Darwin Initiative Main Project Annual Report

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

it is expected that this report will be about 10 pages in length, excluding annexes

Submission Deadline: 30 April

Darwin Project Information

Project Reference	19-020
Project Title	Responding to fish extirpation in the global marine biodiversity epicentre
Host Country/ies	Philippines
Contract Holder Institution	Newcastle University
Partner institutions	Haribon Foundation for the Conservation of Natural Resources
Darwin Grant Value	£294151
Funder (DFID/Defra)	
Start/end dates of project	1 April 2012 – 31 March 2016
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	Apr 2014 – Mar 2015, Annual Report 3
Project Leader name	Nicholas Polunin
Project website/blog/Twitter	
Report author(s) and date	Nicholas Polunin, Margarita Lavides 28 April 2015

1. Project Rationale

Because the Philippines is part of the global marine biodiversity epicentre, yet fishing intensity is great, and it is likely that species have become locally extinct, yet there has been no investigation of this. The project is using surveys of fishermen's recollection of former catches and underwater survey data at five major 'key marine biodiversity' areas to determine likely threatened reef fish species and where possible describe abundance trends of species and

groups of these. The project is strengthening resource management capacity and helping to reconcile any conservation needs with those of a relevant sustainable livelihood in one of the five areas. It will make policy recommendations from local to international levels.

2. Project Partnerships

The Haribon Foundation has been the sole project partner since 1 April 2013. The ongoing work however has also relied on a network of other institutions in the Philippines. Field work in four of the five study areas had previously been based on agreements with various local NGOs, universities, government units and Fishers' Organizations: Kadagatan Ampingan Pagbugtaw Katawhan (KAAMPAKA) and Lanuza Bay Development Alliance in Lanuza Bay; Project Seahorse-Zoological Society of London on Danajon Bank; Institute of Social Order on Polilio Island; Palawan State University, Western Philippines University and Puerto Princesa City Local Government Unit in Honda Bay (Palawan). These partners through the agreements with them have been involved in project planning and implementation as far as possible; it is agreed that up to two individuals from these local partners will be able to join the field work in their respective areas. For the targeted area in Lanuza Bay, the project is in addition linked with and benefitting from the Global Environment Facility 5 and United Nations Development Programme (GEF5-UNDP). Apart from Dr Lavides, Ms Erina ('Yna') Molina, Mr Gregorio ('Ditto') dela Rosa and Mr Miguel ('Mikey') Lorenzo Panopio have been actively engaged in the Philippines field work, analysis and project administration. Apart from Prof. Nicholas Polunin, the Newcastle team's work this year involved Dr Aileen Mill in statistical modelling. Dr Steven Newman left the project in December 2014 after assisting with underwater survey planning; his place was taken by Ms Christina Skinner for the final planning stages and survey implementation. Dr Ting Nanola of the University of the Philippines in Mindanao has advised the team on the underwater surveys, availability of old data, and will be involved in the underwater field work. The main axis of the partnership, between Newcastle University and the Haribon Foundation, has been sustained through regular interactions, in particular by skype, the main points of discussion and planning having been the implementation of the social survey in Honda Bay, completion and revision of the project's first scientific paper on fish species declines and losses, and planning for the underwater field work.

3. Project Progress

3.1 Progress in carrying out project activities

1.2 Fishers' knowledge, socio-economic and underwater surveys conducted [YR1Q2 – YR4Q1]

The Palawan Council for Sustainable Development (PCSD) finally approved the social survey work, and the project team was thus able to successfully complete fishers' knowledge surveys in the fifth of the five sites (Honda Bay, Palawan).

1.3 Analysis of vulnerable species [YR2 Q2 – YR4 Q1]

Vulnerable species across the five sites have been identified; the first paper completed was submitted to the open access peer-review journal PLoS ONE, and has since been revised to address the reviewers' favourable comments. A second paper is in preparation specifically on the grouper species reported from the fisher surveys.

