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	improve fisheries profitability (current baseline datasets is zero). **2.3** Baseline knowledge of magnitude and spatio-temporal patterns of artisanal fisheries and linkage with industrial fisheries greatly improved. (current baseline is zero). **2.4** Research leads to development of publishable case study in rapid assessment of artisanal fisheries and participatory research.	(Congo) and artisanal fisheries action plan (Gabon). **2.4** Peer-reviewed publication on fisheries.	
Output 3: Reducing Bycatch Marine vertebrate bycatch in fishing communities is reduced as a result of participatory research and awareness raising.	**3.1** Fisher engagement in research facilities multiple aspects with participatory research underway (minimum 10 – 20 fishers in 4 communities – current baseline is zero). **3.2** Baseline levels of bycatch estimated as a result of participatory research with potential interventions identified to reduce bycatch (current baseline datasets is zero). **3.3** Research and participatory research leads to publishable case study in bycatch assessment in artisanal fisheries.	**3.1** Focus groups, participatory data collection, workshops, interim field reports. Darwin Project website updated. **3.2** Focus groups, workshops, interim field reports. Darwin Project website updated. **3.3** Peer-reviewed publication on participatory fisheries bycatch assessment and mitigation.	**3.** Trained individuals remain in employment with partner organisations. Partners continue to collect and share data. Good working relationships are maintained with fishing communities. Effective, appropriate measures can be identified for both the fisheries and bycatch species.
Output 4: Project Monitoring	**4.1** Darwin reporting. **4.2** Steering group meetings.	**4.1** Darwin reports. **4.2** Steering committee meeting minutes.	

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Activities: 1.1 Training 1.2 Field data collection and data analysis 1.3 Awareness raising 1.4 Assembling Darwin Marine Atlases 1.5 Marine spatial planning 1.6 Policy paper 1.7 Peer reviewed paper 2.1 Engagement with fishers 2.2 Training in data collection 2.3 Field data collection 2.4 Fisheries management plans 2.5 Identify potential management interventions 2.6 Peer reviewed paper 3.1 Awareness raising 3.2 Field data collection 3.3 Identify participatory mitigation 3.4 Peer reviewed paper 4.1 Darwin reporting 4.2 Steering group meetings			

Annex 2   Report of progress and achievements against final project logframe for the life of the project

Note: For projects that commenced after 2012 the terminology used for the logframe was changed to reflect DFID's terminology.

Project summary	Measurable Indicators	Progress and Achievements in the last Financial Year	Actions required/planned for next period
Goal/Impact: Poverty alleviation, increased food security, and sustainable use of marine biodiversity through an effective marine protected area network in Congo and Gabon.		The Darwin Initiative project has been successful in contributing to more effective management of marine ecosystems and resources in Central Africa. ▪ New MPA network announced in Gabon covering approximately 46,000 km^2, equivalent to 23% of Gabon's territorial waters and EEZ (Exclusive Economic Zone) ▪ Fisheries sector incorporated into decision making processes leading to announcement that Government of Gabon will create a network of community and industrial fishing zones. ▪ Exclusion zones around petrochemical infrastructure also announced in Gabon, operating as additional biodiversity refuges closed to fishing. ▪ Gabonese Government's commitment to conservation of marine biodiversity and the sustainable use of marine resources is further evident following the creation of a new organisation known as the Conseil Nationale de la Mer (National Council of the Sea). ▪ Distribution and modes of operation of artisanal fisheries understood across	N/A

		both nations, with 32% and 88% of fisheries-dependent communities engaged in participatory research in Gabon and Congo, respectively.	
Purpose/Outcome: Increased and effective management of marine ecosystems in Central Africa (Congo and Gabon) as a result of a scientifically informed network of interconnected Marine Protected Areas (MPAs) that enhance ecological integrity while contributing to food security and poverty reduction in coastal communities in the region.	▪ Marine Protected Area networks extended to at least 10% of EEZ of Congo and Gabon based on robust research and participatory implementation. ▪ Distribution and modes of operation of artisanal fisheries understood across both nations and are improved as a result of more effective and sustainable fisheries practices, based on participatory research and implementation in focal communities. ▪ Marine vertebrate bycatch in focal fishing communities is reduced as a result of participatory research and raised awareness.	▪ The Darwin Initiative project was broadly successful in achieving its purpose. National and local capabilities have been vastly improved and relationships and collaborations between governmental and non-governmental institutions and the public have been put in place that will help ensure the continued development of activities well beyond the project end date that will promote sustainable and equitable management of Central Africa's marine biodiversity and resources. ▪ Marine protection has been increased with 10% target exceeded in Gabon (i.e. 23%) and the capacity to identify such a network in Congo greatly increased as a result of training and research outputs. The project has been hugely successful in engaging fishing communities, empowering fishers to engage in the decision making process, and work proactively to make their fisheries more sustainable in the long term. ▪ This was achieved by providing them	N/A

