



# **Darwin Initiative Annual Report - Revised**

# **Darwin Project Information**

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Project Ref Number	162-14-057
Project Title	Conserving Reefs through Community Ownership and Enterprise
Country	UK, Indonesia
UK Contract Holder Institution	LEAD International
UK Partner Institution	LEAD International
Host country Partner Institution(s)	LEAD Indonesia
Darwin Grant Value	£149,954
Start/End dates of Project	1 April 2005 – 31 March 2008
Reporting period	(1 April 2006 – 31 March 2007) Annual Report #2
Project Leader Name	Simon Lyster
Project website	http://www.lead.org/page/139
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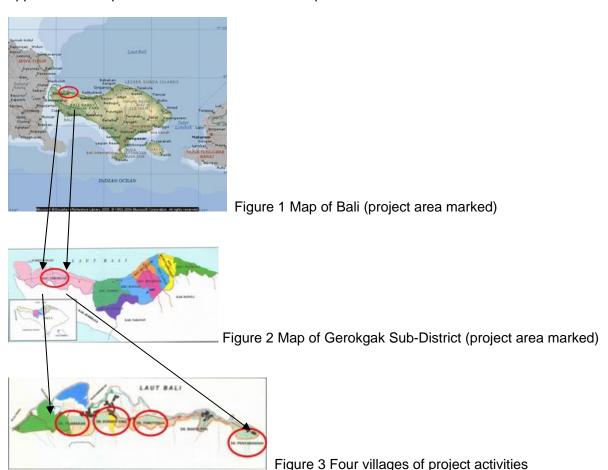


### Project Background

The project site is located in the coastline of northern Bali, in four villages - Sumber Kima, Pejarakan, Panyabangan, and Pemuteran - in Gerokgak Sub-District, Buleleng District. West to these villages is the Bali Barat National Park. **Figure 1-2-3.** 

Unsustainable fishing practices - cyanide for ornamental fish, explosives for food fishery - threaten the coastline's fringing reefs including the buffer zone of the Bali Barat National Park. Buleleng District - as one of the main ornamental fish export markets of the world - needs to shift toward sustainable fishing and effective coastal zone management to ensure sustainable livelihood for poor local fishing communities and to restore local reefs' biodiversity.

The project aims to set up local institutions that ensures sustainable livelihood for poor fishing communities. These institutions – 'enterprises' – will provide communities with economic incentives to guarantee conservation through sustainable harvest. A series of capacity development opportunities empower local communities to set up and run these institutions.



# 2. Project Partnerships

The partnership between the UK institution and Indonesian host country partner is excellent and further developed over the last year through the thorough, collaborative design process, and implementation of the comprehensive and innovative Training of Trainer events, and regular technical consultations on sustainable resource management and capacity development.





The UK partner provides capacity development expertise through a training of trainers programme, mentoring, setting up local peer-learning institutions, and enhancing participants' confidence by promoting exchanges with similar initiatives. An important exchange has started between the two Darwin projects the UK partner manages. As both projects aim at managing coral reef ecosystems with improving sustainable livelihood of poor local fishing communities, the exchange has high potential in sharing best practices, lessons learned and empowering local leaders.

LEAD International in Year Three of the project will continue to facilitate exchange between the Darwin project with particular emphasis on how the communities in the Lakshadweep Islands recognise and support the biodiversity conservation measures that have been implemented.

The partnership has supported the host country institution to build their capacity to the meet CBD commitments by focusing on CBD themes of Marine and Coastal Biodiversity, Sustainable Use and Biodiversity and Protected Areas with special reference to the following CBD articles:

- Restoring biodiversity in the buffer zone of a protected area (Bali Barat National Park) by promoting non-destructive fishing methods (Article 8: In-situ Conservation)
- Strengthening the capacity of local fishing communities to harvest fish stocks sustainably (Article 8: Sustainable Use of Components of Biodiversity)
- Training local communities and policy makers to integrate biodiversity conservation in local development initiatives (Article 12: Training and Research)
- Conducting research on the ecological carrying capacity of the targeted coral reef, the socioeconomic economic profile of fishing communities in Buleleng and related policy measures to enhance biodiversity and improve livelihood (Article12: Training and Research)
- Adopting an innovative approach to develop a new business model to improve biodiversity
  and livelihood at the same time. The business model has replication potential, and as such
  may have an impact beyond the host country. (Article11: Incentive Measures)

The project closely and effectively collaborates with Indonesian representatives of international NGOs, national, regional and local conservation organisations to develop a sustainable ornamental fish enterprise, including

- 'Reef Check': Conducts the research on marine resources, manages the database and trains local fishermen to monitor their reef's resources.
- 'Marine Aquarium Council': Provides training on MAC standards of non-destructive fishing practices (and issues certificate), and supports raising public awareness on the importance of green business for MAC certified ornamental fish
- 'Community Conservation Initiative Forum (CCIF)'
- 'Pilang' (local NGO): Key community organiser and liaison with government relations in the project site.
- 'CSR Indonesia': Conducted the socio-economic research, formulated the profile of the new supply chain of green and fair marine ornamental fish trade in domestic (Indonesian) market.
- WWF Indonesia supports LEAD Indonesia's efforts in local policy advocacy
- Andi Isvandiar, expert in socially responsible business, develops fishermen's community enterprise, brings access to exporters and domestic retail market, promotes green business on ornamental fish, as well as encourages exporters to buy fair traded 'eco fish' from MAC certified ornamental fish collectors
- In Year Three LEAD International will coordinate international peer review with a recognised group of Coral Reef conservation experts, this resource has been established through the Darwin Lakshadweep project.





