

## 1. Darwin Project Information

Project Reference	18-001
Project Title	Darwin Sustainable Artisanal Fisheries Initiative (Peru)
Host Country/ies	Peru
UK contract holder institution	University of Exeter
Host country partner institutions	Pro Delphinus (PD)
Other partner institutions	Instituto del Mar del Peru (IMARPE) Federación de Integración y Unificación de Pescadores Artesanales del peru (FIUPAP) Ministerio del Ambiente (MINAM)
Darwin Grant Value	£299,966
Start/end dates of project	October 2010 / September 2013
Reporting period (eg Apr 2010 – Mar 2011) and number (eg Annual Report 1, 2, 3)	1 October 2010 to 31 March 2011, Annual Report 1
Project Leader name	Dr. Brendan Godley
Project website	Pro Delphinus Facebook page & <a href="http://www.prodelphinus.org">www.prodelphinus.org</a>
Report authors, main contributors and date	Joanna Alfaro Shigueto, Jeffrey C. Mangel, Brendan J. Godley, Annette C. Broderick, 29 April 2011

## 2. Project Background

**The problem:** Peru has significant natural resources with potential for poverty alleviation (sustainable fishing and ecotourism). Although substantial efforts have focussed on terrestrial conservation, the country's marine biodiversity is largely neglected, despite massive industrial and artisanal fishing.

Key biodiversity includes:

- 1. Major fishing resources:** currently exploited through industrial purse-seiners and artisanal fleets. There is marked under-capacity for spatial management and assessment/mitigation of bycatch which preliminary assessments suggest is globally significant.
- 2. Globally important, yet understudied, marine mammal populations:** Multiple species subject to intense bycatch and harpooning for bait by gillnet and longline fisheries.
- 3. Globally important, yet understudied, seabird populations:** Sole foraging ground for endemic, critically endangered waved albatross. Globally important foraging ground for other endangered species.
- 4. Globally important marine turtle populations:** Foraging area and/or migratory route for five species of sea turtles all subject to direct hunting and incidental capture.
- 5. Globally important, yet understudied, shark populations:** Multiple shark species taken by artisanal fisheries in large numbers as both target and incidental catch.



Figure 1. Peru (filled polygon and the South American continent).

**Priority:** There are clear needs for: a national **Sustainable Artisanal Fisheries Initiative (Darwin-SAFI)** integrating all available information on the spatial distribution of biodiversity and threats; increased local capacity to carry out research to further inform the development/implementation of the Darwin-SAFI; increased awareness among key stakeholders and the general public as to the importance of Peruvian marine biodiversity.

The project will work from the bottom up (fishermen and communities) and top down (government agencies, NGOs) to inform key decision-makers of project findings. Key agency decision-makers IMARPE and MINAM will be able to use project results to fulfill international obligations and identify and implement future research and management priorities; fishermen can use results immediately to reduce bycatch and promote fishery sustainability.

### **3. Project Partnerships**

**Project Partnerships:** As planned, the lead in-country partner for the Darwin Sustainable Artisanal Fisheries Initiative (Peru), or Darwin-SAFI, is the marine research NGO Pro Delphinus (PD; Principle contact is Joanna Alfaro-Shigueto who is the Darwin Research Fellow as well as president and Chief Scientist of Pro Delphinus). PD facilitates contacts with government agencies and other partners and leads coordination and implementation of all project activities in Peru, including research, training and outreach. Further partner organisations in the Darwin-SAFI include: (1) Federación de Integración y Unificación de Pescadores Artesanales del Peru (FIUPAP) which assists in coordination and logistics of fishermen workshops and training at ports and landing sites along the coast and assists with coordination of site visits; (2) Instituto del Mar del Peru (IMARPE) which, during year two, will host a Darwin-IMARPE Fellow and Masters student and will provide staff for and implement an onboard observer program of artisanal fisheries in index ports along the Peru coast; and (3) Ministerio del Ambiente (MINAM), the CBD focal point in Peru. While only 6 months into the project, we have made significant progress through bycatch research and mitigation trials that will help Peru meet its international obligations with regard to marine conservation.