		with a voice and platform to map their fishery and interactions with biodiversity ensuring that future decisions represent actual patterns of resource use. ▪ In doing so the project has sought to maintain and protect the economic welfare of these communities.
Output 1 Marine Protected Areas: Marine Protected Area networks extended to at least 10% of EEZ of Congo and Gabon based on robust research and participatory implementation.	**1.1** Enhanced capacity for marine spatial planning via Darwin Marine Atlas for Congo with 10 biodiversity/fisheries professionals trained in its use (baseline is zero). **1.2** Enhanced capacity for marine spatial planning via Darwin Marine Atlas for Gabon with 10 biodiversity/fisheries professionals trained in its use (baseline is zero). **1.3** Increased evidence base for Marine Spatial Planning in Congo based on best available information on biodiversity, artisanal fisheries, and industrial fisheries. Facilitated by Marxan analysis leading to candidate MPA network. Minimum 20 data layers (current baseline is zero) **1.4** Increased evidence base for Marine Spatial Planning in Gabon based on best available information on biodiversity, artisanal fisheries, and industrial fisheries. Facilitated by Marxan analysis leading to candidate MPA network. Minimum 20 data layers enhanced and/or incorporated into existing Marine Biodiversity Atlas for Gabon. **1.5** Increased knowledge of regional biodiversity.	Progress in all areas was excellent and indicators were appropriate. Identification of candidate MPAs based on robust research and participatory data collection were accomplished through the combination of project activities (development of Darwin Marine Biodiversity Atlases, marine spatial planning analyses, training, research and awareness raising initiatives). Biodiversity monitoring, socio-economic and fisheries data collected during project were incorporated into atlases and marine spatial planning analyses. The latter contributing to the announcement of a new network of MPAs in Gabon at World Parks Congress in Sydney in November 2014. Results of these efforts were highlighted in national and international press releases (*see Annex 7 verification*).

1.6 As a result of research, awareness raising and increased capacity MPA network will begin to expand (baseline 3% EEZ Congo; 1% Gabon).	
Activity 1.1 Training	Project staff from **UoE** maintained an extensive and active schedule of training and outreach in the fields of biodiversity monitoring, marine spatial planning and fisheries (*see Activity 2.2*) in both host countries: **Biodiversity Monitoring:** **2013 – 2014 PTMG** hosted 3 marine turtle training workshops in FY1 (with a total of 75 trainees) attended by staff from **WCS-GAB**, **ASF**, **ANPN**, **Ibonga**, **WWF-GAB**, and **Fondation Liambissi**. **UoE** provided training to 10 staff from **PTMG**, **ASF**, **ANPN** and **WCS-GAB** on the attachment of 10 satellite transmitters on nesting female olive ridley sea turtles. **2014 - 2015 PTMG** hosted 5 marine turtle training workshops in FY2 (with a total of 110 trainees) to address the increasing number of organisations and staff involved in sea turtle monitoring in Gabon. **UoE** provided training to 15 staff from **PTMG**, **ASF WWF-GAB**, **Ibonga**, **Fondation Liambiss** and **WCS-GAB** on the attachment of 6 satellite transmitters on nesting female olive ridley sea turtles. Dr Angela Formia (**PTMG/WCS-GAB**) attended meeting in the Republic of Congo in November 2014 to review training materials with staff from **MEFDD/CDNP**, and the 12 years of sea turtle monitoring data that will inform upcoming analyses on status of marine turtles in the Republic of Congo. **2015 – 2016 PTMG** hosted 5 workshops that were attended by staff from **WCS-GAB**, **ASF**, **ANPN**, **Ibonga**, **WWF-GAB**, and **Fondation Liambissi**. **UoE** trained 6 staff on the attachement of 10 satellite transmitters on nesting female olive ridley sea turtles. **Marine Spatial Planning:** **2013 – 2014** The **DRF** was seconded for 1 month to Gabon Bleu a Government programme initiated to help design and implement a national network of marine protected areas (MPAs) to help develop GIS data layers that were incorporated into Darwin Biodiversity Atlas for Gabon, used to help inform Gabon's MPA

	network, leading to a review process of a candidate set of MPAs.

2014 – 2015 UoE provided basic GIS training to a total of 3 senior (management) staff employed at **CDNP** in the Republic of Congo (**WCS-RoC** = 3).

2015 – 2016 UoE provided basic GIS training to a total of 7 junior staff employed at **CDNP** in the Republic of Congo (**WCS-RoC** = 4, **MEFDD** = 3)

Please Note: Staff from the **UoE** have continued to provide GIS support to lead in-country partner **WCS** throughout the project, to meet current political needs and data demands relating to the implementation of a network of MPAs in the region. |
| Activity 1.2. Field data collection and data analysis | Several collaborative research initiatives were undertaken during the project to address several data gaps highlighted during review of available spatial data to support development of an ecological coherent MPA network. These focused on two key areas: (1) biodiversity and (2) fisheries.

