



***Annual Report on Darwin Initiative Project
Conservation of Pakistan's marine
cetacean biodiversity and habitat***

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Rupert Ormond*



Darwin Initiative

Annual Report

1. Darwin Project Information

Project Ref. Number	14-005
Project Title	<i>Conservation of Pakistan's Marine Cetacean Biodiversity and Pelagic Environment</i>
Country(ies)	<i>Pakistan</i>
UK Contractor	<i>University Marine Biological Station Millport (UMBSM), University of London</i>
Partner Organisation(s)	<i>WWF-Pakistan (WWF-P) & Centre for Excellence in Marine Biology (CEMB), Karachi University (KU)</i>
Darwin Grant Value	<i>£167,308</i>
Start/End dates	<i>01 October 2005 / 31 September 2008</i>
Reporting period	<i>01 October 2005 to 31 March 2006: Annual Report 1</i>
Project website	<i>http://www.gla.ac.uk/centres/marinstation/index.html</i>
Author(s), date	<i>Dr. Mauvis Gore, Dr. P Jamal Siddiqui, Dr. Ejaz Ahmad, 30 April 2006</i>

2. Project Background

- Briefly describe the location and circumstances of the project and the problem that the project aims to address.

Prior to the mounting of this project, several sources of information suggested that significant, previously unstudied populations of over 20 species of whale and dolphin occurred within Pakistani waters of the NE Indian Ocean. Very little has been published on the occurrence of marine cetaceans in Pakistan. However, recent work by the Oman Whale & Dolphin Group (OWDRG, with which we are associated) had demonstrated the occurrence of significant populations of cetaceans on the other side of the Arabian Sea and Gulf of Oman. This suggested that the same species should occur in Pakistan, and recently published data on illegal Soviet whaling in the region during the 1960s had supported this view, as had informal accounts provided us by Pakistani fishermen. It thus seemed likely that Pakistani waters harbour important cetacean populations, whose significance is increased by the International Whaling Commission recognition of the Indian Ocean as a Sanctuary, within which populations are protected from whaling. Thus there has been an urgent need both to determine the status of different species of cetacean within Pakistan, and to promote their conservation and sustainable management.

Meanwhile, Pakistan's cetacean populations are threatened indirectly by the removal of components of the food chain on which they depend for food, as well as directly by other impacts such as pollution, ship strikes and entanglement in fishing gear. The loss of cetacean populations in the area would represent not only a decline in biodiversity, but also the loss of resources that could be exploited sustainably, e.g. for ecotourism, by the local fishing community. Staff at both the WWF Pakistan and the Centre of Excellence in Marine Biology, University of Karachi in Pakistan, recognised the need for urgent action to gain information on the country's cetacean populations and the pelagic ecosystem that supports them. Thus the project was mounted to support these agencies in determining the status of Pakistan's marine

cetacean populations, in appraising the health of the pelagic ecosystem on which these populations depend, and in promoting public awareness of the scope for managing these species sustainably.

3. Project Purpose and Outputs

- State the purpose and outputs of the project. Please include your project logical framework as an appendix and report achievements and progress against it (or, if applicable, against the latest version of the logframe).

The overall purpose of the project is the conservation and management of whale and dolphin biodiversity in Pakistani waters of the N.E. Indian Ocean, and of the pelagic resources on which this biodiversity depends. Planned outputs were a) a programme of monitoring of cetaceans and the pelagic environment, b) an understanding of the threats to cetacean populations, c) recommendations for protective actions (including MPAs), d) training of Pakistani academics and project officers, e) the teaching of a cetacean biology module at Karachi University, f) the establishment of a national cetacean conservation group, and g) the increased awareness of stakeholders (especially fishers) of the potential for sustainable use (see App. 1).

After only 6 months, significant steps have been taken towards achieving the above outputs. A programme of boat-based and beach surveys has been initiated, directed at determining the abundance, diversity and seasonal habitat use of cetaceans, and assessing the status of their pelagic environment and the extent of threats to their populations. In particular, inshore boat-based surveys have been undertaken in areas distributed along almost the whole coast of Pakistan from near Jiwani in the West, to Dabbo Creek in the East. Four Pakistani research and project officers, two Pakistani academics and a government field researcher have been trained in monitoring methods through participating in survey work. And the conservation and sustainable management of cetaceans in Pakistan has been promoted through a project launch event, press and media items, and meetings with fishers in fishing villages and ports.