Our relationship with project partners is maintained through periods of in-country field work and by an email circulation list, e-mails and telephone. Formal meetings with partners are held during periods of in-country fieldwork when project staff are present.

**Additional Unforeseen Collaboration:** The Darwin-SAFI project is now collaborating with the Ecuadoran NGO Equilibrio Azul and the Chilean NGO Pacifico Laud to develop a regional perspective of small-scale fisheries and marine fauna bycatch. Within Peru, the project is now also collaborating with the NGO Nature and Culture International to enhance regional marine research and conservation capacity in northern Peru.

At the end of the first year, the partnerships are demonstrably strong, with significant progress having been made across all main project areas.

### **4. Project Progress**

#### **4.1 Progress in carrying out project activities (1-4)**

##### **Output 1. Partners trained in monitoring, research and database use.**

##### **1.1 Workshops**

###### **1.1.1 Visioning**

It was not possible to carry out the visioning workshop with all the partners at once, but visioning activities were carried out independently with each of them due to time and schedule conflicts. Meetings with FIUPAP were held in November 2010, while with IMARPE and MINAM, the meetings were in December 2010 and January 2011. An

additional visioning meeting is planned for the second year of the project, and will also include other partner agencies, such as AGRORURAL and SERNANP.

#### 1.1.2 Fisheries observers

Workshops for fisheries observers of this project were held in the ports of Constante, Salaverry and Ilo. Future workshops with observers will be directed to the IMARPE personnel that will be collecting information as part of the programmed Year 2 collaboration with this agency. Discussions with IMARPE on where these ports will be located are progressing and the choice of index ports has been narrowed to Paita, Cancas, Santa Rosa, Pucusana and Pisco. The selected locations will serve as the main sample sites as well as the locations for upcoming observer workshops to be held as part of project Year 2.

Undergraduate student interest and participation in the project was much higher than anticipated during the first six months of the project. Students were trained and participated in many aspects of the work, including data entry and management, survey methods, and fisheries monitoring. This is reflected in the high number of resulting training weeks provided (Table 1, Items 4A and 4B).

The field guides and manuals produced during this reporting period included (Table 1, Item 10):

1. Net lighting experiment monitoring forms
2. Seahorse bycatch monitoring sheets
3. Darwin survey species & fishery guides (see excerpt, Annex 3)
4. Acoustic alarm experiment monitoring forms
5. Marine otter coastal survey forms
6. Spanish language C-pod user guide
7. Waved Albatross count survey and behaviour monitoring forms

#### 1.1.3 Spatial ecology

Training in spatial ecology was given to JAS and JCM during their visit to University of Exeter in February.

#### 1.1.4 Bycatch mitigation

PD staff participated in the annual FIUPAP artisanal fishermen symposium, to present information on the different mitigation measures available for seabirds (weighted swivels), small cetaceans (pingers) and sea turtles (dehookers, line cutters). During this meeting we talked with each of the representatives of the ports, covering ca. 70% of the landing sites along the coast, obtained their contact information and provided them samples of some of the bycatch mitigation materials we are seeking to see used in their fisheries (e.g. line cutters, dehookers and weighted swivels).

#### 1.1.5 Conservation workshops

There have been 20 conservation workshops this first year, with 479 attendees, most of whom were fishermen, but also included students, local researchers and government officers. The themes discussed during the workshops included marine fauna conservation and sustainable fisheries.

#### 1.2 Darwin Graduate Trainee identified

Darwin graduate students JAS and JCM are well underway with their studies and visited University of Exeter at Cornwall in February 2011 to receive training on spatial analyses and on bycatch data processing. Discussions are also underway with IMARPE to identify the graduate trainee and we anticipate that this person will be selected within the next few months.