Project progress

## 2.1 Progress in carrying out project activities

Noting the comments raised by the reviewer in response to the initial submission of the Year Two project report, this section has been revised to clarify how the project training activities have delivered biodiversity benefits.

The project outcomes are based upon the assumption that the key to achieving conservation of biodiversity in the target regions is changing the behaviour of groups and individuals who are currently engaged in destructive and unsustainable practices that damage the marine environment. The rationale behind the Training of Trainers methodology reflects the understanding that the ability of beneficiaries to *localise* the core skills and competencies delivered by the training is critical to the application of new methods and practices. In principal the using the "Train the Trainer" method might appear to increase the distance between skills and application, however the use of appropriately equipped local resource persons to engage further with their communities is an effective tool in terms of making the learning appropriate at the level at which the impact is desired

The main activities of Year2 included a series of innovative capacity development events, research on ecological carrying capacity and socio-economic baseline, and designing policy instruments for a more effective coastal zone management.

All activities were conducted as planned, except the timing of the 'Training of community members as Trainers' which was carried forward from Year1 with the approval of the Darwin Secretariat to get a deeper insight of local needs and modify existing training modules accordingly.

## **Capacity development**

Capacity development events included (i)Training community members as trainers and as resource persons to increase understanding of sustainable development; (ii) Training fishermen in MAC standard; (iii) Business training for community enterprise for accessing financial resources; (iv) Training community members for monitoring natural resources.

The project has delivered a range of training activities with the aim of empowering people in a number of ways. It is important to stress the complex nature of the drivers that result in unsustainable and destructive fishing practices. The project seeks to respond to these drivers in a suitably complex way by addressing all of the drivers rather than focusing on a single area such as education and awareness-raising. In response to the questions raised by the reviewer the project team has undertaken an evaluation of the training impacts to date. However it should be noted that, at this stage in the project it is probably too early to determine the extent to which the training has resulted in sustained behaviour change. A detailed evaluation will be undertaken at the end of the project which will provide a much fuller picture of behaviour change and resulting biodiversity benefits.

The role of the UK partner has been one primarily of instructional design and content provision / validation. LEAD International is well placed to share experience from the Darwin Lakshadweep project which, to some extent has common objectives and methodologies as the Bali based project.

The training delivered during Year Two of the project is outlined below, together with summary of impacts recorded to date:



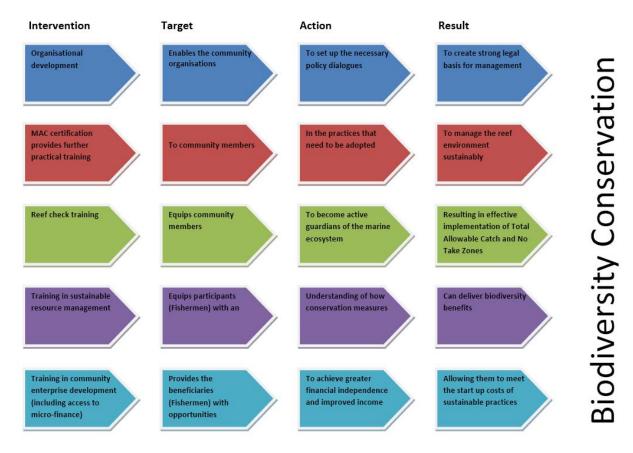


### **LEAD International and LEAD Indonesia Training of Trainers**

While we continue to use the terminology of Training of Trainers, the practical application of this work is slightly different from the traditional understanding of these terms. In fact the beneficiaries of the TOT could not be identified as trainers in the strictest sense, rather they are a network of respected an influential community leaders able to engage with stakeholders and help to support the adoption of more sustainable fishing practices. The aim of this intervention was to support and strengthen the more technical aspects of capacity building dealing with changing fishing practices, marine conservation measures etc. The series of modules outlined below provides an important contextual understanding for the target communities as well as increasing capacity in some key transferable skills such as negotiation and organisational management.

It is important to consider all of the different training activities as contributing to the meta-goal of biodiversity conservation; LEAD's role in this has been to make the connections between the separate elements of the individual programmes. The schematic diagram below provides an illustration of how this works, but in narrative form the explanation can work along the following lines:

Training in sustainable resource management equips participants with an understanding of how conservation measures can deliver biodiversity benefits. MAC certification provides further practical training in the practices that need to be adopted in order to manage the reef environment sustainably. Organisational development enables the community organisations to set up the necessary policy dialogues to create strong legal basis for management. Negotiation skills provide fishermen with the ability to strengthen their economic position and be more confident in dealing with other elements of the supply chain. Training in community enterprise development including access to micro-finance provides the beneficiaries with opportunities to achieve greater financial independence and improved income. By equipping the community members to become active guardians of the marine ecosystem through the reef check training, there is a much greater chance of effective implementation of Total Allowable Catch and No Take Zones.