2.1 Fishers' knowledge of fish abundance trends [completed YR2 Q3]

Analysis of fishers' knowledge of abundance trends at family level has now also been largely completed, and is planned to form the basis of a third paper based on fishermen's recollections.

2.2 Underwater survey and landings data [YR2 Q2 – YR3 Q4]

The underwater work was planned for the period April-June 2015 (and is now underway; see Annex 4 itinerary and dive plan). Some temporal comparisons for many sites across the five study areas will be possible, including Verde Island Passage, Danajon Bank, Lanuza Bay and Honda Bay, facilitated through MOAs with Project Seahorse-ZSL and Western Philippines University; a further MOA is to be signed with the University of the Philippines following a visit to the UP Marine Science Institute in April 2015, so that their fish data can be shared. Of the five sites, NSAP fisheries landings data are only available from Honda Bay (Palawan), however the NSAP pertain to large-scale commercial fisheries, while the project data are from specific municipal grounds. In addition, BFAR/NFRDI stated that we could only have accessed the landings data if they had been co-investigators in the project from the start.

2.3 Fish abundance trends analysed across methods and locations [YR2Q2 – YR4Q4]

Fish abundance trends at the species level based on fishers' perceptions of present and past catches have been analysed across all five sites. Writing and submission of papers for peer-reviewed publication are well under way (see above).

3.1-3.2. Training sessions in Lanuza Bay, marine ecology/fisheries, participatory monitoring [YR2 Q1]; Workshops on management needs and training in fisheries monitoring, participatory management, indicators in Lanuza Bay [YR2 Q2]

These activities in Lanuza Bay were completed in YR2.

3.3 Communication planning, production and distribution of posters, flyers, radio plugs etc in Lanuza Bay area [YR2 Q3-4]

Dissemination of project results has continued. The Haribon website has been frequently updated. The British Embassy has featured the project on its website and newsletter, including Facebook entries. Project team members gave two papers based on findings of the research at the Asia Pacific Coral Reef Symposium (June 2014) and a project presentation was given to the British Embassy in Manila, in relation to a Darwin Scoping project that could form part of the legacy of the present project.

4.1 Social-economic drivers of diversity losses assessed [YR2Q4 – YR3Q1]

The data have been statistically modelled, and some of the data form part of the PLoS ONE paper mentioned above.

4.2 Conservation-livelihood agreements assessments, options and training needs [YR3Q1-4]

The agreement was completed in August 2014, helping formalize roles of KAAMPAKA in marine and fisheries conservation and management (e.g. patrolling and management of marine sanctuaries, and compliance with size limits and closure seasons for danggit) while Haribon and local government units would assist in the development of a social enterprise/sustainable livelihood, including capacity building and resource mobilization. Many meetings and training sessions followed, aimed at capacity building, knowledge and skills development in relation to the livelihood project.

4.3-4.4 Installation of new livelihood option under conservation agreement set up with people's organisation(s) in Lanuza Bay [YR3Q4 – YR4Q4]

The project decided to focus the livelihoods work on danggit (rabbitfish; see Annex 4), and was successful in gaining extra funding from the FSSI for the purpose. Substantial progress was made with training sessions and product development (Annex 4).

5.1-5.3 Formulation with LGUs and POs in Lanuza Bay of local policy; formulation with government agencies of paper targeting national policy including NBSAP; recommendations to IUCN Red List Authority [YR3Q4 – YR4Q4]

Interactions continued with the national NBSAP and international (IUCN SSC) to lay the foundations for the policy-related activities due for completion in YR4. Dr Lavides and Ms Molina were involved in workshops to update the NBSAP by its completion date of April 2014; it is assumed that later inputs from this project will be to the next generation of the NBSAP process. Project results to date facilitated the inclusion of National Red Listing of fishes, among the Actions and Targets of the NBSAP 2025.