#### 1.3 Darwin-IMARPE Fellow identified

One possible candidate has been listed by IMARPE, but is not yet determined. It is likely that a candidate will be proposed by this agency in the next few months.

#### 1.4 Conference attendance Darwin staff

Two international conferences have been attended:

In October 2010, JAS attended to the Small scale fisheries world conference, held in Bangkok and organized by SEAFDEC and Memorial University, Canada.

In November 2010, JCM attended a sea turtle meeting in Guayaquil, Ecuador, organized by the Comisión Permanente del Pacífico Sur (CPPS).

Darwin staff have also presented project findings at a Red List meeting held by MINAM in October 2010. Another meeting on protected areas held by MINAM and the USA Embassy in Lima was also attended by project staff JAS and NOE.

### **Output 2. Increased knowledge of the marine biodiversity of Peru to inform decision makers.**

#### 2.1 Artisanal fisheries assessment completed

Surveys in over 30 ports (30% of the total number of small scale ports, >800 surveys conducted) were successfully completed in January 2011. Work started in October 2010 and we had over 40 researchers and fisheries technicians trained to conduct the surveys. These surveys were conducted in Peru and a companion study in 12 ports (~500 surveys) by partner NGOs Equilibrio Azul and Pacifico Laud was also completed in Ecuador and Chile to allow for a regional assessment of small scale fisheries and marine fauna bycatch.

#### 2.2 Spatial ecology database established

A spatially explicit database has been established that will manage fisheries and fauna capture information as well as satellite tracking data. Satellite transmitters have been deployed on loggerhead turtles and leatherback turtles released after capture in fisheries.

#### 2.3 Fisheries observer programme underway

Observers are currently in place in three ports: Constante, Salaverry and Ilo. The programs in Salaverry and Ilo are part of a long term monitoring project. Onboard observers will also be placed in several additional ports and fisheries as part of Year 2 work with IMARPE.

#### 2.4 Marine vertebrate monitoring underway

During the first year, we have used C-POD acoustic monitoring devices ([www.chelonia.co.uk](http://www.chelonia.co.uk)), in order to monitor the presence and behaviour of small cetaceans in the gillnet fisheries sampled. Seabird monitoring protocols have also been designed and implemented in the port of Salaverry in northern Peru.

#### 2.6 Scientific papers

Six papers have been produced during project Year 1. Copies of these papers have been presented to the government officers at IMARPE, MINAM and SERNANP. Papers regarding seabirds were also presented to the Peru focal point of the ACAP agreement (Agreement on the Conservation of Albatrosses and Petrels); turtle papers were also presented to the government focal point of the IAC agreement on sea turtles (Inter-American Convention for the Protection and Conservation of Sea Turtle), and marine mammal documents were presented to the CPPS focal point.

#### 2.7 Project summary report prepared, presented to stakeholders and decision makers.

We have presented the results of this project to stakeholders during workshops in Constante and Ilo. Summary reports are also being prepared for IMARPE, MINAM, FIUPAP and SERNANP.

### **Output 3. Increased awareness of the marine environment.**

#### 3.1 Website established:

Due to the ease with which updates can be posted, we have chosen to focus on the Pro Delphinus facebook page as the main venue through which project related announcements and

materials are disseminated. This facebook page has been active since January 2011. PD also maintains a website and this is being updated as well to serve as a Darwin-SAFI project portal.

### 3.2 Production of Darwin Newsletters

The first newsletter was produced ahead of schedule in October 2010 and distributed at fishing ports throughout Peru and posted to the Pro Delphinus facebook page and blog to facilitate greater dissemination nationally and internationally (including the UK). The newsletter was used as a means to announce the project and also provided helpful information to Peruvian fisherman regarding bycatch mitigation and Project contact information.