The 'Training of Trainers' programme was delivered from June to October 2006 as follows:

# Module One, June 21-24 2006: "Toward Sustainable Coastal and Marine Livelihood" Attended by 50 participants;

**Content Summary**: Problem mapping & Expert presentation of the status of coral reef in Buleleng **Outcome / Impact**: Problem map from each village from where we can precisely identified the need of capacity building and possible actions required.

The principal outcome of the training has been to equip the beneficiaries with an understanding of the macro picture relating to sustainable livelihoods. There is a danger that training programmes delivered by environmental NGOs in the region focuses too heavily on species conservation and not enough on the need for approaches that enable communities to manage resources sustainably. This danger has been highlighted within the socio economic report which illustrates the fact that some communities may feel subjected to conservation priorities that are imposed upon them. This training helps to build important understanding within the communities that conservation practices will help to secure livelihood benefits.

# Module Two, 26 29 July 2006: "Sustainable Resource Management"

Attended by 35 participants;

**Content Summary:** Ecological Aspect of Sea and Coastal Resource Management (Sustainable Harvesting; Ecological Carrying Capacity; Common Resource Management; Challenges and Opportunities) and Sea and Coastal Policy and Regulation (Basic Concepts and Procedures in Policy making at the State and Village Level)

**Outcome / Impact:** Participants developed understanding of the basic concepts of sustainable harvesting, ecological carrying capacity and common resource management applied to ornamental fish collecting activities.

The outcome of this training is increased understanding among the beneficiaries on the principles and practice of resource management. This understanding has been crucial in working with fishermen in establishing the Total Allowable Catch and identifying the proposed Marine Protected Area or No Take Zones.

## Module Three, 25 26 August 2006: "Negotiation and Decision Making"

Attended by 27 participants;

**Content Summary:** Team building activities, introduction to basic concepts of negotiation, mutual gains approach. Negotiation simulation. Visioning Activities to define their group vision.

#### Outcome / Impact:

The primary outcome of this training is to provide the beneficiaries with an understanding of how to work for the best possible outcome. There is a strong relationship between thinking about managing a common resource and being able to negotiate and come to decisions that relate to the management of those resources. Negotiation and decision making are transferable skills that support the beneficiaries in their dealings with fish exporters and other stakeholders including local government and NGOs!

## Module Four, October 5 2006 "Effective Facilitation"

Attended by selected 7participants as main resource persons for Buleleng district;

**Content Summary:** Communication skills, Sharing Experience from Lakshadweep, Learning, Knowledge Management and Team Building

#### Outcome / Impact:

LEAD has trained 7 resource persons who will continue to act as a focal point and resource for the target communities. The provision of basic skills such as basic ITC enables these individuals to support their communities in dealing with local and international stakeholders. These individuals have continued to facilitate discussions within the communities including: organising meetings to formulate planning on coral reef rehabilitation; development of youth projects focused on care of marine environment, facilitation public dialogue relating to policy mechanisms for management of marine resources.





Other results of the training activities outlined above include:

- For the first time ever a dialogue started between local communities and government officials on marine resource management policies. The government accepted the community's inputs in certain issues, e.g. the decision making process of a new decree on fishing license where there is "free charge" for license of small scale fishing equipments.
- A new partnership was forged among parties of ornamental fish enterprise to promote green and fair trade. LEAD Indonesia facilitated the process which resulted in a Memorandum of Understanding between fishermen, a local government agency ('Diskanla' - in charge of marine and fishery activities), exporters and retailers.
- A separate agreement was signed between MAC certified exporters and MAC certified fishermen to launch a new supply chain. The new arrangement creates a direct connection between ornamental fish collectors in Bali with the retail market in Jakarta, and offers 'fair trade eco fish' for higher price (10%). Retailers and hobbyist will be educated on the significance of buying "fair trade eco fish" (marine habitat conservation, sustainable supply of ornamental fish, and improvement of fishermen livelihood). This scheme provides fishermen and exporters with an incentive to harvest ornamental fish in an environmentally friendly way.
- While it is perhaps too soon to claim lasting biodiversity benefits resulting from the training described above there are certainly some very encouraging indications. In a number of the communities the associations of fishermen have responded positively and have begun to approach the management of marine resources in a way that demonstrates a clear understanding of the principles of sustainable use. In addition there is good dissemination of the recommendations for community based resource management, this is a good indication that there is strong "buy-in" and this is crucial in sustaining long term behaviour change. This includes development of information including databases relating to the monitoring and collection of specie. In addition some communities are engaged in more direct conservation related activities such as collection of Acanthaster planci starfish and transplanting of coral.

#### (ii) MAC training

This section of the report has been revised to clarify particular issues raised by the reviewer.

Summary of the content of the MAC Training as follows:

- The importance of community involvement in law enforcement for effective marine resources management
- The importance of micro finance institutions to assist local community in small enterprises
- Post harvest training Filtration system for land-based holding facility (how to establish
  a filtration system and the understanding of the water quality requirement)
- The importance of community based management of collection site for ornamental fish activities
- Training on Healthy Diving, Sorting ornamental fish, packaging and handling to local fishermen (MAC standard). Participated in by community enterprise, head of the group and members.
- Evaluation of MAC standard in fishing practices to the trained fishermen in Pejarakan village by independent certification agency.





 Training on the supply chain: An Overview of the Values; Introduction to Small and Medium Enterprise and SMART Plan (business plan), Small Enterprise Management, and Organizational Management.