Biodiversity:

2013 – 2014 10 satellite transmitters were deployed on nesting female olive ridley sea turtle at four nesting beaches, Pongara National Park, and Port-Gentil and Gamba two locations where nesting females had not been previously tracked.

Staff from **UoE** in collaboration with >15 local organisations completed the first ground-based coastal survey of Gabon covering 600 km; leading to discovery that Gabon hosts one of the most important nesting populations of olive ridley sea turtles in the Atlantic.

2014 - 2015 6 satellite transmitters deployed on nesting female olive ridley sea turtle at four nesting beaches, Port-Gentil, Ozori, Omboué and Gamba. Analysis of population status of Gabon's olive ridley sea turtle population including spatial distribution of nesting effort completed and submitted for publication (see Activity 1.7).

2015 – 2016 10 satellite transmitters deployed on nesting female olive ridley sea turtle in Pongara National Park.

Please Note: Field data collection relating to fisheries is covered in *Output 2*. |

Activity 1.3 Awareness raising	To meet the project goals and outcomes, in particular, promote awareness of marine biodiversity in Central Africa the Darwin Project adopted a number of strategies, including dissemination of research outputs and Darwin Marine Biodiversity Atlases through social media (Twitter and Facebook) and the dedicated project website. The latter proved extremely successful, with the site having been visited ~3000 times by visitors from a total of 32 different countries by the end of the project (October 31st 2015) highlighting that the impact and knowledge of the project has been far reaching (*see Section 6 Darwin Identify for more details*). A full update of the website is now underway to include more features.
	Dissemination of biodiversity surveys including satellite tracking of sea turtles garnered substantial press coverage in Gabon, featuring an article in National Paper L'Union (*see Annex 7 verification*). Media activity in the UK and internationally came from a major project-related publication related to the results of the coastal survey that revealed Gabon hosts one of the most important rookeries for olive ridley sea turtles in the Atlantic.
	Please Note: All in-country partners are continuing to disseminate and share research outputs and findings at close of project, particularly to government agencies.
Activity 1.4 Darwin marine biodiversity atlases	The development of Darwin Marine Biodiversity Atlases was a collaborative effort between several partner and external organisations.
	Gabon:
	2013 – 2014 Version 1 of the Darwin Marine Biodiversity Atlas for Gabon reviewed and additional data gaps identified (developed as part of Darwin Initiative Project 17-005, baseline 100 data layers)
	2014 – 2015 Version 2 of Darwin Marine Biodiversity Atlas for Gabon, produced and shared with partner organisations (total of 120 data layers).
	2014 – 2015 and **2015 – 2016**: Darwin Marine Biodiversity Atlas for Gabon disseminated to partners and government agencies.
	Republic of Congo:
	2013 – 2014 Congo Marine Biodiversity Atlas outline and format shared with

	partners and data gaps identified (baseline data is zero).
	2014 – 2015 Version 1 of Darwin Marine Biodiversity Atlas for Republic of Congo completed (total of 110 data layers), and disseminated to local, national and partner organisations for feedback.
	2015 – 2016 Version 2 of Darwin Marine Biodiversity Atlas for Republic of Congo completed (total of 115 data layers) and shared with local, national and partner organisations.
	<u>**Please Note**</u>: Given the format of the Atlases, staff from the **UoE** will continue to incorporate new data layers after the project, to help meet current political needs and data demands relating to the implementation of a network of MPAs in the region.
Activity 1.5 Marine spatial planning	Changes in delivery of this activity in Gabon occurred. Notably, **UoE** support to help identify priority areas for conservation zoning was brought forward in Gabon to FY1 (previously earmarked for FY2). This largely reflected the increased knowledge on the importance of marine biodiversity in the region and increased political will following the development of Gabon Bleu a Government programme initiated to help design and implement a national network of marine protected areas (MPAs). To address these needs the **DRF** was seconded for 1 month to Gabon Bleu in 2013, to help develop GIS data layers that were incorporated into Darwin Biodiversity Atlas for Gabon, and subsequently used to help inform the identification of a candidate set of MPAs. In Congo, the project has made significant progress towards overall project goal of increasing effective management of marine ecosystems in Central Africa (Congo and Gabon) through a network of interconnected Marine Protected Areas. In particular, the Marine Biodiversity Atlas for the Republic of Congo provides a comprehensive overview of the data available to support more effective marine spatial planning efforts. To date these data have been utilised to highlight the application of marine spatial planning to assess a range of policy scenarios that consider the important role of the petrochemical and fisheries sectors in supporting the local and national economy (see Section 2.2 for more details). The outputs of this preliminary assessment have been disseminated to partner organisations and publication of results is being prepared.