### 3.3 Press releases in Peru and UK

We have issued 5 Project related press releases in Peru, one of which led to coverage and an interview by *Rainforest Alliance* and an article on their website and the Eco-Index website. Project related articles also appeared on the websites of the Western Hemisphere Migratory Species Initiative Pathway and the Centre for Development and Sustainable Fisheries. A summary of the project was also published in the internationally distributed *Bycatch Communication Network Newsletter*. Excerpts from these links are presented in Annex 3.

### 3.4 Darwin Seminars for key stakeholders

Planning for the first conference of Darwin staff continues and the first event should occur as Year 2 plans for bycatch observer work are finalized.

### 3.5 Darwin Conference

The conference, to be held in mid-2013, will serve as an opportunity to summarize project results and finding and to chart the way forward upon project completion.

## **Output 4. Bycatch mitigation experiments and implementation.**

### 4.1 Bycatch mitigation trials and implementation

Building upon progress by Pro Delphinus and momentum provided by the Darwin-SAFI we have already begun several bycatch mitigation trials. These include experimental trials of acoustic alarms to reduce small cetacean bycatch in driftnets and experimental trials of LED lights to reduce sea turtle and seabird bycatch in bottomset nets. Preliminary results from both projects are quite promising as both experiments resulted in reduced bycatch. Apart from these experiments, several other bycatch mitigation efforts are also underway. These include the introduction and distribution of weighted swivels for use on surface longline vessels as a means to reduce seabird bycatch, and the distribution of net cutters as a means to facilitate the safe release of sea turtles (and other species) from driftnets.

## **Output 5. Project monitoring.**

### 5.1 Darwin reporting

This report demonstrates our progress to date.

### 5.2 Steering group meetings

An initial steering group meeting was held in September 2010, just prior to the formal start of the project in order to better plan Year 1 activities. An additional steering group meeting was held during Dr. Godley's field visit in December 2010.

## 4.2 Progress towards project outputs

We are only 17% of the way through the project and are well on target to attain all project outputs, with 50% or more of target reached in 21 of 38 relevant standard output criteria.

## 4.3 Standard Measures

We have made excellent progress against standard reporting measures, being on target or ahead of schedule in all criteria.

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Number planned for reporting period	Total planned during the project
1A	Number of people to submit thesis for PhD qualification (in host country)	0					0	1
1B	Number of people to attain PhD qualification (in host country)	0					0	1
2	Number of people to attain Masters qualification (MSc, MPhil etc)	0					1	1
3	Number of people to attain other qualifications (ie. Not outputs 1 or 2 above)	0					1	3
4A	Number of undergraduate students to receive training	11					5	15
4B	Number of training weeks to be provided	80					5	7
4C	Number of postgraduate students to receive training	4					0	1
4D	Number of training weeks to be provided	16					8	50
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	0					0	4
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	479					200	500
6B	Number of training weeks to be provided	5					3	8
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country	4					3	5
8	Number of weeks to	4					5	26

	be spent by UK project staff on project work in the host country							
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	0					0	1
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	7					2	4
11A	Number of papers to be published in peer reviewed journals	3					1	4
11B	Number of papers to be submitted to peer reviewed journals	6					2	4
12A	Number of computer based databases to be <b>established</b> and handed over to host country	2					1	3
12B	Number of computer based databases to be <b>enhanced</b> and handed over to host country	1					1	3
14A	Number of conferences/seminars/workshops to be <b>organised</b> to present/disseminate findings	2					1	4
14B	Number of conferences/seminars/workshops <b>attended</b> at which findings from Darwin project work will be presented/ disseminated.	4					2	2
15A	Number of national press releases in host country(ies)	5					2	5
15B	Number of local press releases in host country(ies)	5					2	6
15C	Number of national press releases in UK	1					1	2
15D	Number of local press releases in UK	1					1	2
16A	Number of newsletters to be produced	1					1	4
16B	Estimated circulation of each newsletter in the host country(ies)	1000					500	1000
16C	Estimated circulation of each newsletter in	250					100	250