(Output 1) In year 2 an additional 55 fishermen and 3 exporters were trained and recommended for MAC certification (due in April 2007) in Year2. The total number of local MAC certified fishers using sustainable fishery techniques due to our project activities have now reached 201 (including 138 in Year1 plus 5 exporters) - exceeds the 150 output target.

In terms of the validity of the MAC training; MAC is a recognised international partner in the creation of standards and certification for those engaged in the collection and care of ornamental marine life from reef to aquarium. MAC has created several international partnerships to support certification. Among the key partnerships are the following:

- Reef Check, a member of the Global Coral Reef Monitoring Network.
- Conservation and Community Investment Forum (CCIF) collaborates with MAC in Southeast Asia.
- The United Nations Environment Program's World Conservation Monitoring Center (UNEP WCMC)

The project in Bali is not yet at the stage to be able to demonstrate the direct connection between changing fishing practices and species recovery. However in other MAC certified sites in Indonesia there is strong evidence, supplied by fishing communities of the recovery of key ornamental species, plans are in place to facilitate exchange of practice and experience between the target communities. Further evidence will be supplied to support biodiversity improvements as part of the reporting for Year Three.

#### (iii) Business training

# This section of the report has been revised to clarify particular issues raised by the reviewer.

The business training provides an important link to the development of sustainable livelihoods for the communities reliant upon marine resources. In many cases fishermen are trapped in debt cycles that tie them to money lenders who purchase the collected fish at reduced rates. There is poor awareness of how the debt situation prevents the creation of new opportunities, these and other factors contribute to the continued destructive practices as fishermen are unable to secure start up costs for more sustainable business methods.

(Output 3c) Facilitated by a team of Indonesian small business development experts, 15 community members developed their management and business skills to improve their livelihood through a series of training events. The content of these training events is summarised below:

- August 2006: Enterprise Development the roles of community groups, cooperatives and NGO in the ornamental fish trade –
- October 2006: Managing Micro Finance Institution
- **November 2006:** Writing Credit Proposal for Micro Finance Agencies
- **December 2006:** Market Match for Ornamental Fish Trade: Facilitated meeting involving fishermen community, suppliers, government agencies

The business training was originally focussed on management skills. However, the needs assessment revealed that what the community enterprise really needed was more knowledge on financial resource institutions. Therefore, the training provided participants with information on accessing financial resources, working on credit schemes and developing risk management skills.





Evaluation of the training indicates that the participants found it to be very useful in terms of presenting practical steps and opportunities for the realisation of improved livelihoods. By bringing together collectors, suppliers and other stakeholders involved in the ornamental fish trade, the fishermen were able to understand better the possibilities of 'eco fish' labelling as a means of securing higher prices.

As a result of the business training Sinar Baru, fishermen group in Panyabangan, has received a loan from local cooperative Wana Agung to support its activities. Other groups are in the process of trying to secure micro finance in similar ways. There will be further evaluation of the impact of enterprise training over the remaining course of the project. The relationship between money lenders, fishing practices and the ornamental fish trade is complex and it will be useful to note how this particular intervention delivers benefits that can be measured over the final six months of the project.

## (iv) Reef Check training

Regarding the validity of Reef Check Training: Reef Check is a global environmental group established to facilitate community education, monitoring and management of coral reefs. Under the ICRI (International Coral Reef Initiative) framework, Reef Check is a primary GCRMN partner and coordinates GCRMN training programs in ecological and socio-economic monitoring, and coral reef management throughout the world. Reef Check is active in more than 70 coral reef countries and territories, where it seeks to: educate the public about the coral reef crisis and how to prevent it; create a global network of volunteer teams that regularly monitor and report on reef health under the supervision of scientists; scientifically investigate coral reef processes; facilitate collaboration among academics, NGOs, governments and the private sector to solve coral reef problems; and stimulate community action to protect remaining pristine reefs and rehabilitate damaged reefs worldwide using ecologically sound and economically sustainable solutions. LEAD is pleased to working with such an established and recognised partner.

The Reef check training is focused on providing community members will the skills and understanding to be able to manage marine resources in a sustainable way (Output 2). Reef Check and LEAD worked together to equip 15 community members in four villages with skills to be able to assess the status of the marine environment, using sound scientific principles through Participatory Coastal Resources Assessment (PCRA). Following the PRCA the communities work together with Reef Check and LEAD to formulate the Total Allowable Catch (TAC) for the ornamental fisheries. The TAC is based upon a number of assessments as follows:

- Banned Species List: CITES listed
- Unsuitable Species List: List that should not be collected due to low survival rates in captivity, low fecundities, ecologically important stage etc
- **Precautionary Species List:** Species usually low in abundance in the wild, low growth rates, low recruitment rates, high price and high demand.

Deepening the community understanding of ecological carrying capacity and concepts like "total allowable catch", has enabled the project partners to work with the community to identify a potential Marine Protected Area (MPA) in Sumberkima. The geographical scope of the MPA have been agreed through consultation with the community and current management body, and the final legal procedures regarding enforcement of MPA regulation are ongoing.

Reef Check have undertaken data collection of biophysical data both within and outside the MPA area and the programme team will continue to monitor the fish, invertebrate and substrate indicators through the remaining project period. The short time frame between establishing community support for the MPA (April 2007) and the end of the project (March 2008) is not sufficient to establish absolute conclusions regarding the success of the approach, however it should be possible to identify initial improvements that can be used to 'prove' the value of the practice to the participating communities.