Activity 1.6 Policy paper		Data developed as part of this project contributed to a **WCS Congo** report titled *"Preliminary scoping study for the establishment of an integrated coastal and marine program in the Republic of Congo"* designed to highlight current data availability, gaps and priorities, as well as to assess the viability of the development of an integrated coastal and marine conservation and management initiative similar to that established in Gabon (known as Gabon Bleu).
Activity 1.7 Peer-reviewed paper		Several collaborative papers on the importance of regional biodiversity were published during the project, these covered a range of topics from at-sea habitat mapping of olive ridley sea turtles, spatial distribution of nesting effort of olive ridley sea turtles, a pan Atlantic analysis of overlap between leatherback sea turtles and pelagic longline fisheries, the threat to nesting sea turtles posed by beached timber and a global assessment of threat posed to sea turtles by seismic surveys linked to petrochemical exploration, a growing sector in Central Africa (*see Annex 5 publications*).
Output 2: Artisanal Fisheries Artisanal fisheries understood across both nations and are improved as a result of more effective and sustainable fishing practices, based on participatory research and implementation in focal communities.	**2.1** Fisher engagement in research facilities multiple aspects with participatory research underway (minimum 10 – 20 fishers in 4 communities – current baseline is zero). **2.2** Baseline data assembled and potential interventions identified to improve fisheries profitability (current baseline datasets is zero). **2.3** Baseline knowledge of magnitude and spatio-temporal patterns of artisanal fisheries and linkage with industrial fisheries greatly improved. (current baseline is zero). **2.4** Research leads to development of publishable case study in rapid assessment of artisanal fisheries and participatory research.	Engagement with artisanal fisheries has far exceeded planned project targets (4 focal sites) for the number of fishers and sites engaged in Gabon and the Republic of Congo. Given the announcement that community fishing zones are to be established in Gabon (informed from GPS tracking data and assessments undertaken in FY1) further emphasis was placed on developing a rigorous nationwide dataset for Congo instead of primarily focusing on **CDNP** as initially envisaged. This objective was completed in FY2 with boats tracked from 88% of known landing sites along the coast leading to a greater understanding of the spatial and temporal dynamics involved in this sector at a national scale. These successes reflect the training provided to staff involved in delivering on this aspect project and the level of trust between staff and fishing communities since the project commenced.

Activity 2.1. Engagement with fishers	The project has continually engaged with fishing communities from its outset as a result project staff are engaged in participatory research with 49 fishers at 23 of the 26 (88%) artisanal fishing sites in the Republic of Congo and at 20 of the 62 (32%) of sites in Gabon.
	Timeline of Community Engagement: **2013 – 2014** 11 (42%) and 20 (32%) sites engaged in participatory research in Congo and Gabon, respectively. **2014 – 2015** 23 (88%) and 20 (32%) sites engaged in participatory research in Congo and Gabon, respectively. **2015 – 2016** 23 (88%) and 20 (32%) sites still engaged in participatory research in Congo and Gabon, respectively. **Please Note:** The WCS Gabon and Congo country programmes are still continuing to engage with fishers even at close of project, specifically those that operate inside or close to marine protected areas.
Activity 2.2. Training in data collection	Project staff from **UoE** maintained an extensive and active schedule of training in the fields of fisheries data collection, specifically focused on GPS tracking socio-economic and landings surveys (*see Activity 3.1*): **2013 – 2014 UoE** staff provided in-country training to a total of 10 staff in Gabon (**WCS-GAB** = 3 and **Manga** = 2**)** and the Republic of Congo (**CDNP** = 5) on the configuration and deployment of GPS trackers. **2013 – 2014 UoE** provided training on socio-economic data collection to 2 staff in Gabon (**WCS-GAB** = 2). **2014 – 2015 UoE** provided training on socio-economic data collection to 2 staff in the Republic of Congo (**CDNP** = 2). **UoE** of staff created, sourced (from seaturtle.org and NOAA)**,** and distributed, shark, sea turtle and marine mammal and cetacean ID guides to 5 partner organisations in Gabon and 3 in Congo to improve quality of data collected in the field. **2015 – 2016 UoE** reviewed and provided additional training on socio-economic data collection to 2 staff in the Republic of Congo (**CDNP** = 2).

| Activity 2.3. Field data collection | Field data collection was separated into three components: (1) identifying location of all landing sites and number of boats in each host country; (2) deploying GPS data loggers to quantify and describe artisanal fisheries and their spatio-temporal extent; and (3) conduct participatory questionnaires to gain a better understanding/knowledge of those working in the fisheries sector, how, when and where they operate, socio-economic underlying fisheries sector such as (value of catch, cost of fishing, processing and marketing), and the threats to their livelihoods. The minimum target for components 2 and 3 as set out in the bid was 4 sites.