	the UK							
17A	Number of dissemination networks to be <b>established</b>	1					0	1
17B	Number of dissemination networks to be <b>enhanced/ extended</b>	1					0	1
18A	Number of national TV programmes/features in host country(ies)	1					1	2
19A	Number of national radio interviews/features in host county(ies)	0					0	2
19C	Number of local radio interviews/features in host country(ies)	8					1	3
19D	Number of local radio interviews/features in UK	0					0	1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	£16,190						£36,490
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	1					0	
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased	3					2	5
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	£69,182						£300,960
New -Project specific measures								

**Table 2 Publications**

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Journal	Mangel, J.C., J. Alfaro-Shigueto, M.J. Witt, P.H. Dutton, J.A. Seminoff & B.J. Godley. <i>In press</i> . Post-capture movements of loggerhead turtles in the southeastern Pacific Ocean assessed by satellite tracking. Marine Ecology Progress Series. DOI 10.3354/meps09120.	Inter-Research	Publisher's website	Na



Journal	Alfaro-Shigueto, J., J.C. Mangel, C. Caceres, J.A. Seminoff, A. Gaos & I. Yañez. <i>In press</i> . Hawksbill turtles in Peruvian coastal fisheries. Marine Turtle Newsletter.	Seaturtle.org	Publisher's website	Na
Journal	Benavides, M., K.A. Feldheim, C.A. Duffy, S. Wintner, M. Braccini, J. Boomer, C. Huveneers, J.C. Mangel, J. Alfaro-Shigueto, D.P. Caramil & D.D. Chapman. <i>In press</i> . Southern hemisphere phylogeography of the copper shark ( <i>Carcharhinus brachyurus</i> ). Marine and Freshwater Research.	CSIRO Publishing	Publisher's website	Na
Journal	Mangel, J.C., T. Whitty, G. Medina-Vogel, J. Alfaro-Shigueto, C. Caceres & B.J. Godley. 2011. Latitudinal variation in diet and patterns of human interaction in the marine otter. Marine Mammal Science 27(2): E14-E25.	Wiley-Blackwell	Publisher's website	Na
Journal	Alfaro-Shigueto, J., J.C. Mangel, M. Pajuelo, P. Dutton, J.A. Seminoff & B.J. Godley. 2010. Where small scale can have a large impact: Structure and characterization of small-scale fisheries in Peru. Fisheries Research 106: 8-17.	Elsevier	Publisher's website	Na
Journal	Hidalgo-Aranzamendi, N., J. Alfaro-Shigueto & C.B. Zavalaga. 2010. New records of broad-billed prions ( <i>Pachyptila vittata</i> ) in southern Peru. Notornis 57: 40-43.	Ornithological Society of New Zealand	Publisher's website	Na

#### 4.4 Progress towards the project purpose and outcomes

We feel that at this early stage we are making strong progress towards stated purposes and outcomes, and our purpose level assumptions still hold true.

#### 4.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

It is too early to assess the full impact of the project but we feel our indicators for measuring outcomes remain entirely adequate toward monitoring project progress, and, subsequently, evaluating potential for bycatch reductions resulting from the project.

### 5. Monitoring, evaluation and lessons

As articulated in the main bid, the progress of the project against key milestones and indicators is appraised by a Steering Group made up of partner organisation that will meet bi-annually. There is also regular communication among project partners, facilitated by the field presence of the key Darwin Staff. The key indicators show the progress of the project as catalysed by the launch of several ongoing initiatives. These include websites development, establishment of a spatial ecology database, a commencement of a Fishery Observer Programme and marine vertebrate monitoring and bycatch mitigation initiatives. All of these are clearly articulated and time stamped and have moved beyond the planning stages to varying levels of implementation.

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

This is our first report.