It is too early in the project for an MPA to be proposed or whale watching business to be considered, but we have begun discussions with our project advisory panel on setting up a national cetacean group and one of our project officers is currently collating the necessary material. We have prepared the final draft of a first scientific paper arising out of our beach surveys. Our initial databases have been constructed and data collected so far entered. Four Pakistani personnel have already attended the UMBSM marine mammal course in the UK, in July 2005, one year ahead of schedule, and arrangements are in hand to teach the course in Pakistan in the coming year. The work of the project has been reported regularly in the WWF-Pakistan newsletter, and the fisher reporting scheme has been launched with fisher community surveys.

- Have the outputs or proposed operational plan been modified over the last year, for what reason, and have these changes been approved by the Darwin Secretariat? (Please note that any intended modifications should be discussed with the Secretariat directly rather than making suggestions in this report).

The outputs and operational plan has not been significantly modified in the six months that we have been working on the project.

4. Progress

- Please provide a brief history of the project to the beginning of this reporting period.

The project began six months ago, in October 2005, within this current reporting period.

- Summarise progress over the last year against the agreed baseline timetable for the period and the logical framework (complete Annex 1). Explain differences including any slippage or additional outputs and activities.

Progress over the first six months of the project has been more than satisfactory, exceeding that anticipated by our timetable for the period (Annex 1). Inshore and coastal surveys have covered not only much of the coast of Sindh, as planned, but also key areas along the coast of Balochistan, the latter as a result of an opportunity to collaborate with the WWF-P managed Pakistan Wetlands Project (funded by GEF). As a result surveys have already established key areas for three threatened inshore cetaceans (humpback dolphins, bottle-nosed dolphins, and finless porpoise).

By talking with the media, general public, academics, conservationists and fishers, we have begun to raise awareness of the presence of important cetacean populations, and the threats they face. We have established conservation and research activities in KU and WWF-P, and work has begun on establishing a national cetacean group. The first scientific Annual Report is in preparation, and a first scientific paper is to be submitted shortly.

- Provide an account of the project's achievements during the last year. This should include concise discussion on methodologies and approaches by the project (e.g. research, training, planning, assessment, monitoring) and their consequences and impacts as well as results. Please **summarise** content on methodologies and approaches, and, if necessary, provide more detailed information in appendices (this may include cross-references to attached publications).

During the 6 months of the project to date, the project leader, Dr. Mauvis Gore, has spent two 6 week periods in Pakistan (total 12 weeks), the first in November-December 2005, the second in January-March 2006. In both cases she was accompanied by an experienced UMBSM research assistant, Ross Culloch. The Director of UMBSM, Dr. Rupert Ormond, also visited Pakistan to assist in the work of the project, once for two weeks in November 2005, and again for two weeks in February 2006.

A very successful project launch was held in November 2005 at the Karachi Institute of Genetics and Bio-engineering (KIGBE), Karachi University, with over 200 people attending, including the press and television. The Vice-Chancellor of Karachi University, the Director of the British Council, Karachi, and the Director of KIGBE each gave brief addresses, while talks about marine and cetacean conservation and the project itself were given by the project partners - Dr. Mauvis Gore (UMBSM), Dr. Jamal Siddiqui (CEMB), and Ali Hasnain (WWF-P).

A Project Advisory Panel (PAP), including representatives of key organisations involved with conservation issues in Pakistan (App. 2), was successfully formed with a first meeting taking place in November 2005, followed by a second meeting in February 2006. The panel has brought together institutions that had not previously worked together, a positive outcome that has assisted in advancing conservation in Pakistan.

Two Research Officers and two Project Officers were appointed in October 2005, and intensive training in theory and practical methods begun in November 2005. We have also taken the opportunity to provide training to other staff from government (Sindh Wildlife Dept., Zoological Survey Dept.) and university (MRCRC and Zoology Depts., Karachi University) departments and NGOs (including WWF-P) who have participated in the project. In addition to training through lectures and practical classes during the UMBSM marine mammals module (App. 3), training was provided during fieldwork in Pakistan and by individual tuition in relation to particular project responsibilities, including cetacean and seabird monitoring techniques, questionnaire surveys, literature searches, behavioural observations, navigation, computing skills, use of databases, and use and care of field equipment.