#### Research

#### This section of the report has been revised to clarify particular issues raised by the reviewer.

(Output 2) Research report was developed on ecological and resource stock: 'Developing Community-based Marine Resource Management for Sustainable Use (Ecological Carrying Capacity Database and Monitoring Scheme with Community Participation'.

#### **About Reef Check Foundation**

(Output 3a) Socio-economic baseline data were established for measuring livelihood improvement of four fishing communities: 'Socio-Economic Profile of Fishermen Communities in Four Project Sites'.

### Policy making

(Output 3b) Two Memoranda of Understanding (MoU) were negotiated: (i) Partnership between community fishermen group, local government agency, exporter and LEAD Indonesia to promote 'green and fair traded' ornamental fish; (ii) Partnership between a community fishermen group and exporter to buy and sell 'eco fish' that meet MAC standard. The support from LEAD Indonesia played in important role to access the retail market and provide promotion awareness materials.

Several meetings of local community members and local government have also taken place to increase the confidence of community members for engaging in multi-stakeholder dialogues: Meeting between the community and the local government officials to review IUP ('Izin Usaha Perikanan') bill (fishing business license).

Informal meeting among LEAD staff, a policy expert and local government officials to discuss local policy issues.

Two meetings among stakeholders (government, business community and LEAD) to explore partnership that promotes green and fair ornamental fish trade.

## 2.2 Progress towards Project Outputs

Based on the project outputs it is very likely that the project will achieve its proposed goal. All actual outputs match with or even exceed the targets as follows:

MAC certified fishermen and exporters

 Target exceeded: 201 versus 150 targeted in the original proposal Actual Yr1:138 fishers+5exporters; Yr2: 55fishers+3exporters

Based on assessments carried out by project staff in August 2007 there are good indications of behaviour change in the target communities. There is strong and widespread understanding of the principles and practice of sustainable management of marine resources. The value of certification is recognised as a contributing to the conservation of the reef and the potential benefits to be realised through the supply chain modifications are also well understood though the market has yet to fully deliver on financial incentives.

Research on ecological carrying capacity

 On target (report developed by Reef Check; baseline data established, monitoring started in Yr2)





As referred to in section 3.1 (iii) above the work of Reef Check has been essential in building the community understanding of the principles of Total Allowable Catch and the agreement of a Marine Protected area. Further monitoring is planned for Year 3 to measure improvements to indicator species populations.

#### Livelihood improvement

On target (report developed by CSR Indonesia; baseline data established for Yr3
assessment; the number of trained community members as trainers or resource persons
exceeded the target: actual 35 (the number of participants varies in each training session)
versus 7.

In addition to the outputs described above, all of the communities have responded very positively to this intervention. Equipping the communities with the skills to write proposals for micro credit as business capital has achieved some direct and concrete impacts where fishermen's groups have been able to secure loans to support activities.

### Dialogue with government

 On target (several milestone meetings took place, Community-Based Resource Management (CBRM) institutions were formed; policy recommendations developed).

The project has also been able to connect community members with a direct network of government institutions, exporters and retailers in the supply chain of the marine ornamental fish trade.

#### New supply chain developed

One of the key outputs of Year 2 is the design and institutional set-up of a new supply chain for 'green' and fair ornamental fish trade in the Indonesian market. This is a new experimental model designed to use a price increase charged by exporters to incentivise fishermen to use non-destructive practices.

There is strong evidence from MAC of high rejection / mortality rates for many shipments of fish that are gathered using destructive practices. Because so many fish cannot be sold on the fishermen are poorly rewarded and faced with a perverse incentive to gather larger numbers of poor quality fish.

Under the experimental Eco Fish supply chain, agreement has been secured for one of the exporters (Blue Star) to pay a price premium for fishermen using sustainable practices as certified by MAC. Fishermen receive an additional 10% on the normal prices paid with the aim of increasing the take up of sustainable practices for sound financial rewards. The model is yet not yet fully proven but there are some positive elements to the scheme: there is a recognition on the part of collectors and exporters that there is value in using not destructive practices, the brand value of "Eco Fish" has further been established and the project will be able to draw further information from this part of the supply chain relating to the attitudes of purchasers (hobbyists).

From recent meetings with MAC and other partners there are a number of areas where the project can deliver further activities to try and generate direct financial benefits derived from international markets supplying hobbyists worldwide. Part of the role of LEAD International in Year Three should be to explore the possibilities of working with international exporters and hobbyist associations who may be more able and willing to contribute directly to the conservation of marine resources.

#### Media

• The only output which needs rescheduling is the media coverage. Press releases will be issued during the first quarter of Year 3 when the new supply chain will be marketed.