## 7. Other comments on progress not covered elsewhere

There have been no major enhancements or refinements to the project, nor any significant difficulties encountered. We do not foresee any major additional risks.

## 8. Sustainability

As detailed above, the project has made considerable inroads to creating a profile in-country. There is strong buy-in from partners for the project, demonstrated by the number of initiatives we have been able to get off the ground in the first six months. The exit strategy will be the formulation of a spatially explicit sustainable artisanal fisheries initiative which will act as a roadmap for further action in the waters off Peru and, indeed, regionally, as many of these marine resources and issues are found throughout the southeast Pacific. There is a stable project endpoint in that capacity and awareness will have been raised to an all-time high with the launch of the Darwin-SAFI. Sustainability will depend on the ongoing commitment of the organisations that currently make up the consortium. This is highly likely given the sustained efforts made by all organisations to date, and given the representation of the key stakeholders in the project. There will be considerable legacy aspects to this project including greatly enhanced levels of training of local staff and project participants, training and educational materials, and a spatially explicit database.

## 9. Dissemination

Dissemination efforts have been targeted at key stakeholders in fishing communities and government during the launch period of the project although media activity will have widened the impact. Repeated conservation workshops along the Peru coast also served to promote the project and its objectives. In the coming year we plan to expand web, media and newsletter activity to increase the profile of the project and hold regular project related workshops and talks with stakeholder groups.

## 10. Project Expenditure

**Table 3 project expenditure during the reporting period (1 April 2010 – 31 March 2011)**

Item	Budget (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance/ Comments
Staff costs specified by individual			zero
Overhead costs			zero
Travel and subsistence			zero
Operating costs			zero
Capital items/equipment (specify)			zero
Others: Consultancy			zero
Others (please specify)			zero
TOTAL			zero

**11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

I agree for LTS and the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

**A strong start:** As a result of strong partnerships and a tremendous commitment from local partners and UoE staff, the project has proceeded apace and significant inroads have been made in research, training, and outreach. We are exceptionally well placed to further strengthen the project in the next financial year.

**Images:** We have many excellent images of local partners involved with fieldwork that we would happily share. These include photos of staff conducting fishermen interviews and workshops, fishing vessels, marine fauna bycatch, and attachments of satellite transmitters to sea turtles. Please contact Darwin Research Fellow, Joanna Alfaro-Shigueto

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2010-2011

Project summary	Measurable Indicators	Progress and Achievements April 2010 - March 2011	Actions required/planned for next period
<p><b>Goal:</b> <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <ul style="list-style-type: none"> <li>⇒ The conservation of biological diversity,</li> <li>⇒ The sustainable use of its components, and</li> <li>⇒ The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>	<p>Sustainable artisanal fisheries initiative effectively enacted.</p>	<p>Significant steps have been made towards project aims in the first 6mo. of a 3 year project.</p>	
<p><b>Purpose</b> Improved national and local capabilities applied to the sustainable and equitable management of marine biodiversity of Peru</p>	<p>Improved national and local capabilities applied to the sustainable and equitable management of marine biodiversity of Peru</p>	<p>Training, research and involvement of key stakeholders is well underway.</p>	<p>Fisheries observer programme continued and expanded. IMARPE Fellow and Msc underway. Additional research and mitigation trial outputs.</p>
<p><b>Output 1.</b> Partners trained in monitoring, research and database use</p>	<ul style="list-style-type: none"> <li>• Training workshops</li> <li>• Training of Darwin Research Fellow and other local partners</li> <li>• Training of Darwin Graduate Trainee to MSc</li> <li>• Darwin Staff to international conferences</li> </ul>	<p>Progress generally good and indicators appropriate.</p>	
<p>Activity 1.1 Workshops (1. Visioning; 2. Fisheries observers; 3. Spatial ecology; 4. Bycatch mitigation; 5. Conservation workshops; Dates per workplan)</p>	<p>Visioning workshop undertaken. Conservation workshops undertaken on a continuing basis. Remaining workshops (fisheries observers, spatial ecology, bycatch mitigation) planned.</p>	<p>Visioning workshop undertaken. Conservation workshops undertaken on a continuing basis. Remaining workshops (fisheries observers, spatial ecology, bycatch mitigation) planned.</p>	
<p>Activity 1.2 Darwin Graduate Trainee identified</p>		<p>Planned</p>	
<p>Activity 1.3 Darwin-IMARPE Fellow identified</p>		<p>Planned</p>	
<p>Activity 1.4 Conference attendance Darwin staff</p>		<p>Underway. Staff attendance at 2 international conferences, and 2 national events.</p>	
<p><b>Output 2.</b> Increased knowledge of the marine biodiversity of Peru to inform decision makers</p>	<ul style="list-style-type: none"> <li>• Current assessment of artisanal fisheries and associated bycatch Initiative</li> <li>• Sustainable Artisanal Fisheries</li> <li>• Species and fisheries effort maps</li> <li>• Darwin conference</li> </ul>	<p>Progress generally good and indicators appropriate.</p>	