Intensive fieldwork was undertaken during November-December 2005, focussing on the coast of Sindh, extending from west of Karachi to Keti Bundar, in the eastern part of the Indus Delta. Further occasional survey work continued in this region during January-March 2006, but was interrupted by preparation and execution of a high-profile expedition along the coast of Balochistan, extending offshore to the island of Haft-Talaar (Astola), and westwards to Jiwani, on the border with Iran. Surveys have each incorporated boat-based transects, shore surveys for beach-cast material, and surveys of knowledge among fisher communities (App. 4).

To raise public awareness and promote the project, we have printed and distributed Darwin-badged project leaflets and cetacean identification guides (for both literate and illiterate people) and project stickers. We have given a series of public talks (App. 5) and both contacted and been contacted by the media, securing effective coverage of the project (App. 6).

- Discuss any significant difficulties encountered during the year and steps taken to overcome them.

Unfortunately one of the project officers who had attended the UMBSM marine mammals course resigned from WWF-P in January 2006, and although he has now been replaced, the loss of his expertise put pressure on the team during field and laboratory work.

Two cetacean researchers (Tim Collins [OWDRG] and Gill Braulik [OPCF]) who were scheduled to participate in the November-December and January-March field phases respectively, both withdrew pleading over-commitment. Following discussion with the Darwin Initiative office, the relevant budget element was used to fund the participation in both field phases, and for a significantly longer period than expected for the other researchers, of Ross Culloch, a graduate field assistant with an M.Sc. in marine mammal science and significant additional experience of cetacean survey work.

The transfer of funds to Pakistan to cover the salaries of KU-based Research Officers has been subject to delay, in part due to the policy of only providing funding quarterly in arrears. The problem has been discussed with the University of London, who have agreed to an accelerated schedule of payments.

- Has the design of the project been enhanced over the last year, e.g. refining methods, indicators for measuring achievements, exit strategy?

We have taken the opportunity to collaborate with the WWF-P managed Pakistan Wetlands Project (Dr. Richard Garstang). This allowed us to carry out initial surveys along the coast of Balochistan, providing us with experience of this difficult to access and politically highly sensitive region.

- Present a timetable (workplan) for the next reporting period.

<i>Apr 06</i>	<i>Publish first Annual Report</i>
<i>May, Aug, Nov 06, Feb 07</i>	<i>Darwin-badged publicity packages to media</i>
<i>Jul 06</i>	<i>Marine Mammal Module at UMBSM</i>
<i>Aug 06</i>	<i>Educational packages published and distributed through WWF-P to the public</i>
<i>Oct 06</i>	<i>Publish Half-yearly Report</i>
<i>Dec 06</i>	<i>Begin next field season of boat-based survey of inshore areas</i>
<i>Jan 07</i>	<i>Launch of national cetacean conservation group, "Pakistan Whale & Dolphin Group" (PWDG)</i>
<i>Jan 07</i>	<i>Marine Mammal Module first taught at KU</i>
<i>Feb-Mar 07</i>	<i>Fisher Workshops held in Sindh & Balochistan</i>
<i>Mar 07</i>	<i>Launch of PWDG semi-annual Newsletter</i>

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

- Have you responded to issues raised in the review of your last year's annual report? Have you discussed the review with your collaborators? Briefly describe what actions have been taken as a result of recommendations from last year's review.

Not applicable

6. Partnerships

- Describe collaboration between UK and host country partner(s) over the last year. Are there difficulties or unforeseen problems or advantages of these relationships?

All project partners have supported the project enthusiastically, and responded as well as could have been hoped to requests for support or advice. Notably, during periods spent in Pakistan, the project leader (Dr. Mauvis Gore) was based in Dr. Siddiqui's laboratory in CEMB, facilitating collaboration with project staff based there, and WWF-P arranged extra funding and support through the WWF-managed Pakistan Wetlands Project, permitting the early extension of the project to Balochistan. Owing to the pressure of other commitments, not all partners have been able to participate in fieldwork to the extent envisaged, and e-mail links between KU and the UK have occasionally been problematic. But partners have gone to great lengths to support the project in other ways, such as by obtaining security clearance for fieldwork in restricted areas.

- Has the project been able to collaborate with similar projects (Darwin or other) in the host country or other regions, or establish new links with / between local or international organisations involved in biodiversity conservation?

Most notably, as explained above, we have established collaboration with the new GEF-funded Pakistan Wetlands Project (led by WWF-Pakistan) resulting in participating in an expedition to Balochistan, together with a group working on coral reef biodiversity and conservation. We have also established links with the IUCN-Pakistan, who have provided a representative for our Project Advisory Panel, and the Pakistan Navy supported us with security during the entire Balochistan coastal survey.