3.2 Progress towards project outputs

Output 1. **Vulnerable marine finfish species identified in 5 key marine biodiversity areas**

Fifty-five species were reported by fishers to have been lost from catches, of which 47 were identified to species, one to genus, seven to family only and 10 to local name only. The number of zero catch reports was variable among fishers but six of the species had zero-catch reports across all five sites, while the greatest numbers of zero-catch reports related to green bumphead parrotfish (*Bolbometopon muricatum*), humphead wrasse (*Cheilinus undulatus*), African pompano (*Alectis ciliaris*), giant grouper (*Epinephelus lanceolatus*), mangrove red snapper (*Lutjanus argentimaculatus*) smalltooth emperor (*Lethrinus microdon*) and giant trevally (*Gnathanodon speciosus*) (see paper in Annex 4).

Output 2. **Changes in abundance of reef finfish families and fishery target species modelled for 5 key marine biodiversity areas**

Abundance trends are based on fishers' recall of current (2014) and previous best day's catches by decade (1950s-) and show evidence of substantial declines in catch per unit effort in the five most vulnerable species: green bumphead parrotfish (91% decline), humphead wrasse (74%), giant grouper (74%), African pompano (66%) and mangrove red snapper (64%). The underwater surveys are being conducted in early 2015. One peer-review paper on these vulnerable species is in review for an open-access journal, and two more are planned based on the fishers' knowledge data that the project has gathered (see species-level paper and abstract on grouper in Annex 4). The underwater work has got under way (see Annex 4: itinerary and dive plan)

Output 3. **Capacity of LGUs and POs for local resource management in conservation site enhanced**

Following completion of the agreement with KAAMPAKA, several meetings and training sessions were conducted (agenda and minutes examples at Annex 4). These focused on social enterprise and entrepreneurship in the context of fisheries and marine sanctuary management. Full communication of results will be in YR4. At an international level, two oral papers were presented to the Asia Pacific Coral Reef Symposium in June 2014 (poster summaries in Annex 4).

Output 4. **Conservation needs reconciled with sustainable livelihoods**

With the social data now complete from the five sites, data processing and analysis of the social-economic drivers of species declines was begun. Following the training needs assessment of YR2, a conservation-livelihood agreement was completed with trusted partner organisation KAAMPAKA and training related to the livelihoods project conducted (see items in Annex 4). It was decided to focus on danggit (rabbitfish; see Annex 4 product label) for the alternative livelihood; pre-project data have already been collected, and survey post inception will be gathered in YR4.

Output 5. **Policy recommendations made at local, national and international levels**

Under the project implementation timetable, activities got under way in January 2015, but inputs to the NBSAP and IUCN processes were already underway in YR2, and will culminate in YR4.

3.3 Progress towards the project Outcome

The Purpose-level indicators (identify vulnerable reef finfish species, model changes in reef finfish abundances, enhance local capacity in local resource management, reconcile any conservation needs with sustainable livelihoods, recommend policy from local to international levels) are expected to be achieved by the end of the project, and significant progress has been made with an alternative-livelihood project in the target area (see Annex 4).

3.4 Monitoring of assumptions

The Purpose-level assumptions (LGU and other government agencies continue to be supportive of the project; PO and other community groups continue to be receptive of the project; funding schemes remain available for local and national studies in future) were reviewed during YR3 and are deemed to remain appropriate.

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

The Goal of supporting implementation of objectives of the Convention on Biological Diversity and related Aichi targets and have led in YR3 to extensive work with the organisation KAAMPAKA to implement an alternative livelihood project focused on dried danggit (rabbitfish) that was identified by them (see Annex 4).

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

The project responds to the CBD (particularly Aichi Biodiversity Targets 6, 10, 17 and 18 of the CBD 2011-2020 Strategic Plan), through the project's engagement with the Philippines CBD focal point the DENR-BMB (formerly PAWB), and being involved with review and revision of the Philippine NBSAP. There has been ongoing discussion on marine fish extinction through the NBSAP and IUCN processes, the culmination of which will be in YR4, once all the data are collected and analysed.