In Gabon project partners completed all three components of this activity. Through a range of surveys (aerial, desktop and field) 62 small-scale fishing sites were identified, and GPS trackers were deployed at 20 (32%) of these sites (resulting in GPS track logs for ~225 individual fishing trips). In addition, participatory questionnaires were completed with fishers at 5 sites distributed along the coast. These data have been analysed to produce the first spatially explicit data layer on spatial distribution and extent of artisanal fisheries in Gabon, and identify cumulative utilisation and thus pressure from the different gear types used along the coast.

In Congo, project partners completed all three components of this activity. A total of 26 landing sites were identified through field surveys, and GPS trackers were deployed at 23 (88%) of these sites. These efforts provided data on 875 individual fishing trips undertaken by 49 fishers, that represented a total of 192 days at sea (equivalent to 5505 hours) covering a total distance of 9,511 kilometres. Participatory questionnaires were also undertaken at 18 sites along the coast, contributing to research outputs under Activity 2.5. |
| Activity 2.4 Fisheries management plans and reports | Summary reports on the spatial distribution of fishing effort have been provided to lead in-country partner **WCS** and management staff at **CDNP** who are reviewing the current zoning and management plan for the marine component of the Park. In addition, data gathered as part of this project has been provided to the IUCN West and Central Africa Programme for inclusion in a report on the status of small-scale fisheries sector in Central Africa. |

| Activity 2.5 Potential Management Interventions | In Gabon, data collected on the spatial distribution and patterns of fishing effort by fisheries-dependent communities was incorporated into marine spatial planning process, leading to the announcement that the Government will also establish a network of community and industrial fishing zones. These designations will maintain access to important fishing areas (as highlighted by GPS tracking undertaken during the project) and through the designation of new industrial fishing zones will ensure food security (by reducing illegal and unregulated fishing effort) and so enhance livelihoods of fishers operating in this sector.

In Congo, participatory questionnaires with fishing communities in Congo highlighted two key issues that will form the basis of future efforts to improve the management of marine resources:

1. The overexploitation of marine resources, conflict and illegal fishing practices resulting from the ineffective management of the industrial fleet is currently threatening fisheries-dependent communities in the Republic of Congo. This is critical as these communities support an estimated 2,600 small-scale fishers and 35,300 dependents (~ 1,500 households), which together with 29,500 associated workers (including traders, 51% of which are female) represents ~10% of the coastal population. For example, the average value of fishing gear lost to trawlers in 2015 was ~ $966 USD per fisher - equivalent to 36-41% of fishers' average annual earnings.

2. In addition, preliminary analysis of fishers earnings have revealed that the average daily income (USD day^{-1} after operating costs and expenses have been deducted) is on average 7 times greater for fishers inside the city compared to those located outside of the city.

As a result of these findings project partners have increased focus on obtaining funding to improve number and effectiveness of enforcement initiatives, and are actively working with fishers in the most isolated communities, particularly in **CDNP** to implement cooperatives to reduce processing costs (which on average account for 27% of operating costs) and thus increase profitability. |

Activity 2.6 Peer-reviewed paper		A paper has been submitted and is currently under review in the Open Access Journal Conservation Letters on combining community engagement and novel technologies (i.e. GPS tracking) to characterise small-scale fisheries to better inform policy and management decisions/interventions.
Output 3: Reducing Bycatch Marine vertebrate bycatch in fishing communities is reduced as a result of participatory research and awareness raising.	**3.1** Fisher engagement in research facilities multiple aspects with participatory research underway (minimum 10 – 20 fishers in 4 communities – current baseline is zero). **3.2** Baseline levels of bycatch estimated as a result of participatory research with potential interventions identified to reduce bycatch (current baseline datasets is zero). **3.3** Research and participatory research leads to publishable case study in bycatch assessment in artisanal fisheries.	Engagement with artisanal fisheries has far exceeded planned project targets with 32% and 88% of fisheries-dependent communities engaged in participatory research in Gabon and Congo, respectively.
Activity 3.1. Field data collection		Bycatch estimates derived for 5 sites in Gabon and 18 sites in Congo, with preliminary data analysis revealing that sharks constitute an important proportion of catches from boats operating in the small-scale fisheries sector. Given that little was known about sharks in this region landing site survey protocols were developed by Dr Matthew Witt and PhD student Phil Doherty (**UoE**) and undertaken in partnership with **WCS-GAB** at Cap Lopez in Port-Gentil and two sites in Mayumba, one landing catch in the lagoon, the other directly onto the beach. The aim of these surveys was to develop a better understanding of the composition of shark catch in the small-scale fisheries sector (including species, sex, and morphometric data) to inform future management plans and bycatch reduction strategies. This involved training of field staff within the Mayumba **WCS-GAB** programme and a MSc student from Franceville for two weeks, one learning the survey protocols at landing sites with the Mayumba team and the other with Phil Doherty surveying a wider range of landing sites in Libreville and within Corisco Bay. This project was