7. Impact and Sustainability

- Discuss the profile of the project within the country and what efforts have been made during the year to promote the work. What evidence is there for increasing interest and capacity for biodiversity resulting from the project? Is there a satisfactory exit strategy for the project in place?

To promote the work, we began with a major launch involving significant leaders in the communities at a highly regarded venue, with the press and television media present and given press release packages.

We have designed, printed and are distributing leaflets, guides and stickers that promote the work and give information on the importance of Pakistan's cetaceans.

We visit local fisher communities to discuss their experiences and to promote the work of the project. Our project officers give talks to groups on the project. Our Project Advisory Panel includes representatives from key organisations and government departments that not only provide valuable advice, but disseminate information on the project. We have taken every opportunity to provide information to the media on the project and have reached a wider public as a result.

Exit strategy: 1) WWF-P, a large, highly proactive NGO with 27 regional offices and over 300 staff, committed to a long-term role in promoting conservation & management of Pakistan's cetacean population directly, is expected to maintain the WWF employed project officers in post, 2) the planned national cetacean conservation group is expected to be operational within two years, 3) Karachi

University will continue to offer the Marine Mammal Module in their degree programme, so training future biologists and stimulating public interest & awareness; it is also anticipated that the research officers will, in due course, be appointed as academic staff, likely to continue research and conservation activities on cetaceans, 4) the SAPs and other policies developed through the project, which will influence the work of the responsible government agencies (Fisheries and Zoological Survey Departments) into the future, and 5) the Project Advisory Panel will specifically address issues of impact and legacy.

8. Outputs, Outcomes and Dissemination

- Explain differences in actual outputs against those agreed in the initial 'Project Implementation Timetable' and the 'Project Outputs Schedule', i.e. what outputs were not or only partly achieved? Were additional outputs achieved?

The table below shows the agreed outputs and their status.

<i>Date</i>	<i>Description of Project Outputs</i>	<i>Status</i>
<i>Jul 05</i>	<i>Advertise for Pakistani Research & Project Officers</i>	<i>Yes</i>
<i>Jul 05</i>	<i>Liase with OWDRG & other Indian Ocean cetacean specialists</i>	<i>ongoing</i>
<i>Oct 05</i>	<i>Research & Project Officers commence employment</i>	<i>Yes</i>
<i>Oct 05</i>	<i>Establish Project Advisory Panel</i>	<i>Yes</i>
<i>Nov 05,</i> <i>Feb 06</i>	<i>Darwin-badged publicity packages to media</i>	<i>Yes</i>
<i>Nov 05</i>	<i>Publish first public awareness leaflets</i>	<i>Yes</i>
<i>Nov 05</i>	<i>First Project Advisory Panel meeting</i>	<i>2 meetings to date</i>
<i>Nov 05</i>	<i>Begin shore survey & boat-based survey of inshore Sindh</i>	<i>Yes, also preliminary survey work in Balochistan</i>
<i>Jan 06</i>	<i>Publish identification card & recording form for fishers</i>	<i>Yes</i>
<i>Feb 06</i>	<i>Pilot Fisher Reporting Scheme</i>	
<i>Mar 06</i>	<i>Darwin-badged Project pages on KU and WWF-P websites</i>	<i>Yes</i>
<i>Apr 06</i>		<i>Yes for WWF-P</i>
<i>Apr 06</i>	<i>Complete boat-based survey of inshore Sindh</i>	<i>Completed the planned phase I survey work and arranged additional boat trips to collect additional data</i>
	<i>Publish Annual Report</i>	<i>In prep. to be published shortly</i>
	<i>Observers begin 1st season for deep sea fishing vessels</i>	<i>Initial negotiations are underway</i>

We have liased with the OWDRG, who are facilitating contacts with other Indian Ocean cetacean specialists. However, OWDRG are undergoing changes in membership, and this has affected our schedule.

As mentioned above, we have taken advantage of an opportunity to collaborate with the new Wetlands Project (led by WWF-Pakistan). As a result, we have been able to undertake extensive preliminary surveys of both the Balochistan as well as the Sindh coasts.

Darwin-badged project pages have been included on the WWF-P websites, but not the KU ones as yet. We are discussing a timetable through our KU partner.

We have made contact with the Marine Fisheries Dept. who are in charge of deep sea fishing vessels. The department places observers on board these vessels in 6

month programmes and they have asked our team for training for the observers. We have arranged for this to take place in November 2006.