5. Project support to poverty alleviation

The project is partly supported by DFID and accordingly substantial resources and match funding have been found to consider and now plan for a project based on dried danggit, which is aimed at providing fishers with an alternative livelihood and thus means of avoiding poverty in the context of declining abundances of many fishery target species, as documented by the project.

6. Project support to Gender equity issues

The Philippines team has included two women and two men, while the personnel principally involved at Newcastle University have also included two men and two women. While interviewees in the social surveys included women, all the fishing that was the subject of fisher recall about the species in question came specifically from fishermen.

7. Monitoring and evaluation

As stated in the proposal (section 20) the milestones are the main indicator of overall progress and these have been the focus of ongoing interaction between the Project Leader and partner. The stated outputs including training and workshop minutes and scientific papers, apart from the ongoing project work, have been the substantial ongoing targets (examples in Annex 4).

8. Lessons learnt

The project has benefited from the choice of the main project partner (Haribon), which has provided assistants and collaborators of a high calibre. The choice of the main field partner (KAAMPAKA) has thus far proved judicious, and in fact all collaborators have been supportive, although completion of local agreements has sometimes proved burdensome.

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

The key requirement was that the conservation-livelihood component be addressed with Darwin. This had been slow to develop especially because it was not due for development until a likely specific project had been identified, which it was in YR3. We believe that the issue is now substantially being addressed, and this was communicated to Darwin.

10. Other comments on progress not covered elsewhere

No project enhancements or issues of note and at this time no obvious risks have been identified.

11. Sustainability and legacy

The future of the project was discussed at a meeting with University of the Philippines Marine Science Institute in April 2015, and this generated some ideas related to the sustainability of the alternative livelihood fishery targeting danggit. There has been discussion with Cefas based on a Darwin Scoping project that would build on the present project but focused on ornamental species. Dr Lavides has been bidding with UPMSI and NFRDI for USAID PEER funding to address Philippines National Red Listing for fish and other marine species based on IUCN criteria and methodology. She has also a co-applicant for US National Science Foundation funding for work on Philippine marine biodiversity including the fish.

12. Darwin Identity

Darwin Initiative project 19-020 has been distinct, albeit benefitting from other funding such as the GEF-5 funding to Haribon for the work in Lanuza Bay. The logo was displayed in presentations to the Symposium in Taiwan (e.g. Annex 4 posters).

13. Project Expenditure

Table 1 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				Not spent
TOTAL	**85,856**	**85,729.86**		

14. 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 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)

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2014-2015

Darwin Initiative Project 19-020 : Report of progress and achievements against Logical Framework as of Jan 31, 2015			
Project summary	**Measurable Indicators**	**Progress and Achievements April 2014 – Mar 2015**	**Actions required/planned for next period**
Goal *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.* **Sub-goal** *New knowledge gained, stakeholder-led management capacity built and new conservation action taken to conserve marine biodiversity in Philippines hotspots*		Significant project activities include providing evidence of local depletions and extirpations of species, building stakeholder management capacity, devising new action to conserve marine biodiversity in the five study areas and inputting to national conservation prioritisation and plans including the updating of NBSAP 2028 and National Action Plan to Prevent Species Extinction	
Purpose Identify vulnerable reef finfish species, model changes in reef finfish abundances, enhance local capacity in local resource management, reconcile any conservation needs with sustainable livelihoods, recommend policy from local to international levels	Purpose indicators: Vulnerable species identified Relevant policy derived and delivered at international, national and a local area Resource management capacity in Lanuza Bay enhanced Training and experience required to sustain project outputs in future achieved	Progress April 2014 – Mar 2015: Fishers' knowledge surveys completed, vulnerable fish species across all five sites drafted, first paper on study in revision with open-access journal. Inputs to NBSAP updating and IUCN National Red Listing under way. Participatory rural appraisal completed, enterprise and livelihoods related training completed. Feasibility and market studies for danggit and coconut, and business planning with KAAMPAKA, conservation-livelihood agreement completed. Continued training of project staff and at community level with Lanuza local government unit.	Key actions planned for next period include: 1. Commence underwater survey 2. Collate existing underwater visual census survey data for the sites surveyed 3. Set up database of underwater survey data 4. Input to writing of National Action Plan to Prevent Species Extinction 5. Additional resource mobilization for social enterprise 6. Commence installation of social enterprise for danggit/coconut 7. Conduct further training related to social enterprise for danggit subproject 8. Continue with implementation of communication plan