		carried out in two phases, one in December, surveying one week in Port Gentil and two weeks in Mayumba, the second phase took place during February with one week in Port Gentil and three weeks surveying other potential areas for shark catch including Libreville and Corisco Bay. In addition, **WCS** staff in collaboration with several regional partners (and exploration companies) compiled a cetacean sighting and stranding database, pulling together >10 years of survey work undertaken in the Republic of Congo and Gabon.
Activity 3.2. Identify participatory mitigation		Comparative analysis of GPS tracking data and bycatch estimates derived from participatory questionnaires have revealed that high levels of bycatch in small-scale fisheries is the result of overlapping habitat preferences for fishers and marine biodiversity (i.e. sharks, rays, cetaceans). The GPS tracking dataset has revealed that fishing effort is generally concentrated in shallow waters close to the coast with this pattern generally holding across all fishing communities, with the exception of those operating from landing sites situated in the city that operate over larger distances and greater depths. These findings are invaluable when developing national bycatch reduction strategies as it highlights that interventions should reflect these different modes of operation. Most notably at the annual meeting with fishers operating in **CDNP** it was agreed that in 2016 fishers would trial moving their nets further offshore (> 200m) and data collected in FY1 and FY2 would serve as a baseline from which to establish: (1) whether it is effective at reducing bycatch; and (2) what impact it has on earnings and profitability.
Activity 3.3 Peer reviewed paper		Analysis of bycatch of vulnerable Atlantic Humpback Dolphin in small-scale fisheries is currently underway with target for submission in 2016. This paper will combine GPS tracking dataset which is currently under review in Conservation Letters (see Activity 2.6 for more details), and cetacean sighting and stranding database compiled by **WCS**.
Output 4: Darwin Reporting		
	4.1 Darwin reporting.	Reporting undertaken in timely manner, with all partners contributing information for monitoring and evaluation of progress towards project activities.

	4.2 Steering group meetings.	
Activity 4.1. Darwin reporting		All Half Year and Annual Reports were undertaken in a timely manner, effectively drawing together project for appraisal.
Activity 4.2. Steering group meetings		Two steering group meetings were undertaken during each financial year to evaluate progress of project activities and outline work plan for reporting year. During periods where the **DRF** was not present in-country regular communication between partners was maintained through conference calls, meetings in the UK and email circulation lists. The **DRF** maintained a substantial presence in country (62 weeks) exceeding initial plans and so was easily accessible to in-country partners. In addition, project lead was present in host countries for a total of 8 weeks.

Annex 3 Standard Measures

Code	Description	Total (% of target)	Nationality	Gender	Theme	Language	Comments
	Training Measures						
1a	Number of people to submit PhD thesis						
1b	Number of PhD qualifications obtained						
2	Number of Masters qualifications obtained						
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training						
4b	Number of training weeks provided to undergraduate students						
4c	Number of postgraduate students receiving training (not 1-3 above)						
4d	Number of training weeks for postgraduate students						
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification(e.g., not categories 1-4 above)						
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	200 (1000%)	Gabonese / Congolese (comprised of research assistants employed by partner and local organisations)	Male and Female	Technical training to enhance local capacity.	French / English	Biodiversity monitoring and data collection workshops (3 in FY1, 5 in FY2, and 5 in FY3) and basic GIS training (1 in FY1 and 1 in FY2).

Code	Description	Total (% of target)	Nationality	Gender	Theme	Language	Comments
6b	Number of training weeks not leading to formal qualification	20 (300%)	Gabonese / Congolese	Male and Female	Technical training to enhance local capacity.		Biodiversity monitoring and data collection workshops (3 in FY1, 5 in FY2, and 5 in FY3) and basic GIS training (1 in FY1 and 1 in FY2). Including 1 month secondment for DRF to Gabon Bleu.
7	Number of types of training materials produced for use by host country(s) (describe training materials)	2 (100%)				French / English	1 x GPS tracker training manual, 2 x Darwin Marine Biodiversity Atlases (Gabon and Congo), 1 x socio-economic / participatory questionnaires.