- Provide details of dissemination activities in the host country during the year, including information on target audiences. Will dissemination activities be continued by the host country when the project finishes, and how will this be funded and implemented?

We have made presentations to the PAP members, WWF-Pakistan, students and staff of universities in the Karachi area, the British Council, the media, and interested and appropriate government departments. Our team has also been distributing material on the project to fisher communities, the public and the media.

The host country will continue when the project finishes through the WWF-P website and activities and through the national cetacean conservation group.

- Please expand and complete Table 1. **Quantify** project outputs over the last year using the coding and format from the Darwin Initiative Standard Output Measures (see website for details) and give a brief description. Please list and report on appropriate Code Nos. only. The level of detail required is specified in the Guidance notes on Output Definitions, which accompanies the List of Standard Output Measures. Only the summarised totals after the end of your project will be recorded on the Darwin project database from your final report (the totals below will help you to keep track on a yearly basis).

Table 1. Project Outputs (According to Standard Output Measures)

Code No.	Quantity	Description
4C 4D	2, 12 weeks	2 Pakistani graduates have been trained. <i>The training averaged 10 hours per day for 6 days per week, making the training week 60 hours, thus doubling the 6 weeks set out for the project to 12 for the 6 month project period.</i>
6A 6B	3, 12 weeks	3 Pakistani Project Officers have been trained, increasing the number originally planned. <i>The training averaged 10 hours per day for 6 days per week, making the training week 60 hours, thus doubling the 6 weeks set out for the project to 12 for the 6 month project period.</i>
8	27 weeks	Dr. Gore spent 12, R. Culloch 11 and Dr. Ormond 2 weeks working on the project in Pakistan.
10	1 (1000)	Fisher reporting scheme identification cards
15A 15 B	9	Press releases in newspapers, and publicity on the project also reported on television and websites (App. 6).
17A	1	Fisher Reporting Scheme
18A	2	Television news (App. 6)

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

Table 2: Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Guide* ⁷	Cetacean Species Identification Guide CCP Team 2005		CCP Team c/o CEMB, Karachi University, Karachi, WWF-P, Pakistan and on website	Available on http://www.gla.ac.uk/centres/marine/station/index.html
Awareness leaflet* ⁸	Cetacean Conservation Pakistan leaflet CCP Team CCP Team 2005			
Awareness Stickers* ⁹	Cetacean Conservation Pakistan stickers CCP Team 2006		CCP Team c/o CEMB, Karachi University, Karachi, WWF-P, Pakistan	Free
Report	First Annual Report of Darwin Project 14-005		In prep.	

Key: *⁷ App. 7, *⁸ App. 8, *⁹ App. 9

9. Project Expenditure

- Please expand and complete Table 3.

Table 3: Project expenditure during the reporting period (Defra Financial Year 01 April 2005 to 31 March 2006)

- Highlight any recently agreed changes to the budget and explain any variation in expenditure where this is +/- 10% of the budget.

10. Monitoring, Evaluation and Lessons

- Discuss methods employed to monitor and evaluate the project this year. How can you demonstrate that the outputs and outcomes of the project actually contribute to the project purpose? i.e. what are the indicators of achievements (both qualitative and quantitative) and how are you measuring these?

The Pakistan Project Advisory Panel meets every 6 months to discuss and advise on progress, and to assess indicators, with specific attention to links with government agencies, staff positions, establishment of the cetacean conservation group, the fisher reporting scheme and workshops, field & laboratory work, training and academic courses, stakeholder awareness and recommendations for conservation. Output production can be verified against the measures noted in the Logical Framework, course registration and KU academic records. Photographs illustrating project activities are included in App.10. The semi-annual and annual reports will be submitted to the Project Advisory Panel and the UMBSM Research Committee, and copied to the Darwin Initiative.

- What lessons have you learned from this year's work, and can you build this learning into future plans?

The involvement of the partners with the team is of key importance for support of the project and communication has been shown to be crucial.

11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum)

We believe that we have had an excellent start to the project, as seen in photographs of the project work (App. 10). Working with government departments elsewhere can be difficult, but we have had tremendous support from the Sindh Wildlife Dept., Zoological Survey Dept., Balochistan Forestry Dept. and Marine Fisheries Dept. through our project advisory panel. We also have university departments, the IUCN and a key NGO, the WWF-Pakistan collaborating in the project. In addition, the Pakistan Navy are very keen to become involved in our conservation effort and have been very helpful. They provided secure accommodation at key locations for the team along the route.