Output 1. Vulnerable marine finfish species identified in 5 key marine biodiversity areas	Output indicators: 1.0 Inception workshop and database/statistics training conducted 1.1 Fishers' knowledge of threatened species surveyed, data processed and analysed 1.2 Underwater visual census conducted, presence/absence data gathered and analysed 1.3 List of vulnerable species drafted	
Activity 1.0 Inception workshop: in Manila, review of proposal, preparation for Newcastle training, inception of field work planning		Completed YR1
Activity 1.1 Training in database and statistical modelling: in Newcastle University, introduction and application of Access, application of R to time-series and multivariate data		Completed YR1
Activity 1.2 Fishers' knowledge, socio-economic and underwater surveys conducted: presence-absence data by site, socio-economic variables derived for Output 5		Fisher's knowledge surveys completed for the five sites, data being analysed and/or written up. Underwater surveys being planned for YR4, analysis of socio- economic drivers under way.
Activity 1.3 Analysis of vulnerable species: entry, processing and statistical analysis of data, technical report		Species level extinction paper in revision for PLoS ONE peer reviewed journal, international conference presentations
Output 2. Changes in abundance of reef finfish families and fishery target species modelled for 5 key marine biodiversity areas	Output indicators: 2.1 Fishers' retrospective perceptions of abundance trends surveyed and analysed; 2.2 Abundance trends in underwater visual census and landings data analysed; 2.3 Trends compared between methods within and among sites, drivers analysed; revised vulnerable species list	
Activity 2.1 Fishers' knowledge of fish abundance trends: own catch and size data, recollection of decadal trends, data on fishers themselves		Data on perceived changes in abundances of reef finfish families and fishery target species gathered together with data on fishers for the five sites.
Activity 2.2 Underwater survey and landings data: previous underwater visual data (e.g. Danajon Bank 1997-present, Lanuza Bay 2002-2009), landings data normalised by effort (data from BFAR/NFRDI)		Planning completed for underwater surveys in YR4, two MoUs completed with data owners, trends in data to be analysed during YR4.
Activity 2.3 Fish abundance trends analysed across methods, among locations, writing and submission of papers for peer-reviewed publication		Data on changes in abundances of reef finfish families and fishery target species has been gathered in the five sites.