	<ul style="list-style-type: none"> <li>Scientific Papers</li> </ul>	
Activity 2.1	Artisanal fisheries assessment completed	Underway
Activity 2.2	Spatial ecology database established	Completed
Activity 2.3	Fisheries observer programme underway	Underway
Activity 2.4	Marine Vertebrate monitoring underway	Underway
Activity 2.6	Scientific papers	Underway. 6 published or in press, 1 in review.
Activity 2.7	Project summary report prepared, presented to stakeholders and decisionmakers	Planned
<b>Output 3.</b>	Increased awareness of the marine environment <ul style="list-style-type: none"> <li>Website; newsletters; press releases; Workshops; Lectures; Darwin conference</li> </ul>	Progress generally good and indicators appropriate.
Activity 3.1	Website established	Underway
Activity 3.2	Production of Darwin Newsletters	Underway. First released in October 2010 with additional newsletters to be released as scheduled.
Activity 3.3	Press releases in Peru and UK	5 in Peru, 1 in UK.
Activity 3.4	Darwin Seminars for key stakeholders	Planned
Activity 3.5	Darwin Conference	Planned
<b>Output 4.</b>	Bycatch mitigation experiments and implementation <ul style="list-style-type: none"> <li>Animals released</li> <li>Declines in capture rates, both absolute and catch per unit effort</li> <li>Reduced severity of injury</li> <li>Number of fishers agreeing to change fishing techniques/employ mitigation</li> </ul>	Progress generally good and indicators appropriate.
Activity 4.1	Bycatch mitigation trials and implementation	Underway
<b>Output 5.</b>	Project monitoring <ul style="list-style-type: none"> <li>Darwin reporting.</li> <li>Steering group meetings.</li> </ul>	Progress generally good and indicators appropriate.
Activity 5.1	Darwin reporting	Effectively draws strands of project together for appraisal.

Activity 5.2 Steering Group meetings

Excellent periodic format for project review.