Research Measures		Total	Nationality	Gender	Theme	Language	Comments
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)	2 (100%)			Technical training to enhance local capacity.	French / English	2 x Darwin Marine Biodiversity Atlases (Gabon and Congo) to support marine spatial planning efforts. 2 x marine spatial planning outputs identifying priority areas for conservation zoning.
10	Number of formal documents produced to assist work related to species identification, classification and recording.	6 (600%)			Technical training to enhance local capacity.	French / English	Sea turtle, marine mammal / cetacean, shark and ray ID guides
11a	Number of papers published or accepted for publication in peer reviewed journals	5 (166%)			Biodiversity Conservation	English	See Annex 5 for details.
11b	Number of papers to be submitted to peer reviewed journals.	1 (100%)			Community engagement.	English	A paper has been submitted and is currently under review in the Open Access

							Journal Conservation Letters on combining community engagement and novel technologies (i.e. GPS tracking) to characterise small-scale fisheries to better inform policy and management decisions/interventions.
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	1 (100%)			GIS		Gabon spatial database updated during project
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country	1 (100%)			GIS		Congo spatial database created during project
13a	Number of species reference collections established and handed over to host country(s)						
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work						
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	4 (400%)				English	See Annex 7, which lists 3 invited talks and 1 specialist talk at conference.

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)	24,100 (300%)	GPS trackers, satellite transmitters and attachment materials.
21	Number of permanent educational, training, research facilities or organisation established		
22	Number of permanent field plots established	48 (400%)	23 fisheries-dependent communities in Congo, 20 fisheries-dependent communities in Gabon, 5 nesting beaches outside monitored areas.

Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work	£92,395					Additional contributions towards biodiversity surveys, dissemination of lessons learned to other Central African Countries (i.e. São Tomé and Príncipe) and GIS analysis.

Annex 4   Aichi Targets

	Aichi Target	Tick if applicable to your project
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	✓
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	✓
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	✓
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	

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14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	✓
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

Annex 5   Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. contact address, website)
Journal	Pikesley SK, Maxwell SM, Pendoley K, Costa DP, Coyne MS, Formia A, Godley BJ, Klein W, Makanga-Bahouna J, Maruca S, Ngouessono S, Parnell RJ, Pemo-Makaya E, Witt MJ (2013) On the front line: integrated habitat mapping for olive ridley sea turtles in the southeast Atlantic. Diversity & Distributions 19:1518-1530	British	British	Male	Diversity & Distributions - John Wiley & Sons Ltd.	http://www.seaturtle.org/PDF/PikesleySK_2013_DiversityDistrib.pdf
Journal	Pikesley, S.K.; Agamboue, P.D.; Bonguno, E.A.; Boussamba, F.; Cardiec, F.; Michael Fay, J.; Formia, A.; Godley, B.J.; Laurance, W.F.; Mabert, B.D.K. (2013) Here today, here tomorrow: Beached timber in Gabon, a persistent threat to nesting sea turtles. Biological Conservation. 162:127-132.	British	British	Male	Biological Conservation - Elsevier	http://www.seaturtle.org/PDF/PikesleySK_2013_BiolConserv.pdf
Journal	Fossette S, Witt MJ, Miller P, Nalovic MA, Albareda D, Almeida AP, Broderick AC, Chacon-Chaverri D, Coyne MS, Domingo A, Eckert S, Evans D, Fallabrino A, Ferraroli S, Formia A, Giffoni B, Hays GC, Hughes G, Kelle L, Leslie A, Lopez-Mendilaharsu M, Luschi P, Prosdocimi L, Rodriguez-Heredia S, Turny A, Verhage S, Godley BJ (2014) Pan-Atlantic analysis of the overlap of a highly migratory species, the leatherback turtle, with pelagic longline fisheries.	French	USA	Female	Proceedings Royal Society B – Royal Society.	http://www.seaturtle.org/PDF/FossetteS_2014_ProcRSocB.pdf

	Proceedings Royal Society B 281					
Journal	Metcalfe, K.; Agamboué, P.D.; Augowet, E.; Boussamba, F.; Cardiec, F.; Fay, J.M.; Formia, A.; Kema Kema, J.R.; Kouerey, C.; Mabert, B.D.K.; Maxwell, S.M.; Minton, G.; Mounguengui Mounguengui, G.A.; Moussounda, C.; Moukoumou, N.; Manfoumbi, J.C.; Nguema, A.M.; Nzegoue, J.; Parnell, R.J.; du Plessis, P.; Sounguet, G.-P.; Tilley, D.; Verhage, S.; Viljoen, W.; White, L.; Witt, M.J.; Godley, B.J. (2015) Going the extra mile: Ground-based monitoring of olive ridley turtles reveals Gabon hosts the largest rookery in the Atlantic. Biological Conservation. 190:14-22.	British	British	Male	Biological Conservation - Elsevier	http://www.seaturtle.org/PDF/MetcalfeK_2015_BiolConserv.pdf
Journal	Nelms S.E., Piniak W.E.D., Weir C.R., Godley B.J. (2016) Seismic surveys and marine turtles: An underestimated global threat? Biological Conservation 193, 49-65.	British	British	Female	Biological Conservation - Elsevier	http://www.seaturtle.org/PDF/NelmsSE_2016_BiolConserv.pdf
Book Chapter (in press)	Weir, C.R. and Collins, T., 2015. Chapter Four-A Review of the Geographical Distribution and Habitat of the Atlantic Humpback Dolphin (Sousa teuszii).Advances in marine biology, 72, pp.79-117.	British		Female	Advances in Marine Biology - Elsevier	http://www.sciencedirect.com/science/bookseries/00652881/72
Book Chapter (in press)	Collins, T., 2015. Chapter Three-Re-assessment of the Conservation Status of the Atlantic Humpback Dolphin, Sousa teuszii (Kükenthal, 1892), Using the IUCN Red List Criteria. Advances in Marine Biology, 72, pp.47-77.	British		Male	Advances in Marine Biology - Elsevier	http://www.sciencedirect.com/science/bookseries/00652881/72