Output 3. Capacity of LGUs and POs for local resource management in conservation site enhanced	Output indicators: 3.1 Training in marine ecology, fisheries and conservation conducted 3.2 Workshops on management needs and training on fisheries monitoring conducted 3.3 Communication plan and materials (ie. posters, fliers, radio ads) produced and future funding plan drafted	
3.1 Training sessions: in Lanuza Bay, marine ecology/fisheries, participatory monitoring		Completed previously, training redirected to capacity building related to conservation-sustainable livelihoods and social enterprise related to species depletion.
3.2 Workshops on management needs and training in fisheries monitoring, participatory management, indicators in Lanuza Bay		Based on training needs analysis, social enterprise training (including dried product plant visit, organisational assessment) conducted with KAAMPAKA members together with processing of social enterprise requirements including Food & Drug Administration, Department of Labor & Employment, and Department of Trade & Industry permits.
3.2 Workshops on management needs and training in fisheries monitoring, participatory management, indicators in Lanuza Bay		Training included fish processing, product packaging and labelling, review and formulation of policies, and systems procedures in social enterprise.
3.3 Communication planning, production and distribution of posters, flyers, radio plugs etc in Lanuza Bay area		Oral presentation of two papers at Asia Pacific Coral Reef Symposium (Taiwan). Full communication at local, national, and international levels to be completed in YR4
Output 4. Conservation needs reconciled with sustainable livelihoods	Output indicators: 4.1 Human behavioural drivers of any diversity losses assessed 4.2 Existing conservation-livelihood agreements with fishers' organizations; initiatives and new options including continuity mechanisms evaluated; 4.3 Any new livelihood options with conservation agreements **(**e.g. low-impact mariculture) installed; management system reviewed and improved; 4.4 Economic impact of livelihood options of participant groups surveyed	

4.1 Social-economic drivers of diversity losses assessed		Socio-economic drivers of depletion data obtained for all five sites; analysis well under way
4.2 Conservation-livelihood agreements assessments, options and training needs		Conservation-Sustainable Livelihood Agreement completed about KAAMPAKA roles in marine conservation and fisheries management and development of a social enterprise project.
4.3 Installation of new livelihood option under conservation agreement set up with people's organisation(s) in Lanuza Bay		Danggit decided as focus, the subsector and value chain analysed, development planning done and project progressed to feasibility stage with additional resources from the FSSI foundation
4.4 Surveys to compare income and savings levels of participants at start of project and following project		Pre-livelihood intervention income and social surveys conducted previously to compare with YR4
Output 5. Policy recommendations made at local, national and international levels	Output indicators: 5.1 Lanuza Bay policy paper completed 5.2 National level policy paper completed 5.3 Recommendations made to IUCN	
5.1 Formulation with LGUs and POs in Lanuza Bay of local policy, submission of policy paper on Lanuza Bay		Due in YR4
5.2 Formulation with government agencies of paper targeting national policy including NBSAP, National Fisheries Strategy Plan, submission to BFAR/NFRDI, DENR-PAWB etc		Contributions to workshops updating NBSAP 2025 (marine fish annex) and on Action Plan to Prevent Species Extinction
5.3 Recommendations to IUCN Red List Authority: e.g. status of species/families to be revised		Action taken with IUCN towards using the project results for National Red Listing of fishes, further funding sought for this end.

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: 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.			
Sub-Goal: New knowledge gained, stakeholder-led management capacity built and new conservation action taken to conserve marine biodiversity in Philippines hotspots	* Threatened marine finfish added to national and international listings * Management measures taken in response * Ongoing research and outreach activity on species trends and distributions and their drivers * Key personnel training level increased	* Uptake of lists by NBSAP, IUCN Red List * Planning of new actions e.g. marine protected areas motivated by project outputs * New project proposals, papers and other means of dissemination * Increased competence and skills of key staff * More positive management attitudes	
Purpose: Identify vulnerable reef finfish species, model changes in reef finfish abundances, enhance local capacity in local resource management, reconcile any conservation needs with sustainable livelihoods, recommend policy from local to international levels	* Vulnerable species identified * Relevant policy derived and delivered at international, national and a local area * Resource management capacity in Lanuza Bay enhanced * Training and experience required to sustain project outputs in future achieved	* Progress and final reports, peer-reviewed scientific papers * New projects planned and proposals to funding agencies submitted * Popular articles, related outreach materials and their uptake * Support for future biodiversity conservation science and actions	* LGU and other government agencies continue to be supportive of the project * PO and other community groups continue to be receptive of the project * Funding schemes remain available for local and national studies in future
Outputs			
1. Vulnerable marine finfish species identified in 5 key	1.0 Inception workshop and database/statistics training	* Workshop minutes, copies of trainee-completed database	* Fishers are amenable to survey