# 2.3 Standard Output Measures

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

Code	Description	Year 1	Year 2	Year 3	TOTAL
No.		Total	Total	Total	
6A	Local (Balinesian / Indonesian)	138	55		193
	fishermen were trained on MAC				
	standard				
6B	Training week (MAC)	12-24	12-24		12-24
6A	Community members trained as resource persons (TOT)	0	35		35
6B	Training week (TOT)		2		2
6A	Community members trained in business skills		15		15
6B	Training week (Business skills)		1	•	1
6A	Local NGO members trained in strategic planning		7		7
6B	Training week (local NOG)		1		1
6A	Fish export companies trained on MAC	5	3		8
	standard	_	_		_
6B	Training week (MAC)	12-24	12-24		12-24
6A	Local decision makers participating in policy making workshop	50	15		65
6B	Training week (peer-learning consultation)	0.5	0.5		1
6A	Fishermen, local government, exporters meeting to forge partnership for new supply chain	0	46		46
6B	Training week	0	0.5		0.5
7	Powerpoint presentation ('Project Insight')	0	1		1
7	Icon – 'Eco Fish'	0	1		1
7	Poster – 'Eco Fishr', 'Policy'	0	2		2
7	Sticker - 'Proud Guardian of Eco Fish'	0	1		1
7	Information package	0	2	<b></b>	2
7	Leadership profile	0	1	<del></del>	1
9	Policy recommendations	0	4		4
9	Reports on (1) Socio Economic Profile of Buleleng District & (2) Ecological Assessment	2	2		4
15A	Press release of the graduated fishermen in Bali Post	1	0		1





# **Table 2 Publicity**

Туре	Detail	Publishers	Available from
Icon	Icon to promote eco fish (collected fish using un destructive fishing practices (using MAC standard) March 2007	Produced by PT Cakra Globalindo Utama printing company, Indonesia	Available at LEAD Indonesia office
Poster Eco Fish	A message on the environmentally friendly fishing practices to encourage hobbyists to buy the eco fish (collected and treated under MAC standard*) 2007	Produced by LEAD Indonesia (content) and designed by PT Cakra Globalindo Utama printing company, Indonesia	Available at LEAD Indonesia office
Sticker	'Proud Guardian of Eco Fish'  March 2007	Produced by PT Cakra Globalindo Utama printing company, Indonesia	Available at LEAD Indonesia office
Project Website	The profile and progress of the project	Produced by LEAD Indonesia and LEAD International	http://www.lead.org/p age/139
Package of Information on LEAD Project in Bali	The update progress of Bali Project March 2007	Produced by LEAD Indonesia	LEAD Indonesia Office The selected retailers in Jakarta (April – September 2007)
Package of Information on MAC	MAC standard In fishing practices for marine ornamental fish, off shore treatment and transportation, the benefits, and how to be certified. February 2007	Produced by MAC, cover design by LEAD Indonesia	LEAD Indonesia Office The retailers in Jakarta (April- September 2007) Website www.lead.org and www.lead.or.id
Profile of Abu Haira	The profile of MAC certified ornamental fish supplier, head of village council in Sumber Kima village, BPWLP (Badan Pengelola Wilayah Laut dan Pesisir).  December 2006	Nina Dwisasanti	http://www.lead.org/p age/139
Poster on Policy Work	Explanation of policy issues that LEAD works in the district. 2006	Arief Rahman	LEAD Indonesia office





## 2.4 Progress towards the project purpose and outcomes

Good progress has been made to project purpose, i.e. the conservation of threatened marine biodiversity of Bali Barat National Park and neighbouring buffer zone - by

- facilitating policy dialogues between community government for an integrated coastal management plan
- designing and piloting a new supply chain for 'green and fair ornamental fish trade' for establishing a sustainable fishery enterprise – based on MAC standards
- enhancing the capacities of local fishermen, suppliers and exporters to participate in the new supply chain by trainings on MAC standards, business skills, monitoring natural resources and sustainable development in practice

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

Encouraging progress has been made towards improving biodiversity and sustainable use. Due to the various capacity development efforts and incentives, fishermen started to use non-destructive fishing methods in Buleleng which has direct positive impact on local biodiversity. The regular monitoring of local coral reefs will reveal the extent and pace of coral reef recovery.

Communities have adopted the Total Allowable Catch principles and have used been involved in the Participatory Coastal Resources Assessment to agree on the importance of "no take zones". In one location, Sumberkima the community have agreed on the establishment of a Marine Protected Area which is an important step towards achieving significant biodiversity benefits. As the MPA becomes formally protected through official regulation it is anticipated that the communities will see the biodiversity improvements and this will act as reinforcing feedback for conservation practice.

Progress towards equitable sharing of biodiversity benefits has also been demonstrated by the collaboration of stakeholders in testing the new supply chain. If the market positively respond to the new supply chain, and fishermen will earn more by using sustainable fishing methods, that will be a clear evidence of the project impact on biodiversity, sustainable use and equitable sharing of biodiversity benefits.

During Year Three of the project the UK partner will be conducting a peer review of the project outcomes in achieving biodiversity benefits. One of the mechanisms for this work will be to use the international network of experts who have been involved in reviewing and information sharing relating to the LEAD Darwin project in Lakshadweep. It is proposed that the UN partner will conduct a series of activities, including peer review with the aim of providing further input to support continued behaviour change that produces biodiversity benefits.

#### 3. Monitoring, evaluation and lessons learned

#### Monitoring and evaluation

Project activities were monitored and evaluated for their

- relevance to community needs
- ability to improve fishermen livelihood without compromising conservation goals
- ability to support the exit strategy.

Community involvement





To monitor the work on the ground, the community organizer – head of 'Pilang', the local NGO - submitted monthly reports on the level and quality of community involvement. 'Pilang' is the right choice since it has the wide network of community members and leaders, as well as with the good relationship with government officials, in addition to its experience of working with other international organizations.