This is the first time that these key organisations have worked together, which has had a very positive effect on the project. The extensive contacts that we have made with coastal users, such as the Navy, fishers, skippers and community members,, have allowed us to make good progress both in raising awareness and locating cetaceans.

The team has had great success in our surveys to date in locating sites with cetaceans. We have also found the remains of a sperm whale, a cetacean species not listed for Pakistan, a report on which we will publish. It has been a major achievement to have organised and managed an expedition to the Balochistan coast. This is a restricted area and required an escort by the Navy and police. It attracted a lot of interest among the local communities, particularly fishers. This has involved much co-ordination between agencies by our partners and the team members. Many of the team members had never experienced the conditions presented by the formidable Balochistan landscape; they proved themselves very capable in managing the camping, lack of communication with family, long hours and hard work.

The inshore scientific work has demonstrated a healthy population of three species of small cetaceans, finless porpoise, humpback dolphin and bottlenose dolphin.

■ **I agree for ECTF and the Darwin Secretariat to publish the content of this section**

In this section you have the chance to let us know about outstanding achievements of your project over the year that you consider worth highlighting to ECTF and the Darwin Secretariat. This could relate to achievements already mentioned in this report, on which you would like to expand further, or achievements that were in addition to the ones planned and deserve particular attention e.g. in terms of best

practice. The idea is to use this section for various promotion and dissemination purposes, including e.g. publication in the Defra Annual Report, Darwin promotion material, or on the Darwin website. As we will not be able to ask projects on an individual basis for their consent to publish the content of this section, please note the above agreement clause.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2005/2006

Project summary	Measurable Indicators	Progress and Achievements April 2005-Mar 2006	Actions required/planned for next period
<p>Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 			
<p>Purpose <i>(insert original project purpose statement)</i></p> <p>Conservation & management of whale & dolphin biodiversity in the NE Indian Ocean (Pakistan), and of the pelagic resources on which they depend, through research, protective measures, capacity building and Darwin-badged public awareness and participation programmes.</p>	<p><i>(insert original purpose level indicators)</i></p> <p>At least 1 cetacean hotspot to be established as a Marine Protected Area (MPA).</p> <p>Steps taken to reduce threats to cetaceans.</p> <p>Conservation & research projects established in KU and WWF-P.</p> <p>National cetacean <u>group</u> established.</p> <p>Fishers and others participating in sustainable use initiatives.</p>	<p><i>(report impacts and achievements resulting from the project against purpose indicators – if any)</i></p> <p>Conservation & research projects established in KU and WWF-P.</p>	<p><i>(report any lessons learned resulting from the project & highlight key actions planning for next period)</i></p>
<p>Outputs</p>			
<p><i>(insert original outputs – one per line)</i></p>	<p><i>(insert original output level indicators)</i></p>	<p><i>(report completed activities and outcomes that contribute toward</i></p>	<p><i>(report any lessons learned resulting from the project & highlight key actions planning for next</i></p>

		<i>outputs and indicators)</i>	<i>period)</i>
<i>Regular monitoring of cetaceans & pelagic environment established with two partner institutions.</i>	<i>3 annual reports & 3 scientific articles published & distributed. Database running.</i>	<i>Draft 1st Annual Report, draft of first scientific article prepared Database running.</i>	<i>2nd Annual Report</i>
<i>Understanding of threats to cetacean populations.</i>	<i>Specific reports and scientific article published.</i>	<i>Two short publications are being prepared</i>	
<i>Recommendations for establishment of MPAs and other protective actions.</i>	<i>Specific report published and distributed.</i>		
<i>Training of Pakistani academics and project officers.</i>	<i>At least 6 Pakistani personnel attend UMBSM courses.</i>	<i>4 Pakistani personnel attended UMBSM course</i>	<i>2 Pakistani personnel to attend UMBSM course July 06</i>
<i>Cetacean biology teaching established Karachi University.</i>	<i>Annual module attended by total of <u>80+</u> students.</i>		<i>MMC module to be launched at KU Nov 06</i>
<i>National cetacean conservation group established.</i>	<i>Membership of at least <u>100</u>. Regular newsletter.</i>		<i>National cetacean conservation group to be established Dec 06 Launch PWDG semi-annual newsletter Mar 07</i>
<i>Awareness by stakeholders (e.g. fishers) of potential for sustainable use.</i>	<i>Fishers cetacean reporting scheme and whale-watching business launched.</i>	<i>Fishers cetacean reporting scheme begun</i>	

Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.