marine biodiversity areas,	conducted 1.1 Fishers' knowledge of threatened species surveyed, data processed and analysed 1.2 Underwater visual census conducted, presence/absence data gathered and analysed 1.3 List of vulnerable species drafted	and statistical assessments * Data and technical reports * Paper submitted for peer-review publication	* Agencies permit access to further data * Weather conditions do not impede underwater data gathering
2. Changes in abundance of reef finfish families and fishery target species modelled for 5 key marine biodiversity areas	2.1 Fishers' retrospective perceptions of abundance trends surveyed and analysed; 2.2 Abundance trends in underwater visual census and landings data analysed; 2.3 Trends compared between methods within and among sites, drivers analysed; revised vulnerable species list	* Data and technical reports * Papers submitted for peer-reviewed publication * Popular articles, other outreach materials	* Fishers are amenable to survey * Agencies permit access to further data * Weather conditions do not impede underwater data gathering
3. Capacity of LGUs and POs for local resource management in conservation site enhanced	3.1 Training in marine ecology, fisheries and conservation conducted 3.2 Workshops on management needs and training on fisheries monitoring conducted 3.3 Communication plan and materials (ie. posters, fliers, radio ads) produced and future funding plan drafted	* Minutes and feedback from sessions on local competence and awareness of conservation actions * Progress and final reports * Seminar training materials * Communication plan	* Political conditions do not substantially impede project or deliverables * LGUs and POs continue to be receptive to training and materials
4. Conservation needs reconciled with sustainable livelihoods	4.1 Human behavioural drivers of any diversity losses assessed 4.2 Existing conservation-livelihood agreements with	* Minutes of consultations with LGUs and POs on livelihoods initiatives/options for Lanuza Bay * Paper on socio-economic drivers	* LGUs and POs continue to be receptive to training, seminars and conservation-livelihood agreements * Extreme weather does not substantially affect any conservation-compatible

	fishers' organizations; initiatives and new options including continuity mechanisms evaluated; 4.3 Any new livelihood options with conservation agreements **(**e.g. low-impact mariculture) installed; management system reviewed and improved; 4.4 Economic impact of livelihood options of participant groups surveyed	of any losses * Report on design and management of new conservation-livelihood agreement project and agreed funding plan, aim to involve ≥25 families * Surveys of income and savings levels of participants before and after project; aim for ≥20% savings by target families *Enforcement reports for marine protected areas	livelihood project(s)
5. Policy recommendations made at local, national and international levels	5.1 Lanuza Bay policy paper completed 5.2 National level policy paper completed 5.3 Recommendations made to IUCN	* Papers taken up by LGUs and/or POs in Lanuza Bay * Policy paper taken up by government agency, used to inform next NBSAP * Report to IUCN Red List Authority	* Local and international stakeholders remain receptive of project outcomes * Weather and political conditions do not substantially impede project or deliverables

Annex 3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
4A	UG students			15	15	0	30	
4C	PG students			2	2	2	2	
4D	Training weeks			0	6	12	18	
5	>1 yr training			3	2	2	3	
6A	Others' training			0	200	200	400	
6B	Training weeks			0	3	7	10	
7	Training materials			1	2	2		
8	UK staff			1.5	0	1.5	3.5	
9	plans			1	0	0		
10	guides			0	0	0		
11	Papers published			0	0	0		
12A/B	databases			2	3	2	7	
14A	conferences			1	0	0	1	
14B	seminars			0	3	4	7	

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g.website link or publisher)
Widespread local disappearances of finfish species … (see Annex 4)	journal	In revision	F	Philippines	tba	tba

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

Paper (Figures not included) in revision for PLoS ONE (draft only, in confidence)

Widespread local disappearances of finfish species in the global epicentre of shorefish diversity inferred from fishers' knowledge

Checklist for submission

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