#### Policy research

A consultant - expert in policy strategy and legal drafting - was hired for a comprehensive report on existing local policy issues, identifying strategic partners for LEAD Indonesia to build alliance, and finding leverage points where LEAD Indonesia could play a role in the policy debate. The policy expert previously assisted the development of the village council deed, and advocated for the acknowledgement of the village council as a policy making institution with special reference to marine resource management.

#### Socio economic research

### This section of the report has been revised to clarify particular issues raised by the reviewer.

The objectives of the socio economic research are as follows:

- 1. To have the socio economic general profile of the fishermen household and the specific role of ornamental fish trade to the life of fishermen family.
- 2. To mapping issues related to the entire supply chain of marine ornamental fish trading that meets the export demands and the domestic market in Jakarta retail business.
- 3. To identify the strategic issues and the stakeholders relations within the context of community ornamental fish enterprise development

The reviewer raised a number of points relating to the socio – economic report. Questions about the feasibility of the certification scheme delivering the hoped for economic benefits for fishermen, and the level of influence of 'external' NGOs are presented as compromising the objective of the project. These are certainly valid points and the findings of the research in fact present many challenges that LEAD and the project partners are working to address, however it is also important to emphasise that the capacity building approach does not deliver change guickly.

One of the important observations in the report is that the environmental NGOs involved in the project are too focused on conservation related activities and lack the experience and understanding to address wider livelihood questions. LEAD has been able to make some important contributions to this capacity "gap", for example by delivering training on enterprise development and micro finance, enabling beneficiaries to create opportunities to improve their economic conditions.

The project aims to change current practices which are well established and have become part of the fabric of income generation. At the same time the relationships of money and power that exist between collectors and exporters are complex and cannot simply be re-made. It is understandable that fishermen who change their practices to adopt new methods that may be disappointed if the more sustainable techniques also prove more time consuming and less lucrative.

There also seems to be a connection between the repeated environmentally focused interventions on the part of NGOs and the dissatisfaction expressed by fishermen at the failure of the MAC accreditation to deliver immediate and meaningful benefits. It is apparent that the communities might be suffering from "intervention fatigue", they have been surveyed, monitored, dialogued and facilitated, and finally asked to change the practices that support their livelihood, resulting in little measurable benefit. This sends a clear signal that any request to change practices that yields a relatively smaller return for the same effort (manual practices being more difficult that fishing with cyanide) needs to be accompanied by a serious economic incentives. The experimental supply chain approach involving Blue Star is not yet proven and there is some indication that the market





can provide some benefit as according to surveys carried out, consumers believe that fish collected in non destructive ways will live longer and so save them money. However it is too soon to judge whether this solution will offer the sorts of dividends that the communities are looking for. The results from the supply chain experiment will be available from September 2007.

It is also apparent that the international dimension of the "Eco Fish" supply chain is, as yet, untested. Discussions in August 2007 with MAC and other partners have revealed that there is an urgent need for the international project partners (notably LEAD International) to investigate the potential for using trade associations in the UK and elsewhere to tap into markets that may be financially better able to respond to requests for pricing mechanisms that support the conservation of marine resources. LEAD International will be developing activities in Year Three to respond to this need.

The point about the conflicting agendas illustrates the need for effective coordination between NGOs. LEAD Indonesia has been particularly active in working to bring together the activities and objectives of the different organisations in the region.

### Business training

The business training was highly effective as it addressed fishermen's most pressing challenges: (1) poverty, and (2) monopoly of supplier who can trap fishermen in an unfair trade. The training provided fishermen with information on various financial resources and how to manage the loan for better business performance. As such the training supported the project's exit strategy as it provided fishermen with transferable knowledge and skills they could use well after the project.

#### Monitoring natural resources

The training Reef Check provided on reef monitoring was appreciated as local fishermen learned a new set of skills they could use beyond the scope of this project. They learned how to collect, analyse and interpret data which can be used for biodiversity conservation as well as for business development, i.e. harvesting the maximum allowable catch. The new skills give the community more control over their financial resources: they can do the monitoring themselves, no need to rely on expensive external expertise. This training was also designed to support the exit strategy.

#### Lessons learned

Priorities: Economic development, conservation

LEAD Indonesia has experienced that what the community most needed was economic improvement although they understood conservation could save their future by preserving their marine resources. The immediate needs need to be met first. In response to this challenge a new supply chain was introduced on an experimental basis which could increase fishermen's income while conserving their reef.

The project needs to continue to provide communities with opportunities to improve their livelihoods. Enabling community groups to access micro finance is an important step and one that can be replicated. In other MAC project areas in Indonesia, recent evidence shows that species have begun to return to certified sites, the communities are able once again to gather high value species for sale and are seeing the concrete benefits of non destructive practices. The project partners plan to facilitate exchange between fishermen from these different communities to enable the sharing of information and good practice.

Relationships, relationships, relationships

Researchers who work on the ground can be very effective only to a limited time. The field station has to be operated by people who can build good rapport with locals, have the locally preferred inter-personal skills and amicable personality. This profile does not fit the organized manager who is





in charge of project management, but rather a 'public relations' type personality who can maintain productive relations and delivers as well.