Annex 6 Darwin Contacts

Ref No	20-009
Project Title	**Delivering an MPA network for fisheries and biodiversity for Central Africa (Republic of Congo & Gabon)**
Project Leader Details	
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Partner 2	
Name	Dr Kristian Metcalfe
Organisation	University of Exeter
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Phone	
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Partner 3	
Name	Mark Gately
Organisation	Wildlife Conservation Society
Role within Darwin Project	Lead in-country partner – (Previous Gabon Programme Director, and now current Congo Programme Director)
Address	
Phone	
Fax/Skype	
Email	

Partner 4	
Name	Hilde Vanleeuwe
Organisation	Wildlife Conservation Society
Role within Darwin Project	Project Director Conkouati-Douli National Park
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Phone	
Fax/Skype	
Email	
Partner 5	
Name	Tim Collins
Organisation	Wildlife Conservation Society
Role within Darwin Project	WCS Marine Program based in Conkouati-Douli National Park
Address	
Phone	
Fax/Skype	
Email	
Partner 6	
Name	Dr Angela Formia
Organisation	Partenariat pour les Tortues Marines du Gabon
Role within Darwin Project	Director of PTMG, Biodiversity monitoring, sea turtle workshop coordinator
Address	
Phone	
Fax/Skype	
Email	

Annex 7 Verification

Presentations:
B.J.Godley (2015) Bangor University
B.J.Godley (2015) Amsterdam University
B.J.Godley (2014) University of Cambridge

International Conferences/Workshops/Seminars:
T.Collins (2015) Identifying areas of bycatch risk when resources are limited: a case study using the Atlantic humpback dolphin. 21st Biennial Conference for The Society for Marine Mammalogy. San Francisco, USA.

National Press Releases:
L'Union, Gabon (14th March 2014). National News Paper Article in the Gabonese Press covering satellite tracking work undertaken by the University of Exeter, Wildlife Conservation Society and Agence National des Parcs Nationaux. A copy of article can be accessed here: https://darwininitiativecentralafrica.files.wordpress.com/2014/04/affiche-sur-les-tortues-marine.jpg

Western Morning News, UK (June 4th 2015). Regional News Paper Article covering findings of reaserch published in Biological Conservation that highlighted Gabon hosts one of the most important nesting populations of olive ridley sea turtles in the Atlantic. A copy of the article that also appeared online can be accessed here: http://www.westernmorningnews.co.uk/Exeter-University-research-shows-Gabon-vital/story-26635358-detail/story.html

Coverage of Government of Gabon's announcement to establish a network of MPAs was covered by a range of popular science and news websites as well as the University of Exeter. Links to articles can be accessed here: University of Exeter (http://www.exeter.ac.uk/news/featurednews/title_422320_en.html); National Geographic (http://voices.nationalgeographic.com/2014/11/12/a-massive-new-marine-protected-area-network-in-gabon/); Mongabay (http://news.mongabay.com/2014/11/gabon-protects-23-of-its-coastal-waters/) and the Wildlife Conservation Society (http://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/5102/Government-of-Gabon-Announces-the-Decision-to-Create-A-New-Marine-Protected-Area-Network--Covering-About-23-percent-of-Gabons-Territorial-Waters-and-EEZ.aspx).

Popular Science Magazines:
BioSphere, UK (February 1st 2015). Article covering fieldwork that led to the discovery that Gabon hosts one of the most important nesting populations of olive ridley sea turtles in the Atlantic. A copy of the article that also appeared online can be accessed here: https://darwininitiativecentralafrica.files.wordpress.com/2015/04/biosphere.jpg

Satellite Tracking Data:
To increase awareness of regional biodiversity sea turtle tracking data was made publically accessible in real-time. The following provide links to satellite tracking data from 26 nesting female olive ridley sea turtles tagged between 2013 and 2016 that were deployed in collaboration with several national and international project partners.
2013 – http://www.seaturtle.org/tracking/?project_id=924
2014 – http://www.seaturtle.org/tracking/index.shtml?project_id=1047
2015 – http://www.seaturtle.org/tracking/index.shtml?project_id=1165