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p> <p><b>Sub-Goal:</b> The marine biodiversity of Peru is preserved for future sustainable use</p>	<ul style="list-style-type: none"> <li>• Artisanal fisheries methods and bycatch accurately assessed</li> <li>• Bycatch mitigations identified and implemented for threatened taxa and fisheries observed</li> <li>• Programmes show reduced levels of marine vertebrate bycatch.</li> <li>• Increasing populations of key marine taxa</li> </ul>	<ul style="list-style-type: none"> <li>• Data from Peruvian fisheries ministries and non-governmental monitoring programmes</li> <li>• Monitoring by Peruvian Navy and IMARPE, Spatially referenced fishing and bycatch data</li> <li>• Data from governmental and non-governmental monitoring programmes</li> </ul>	
<p><b>Purpose</b> Improved national and local capabilities applied to the sustainable and equitable management of marine biodiversity of Peru</p>	<ul style="list-style-type: none"> <li>• Sustainable artisanal fisheries initiative effectively enacted</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring continued</li> <li>• Reports and publications by partner organisations</li> </ul>	<ul style="list-style-type: none"> <li>• Peruvian partner organisations incorporate new knowledge into future strategies and workplans</li> <li>• Continued political stability</li> </ul>
<p><b>Outputs</b> (add or delete rows as necessary) 1. Partners trained in monitoring, research and database use</p>	<ul style="list-style-type: none"> <li>• Training workshops</li> <li>• Training of Darwin Research Fellow and other local partners</li> <li>• Training of Darwin Graduate Trainee to MSc</li> <li>• Darwin Staff to international conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop Reports</li> <li>• Functioning fisheries observer programme and bycatch data</li> <li>• MSc thesis</li> </ul>	<ul style="list-style-type: none"> <li>• Trained individuals remain in employment by partner organisations</li> </ul>
<p>2. Increased knowledge of the marine biodiversity of Peru to inform decision makers</p>	<ul style="list-style-type: none"> <li>• Current assessment of artisanal fisheries and associated bycatch</li> <li>• Sustainable Artisanal Fisheries Initiative</li> <li>• Species and fisheries effort maps</li> <li>• Darwin conference</li> <li>• Scientific Papers</li> </ul>	<ul style="list-style-type: none"> <li>• Outputs provided to Darwin; included on project website and reports</li> </ul>	<ul style="list-style-type: none"> <li>• Partners provide and share data</li> </ul>

<p>3. Increased awareness of the marine environment</p>	<ul style="list-style-type: none"> <li>• Website; newsletters; press releases; Workshops; Lectures; Darwin conference</li> </ul>	<ul style="list-style-type: none"> <li>• Web hits</li> <li>• Circulation of Darwin Newsletter</li> <li>• Media Items</li> <li>• Conference outputs</li> <li>• Number workshops held and attendance levels</li> <li>• Number of fishers collaborating in fieldwork</li> </ul>	
<p>4. Bycatch mitigation experiments and implementation</p>	<ul style="list-style-type: none"> <li>• Animals released</li> <li>• Declines in capture rates, both absolute and catch per unit effort</li> <li>• Reduced severity of injury</li> <li>• Number of fishers agreeing to change fishing techniques/employ mitigation</li> </ul>	<ul style="list-style-type: none"> <li>• Reports and publications</li> <li>• Number of fishers employing the techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Effective, appropriate measures can be defined for the fisheries and species</li> </ul>
<p>5. Project monitoring</p>	<ul style="list-style-type: none"> <li>• Darwin reporting.</li> <li>• Steering group meetings.</li> </ul>	<ul style="list-style-type: none"> <li>• Reports to Darwin Initiative.</li> <li>• Minutes of meetings.</li> </ul>	
<p><b>Activities (details in workplan)</b></p>			
<p>1.1 Workshops (1. Visioning; 2. Fisheries observers; 3. Spatial ecology; 4. Bycatch mitigation; 5. Conservation workshops; Dates per workplan)  1.2 Darwin Graduate Trainee identified  1.3 Darwin-IMARPE Fellow identified  1.4 Conference attendance Darwin staff</p> <p>2.1 Artisanal fisheries assessment completed  2.2 Spatial ecology database established  2.3 Fisheries observer programme underway  2.4 Marine Vertebrate monitoring underway  2.6 Scientific papers  2.7 Project summary report prepared, presented to stakeholders and decisionmakers</p>			
<p>3.1 Website established  3.2 Production of Darwin Newsletters  3.3 Press releases in Peru and UK  3.4 Darwin Seminars for key stakeholders  3.5 Darwin Conference</p>			
<p>4.1 Bycatch mitigation trials and implementation</p>			
<p>5.1 Darwin reporting  5.2 Steering Group meetings</p>			