Policy making takes time

In the policy arena, there are unpredictable processes and timelines beyond the control of our project. Therefore, the policy issue - although it is important – is not our first priority. The dialogues between the community and the local government officials need time. Both parties need time to develop trust and feel comfortable to conduct participatory policy review.

## 4. Actions taken in response to previous reviews

The review of Year1 annual report has made positive remarks on project management, the scientific reports and related activities and the project's overall progress. The review pointed out the lack of Memorandum of Agreement between LEAD International and LEAD Indonesia.

The review has requested the UK partner

- To contact the Darwin Secretariat regarding project expenditures
- To describe the roles and responsibilities of the UK staff in the implementation of the project and the stated objectives of the Darwin Initiative in the current, Year2 annual report.
- To describe the role and responsibilities of the LEAD International author of the annual report (Andrea Deri)

The UK partner provides capacity development expertise through a training of trainers programme, mentoring, setting up local peer-learning institutions, and enhancing project participants' confidence by promoting exchanges with similar initiatives, and supporting the development of the new supply chain by ongoing consultation with the business expert. For details, see 3.1.

An exchange has started between the two Darwin projects the UK partner manages. As both projects aim at improving the management of coral reef ecosystems with also improving sustainable livelihood of poor local fishing communities, the exchange has high potential in sharing best practices, lessons learned and empowering local leaders.

Andrea Deri, Senior Consultant to LEAD International, LEAD Fellow, with over 20 years of international capacity development experience, has the role and responsibilities of supporting the Indonesian partner in capacity development, including the design and implementation of training activities; providing ongoing technical support, liaising on with the Indonesian project manager and other staff members; advising on the exit strategy, and enhancing the communication & dissemination process. Andrea worked with LEAD Indonesia staff in August 2006 to deliver module 4&5 of the TOT programme and related capacity development activities (mentoring, setting up peerlearning systems etc).

This report has been revised and submitted August 31 2007, with additional information provided to address specific points raised in the review of the initial Year Two report.





### 5. Other comments on progress not covered elsewhere

## **Challenges and Solutions**

#### Field Coordinator

Finding an appropriate Field Coordinator has been a challenge. After the departure of the first coordinator a new coordinator was hired in July 2006 who also moved on in December 2006. Unfortunately the second hire was not accepted by the local fishermen as her attitude was more of a scientist rather than a community organizer.

As a creative solution, LEAD Indonesia has decided to split the position of the Field Coordinator and hire a team of two experts: the head of the local NGO, 'Pilang', and a Jakarta based consultant, an expert in socially responsible small enterprise development, who played a pivotal role in developing the new supply chain. The local NGO head is in charge of community development. She is an effective and respected community organiser and able to liaise on with local government agencies as well. The Jakarta based consultant covers other responsibilities including the facilitation of partnership among parties, negotiating better price for the fishermen, and ensuring that the experiment of green and fair ornamental fish trade is a success.

This team was successfully working in the period of January to April 2007, and is likely to remain till the end of the project. The community organizer will ensure that the community is involved in the policy making process, and fishermen work well with other partners, while the enterprise development expert will be in charge of promoting 'eco fish' in domestic retail markets and exhibitions.

#### Socio economic research

The socio economic research was delayed since the project had to facilitate the meeting of players for the new supply chain. The research started in January 2007 and was completed by March 2007.

#### Media

No press release was issued as the experiment with the new supply chain reports begins in April 2007. Forging partnership for a 'green and fair ornamental fish trade' has taken time.

#### Risk

The experimental new supply chain involves a certain amount of risks but does not jeopardise the success of the project. As the new supply chain introduces a higher price, we need to prepare the market for this new situation. The market needs to be sensitised and motivated to buy in the new scheme. This process involves both economic and social marketing which is time consuming. The intensive marketing of the 'green and fair ornamental fish trade' will take place between March and September 2007.

## 6. Sustainability

The project was designed to leave a sustainable legacy. The following design elements contribute to sustainability – all of them are part of the exit strategy:

- MAC certification of a critical number of fishermen, suppliers and exporters
- Training fishermen for monitoring marine resources
- Introducing fishermen to a variety of financial resources other than the suppliers
- Engaging fishermen in new networks of exporters and retailers in the ornamental fish trade





- Engaging fishermen in designing and promoting the new supply chain of 'green' and fair ornamental fish trade
- The establishment and empowerment of CBCRM (Community-based Coastal Resource Management) institution
- Developing the capacities and empowering the local NGO, 'Pilang'

The exit strategy applies a systems approach. It links environmental, economic and social capitals together. There are two assumptions to make the exit strategy work: (1) Higher quality resource (i.e. sustainably harvested, longer living fish) sells for better price. (2) New resource management policies are introduced and enforced. Both assumptions require intensive and effective social marketing and financial investment.

The exit strategy's logic is the following:

If the expertise of sustainable fishing practices stay within the community, and if the coastal zone management policy functions well, and if the collection area management plan works, then the business community develops a "green / sustainability" orientation. The partnership between the community and the local authorities plays a key role in conserving biodiversity. The trained resource persons - who understand sustainable development - disseminate their knowledge and create a social movement towards sustainable livelihood.

#### 7. Dissemination

Dissemination of project results started in Year 2 by distributing information packages, posters, stickers, attending shows and the first steps of marketing the new supply chain of green and fair ornamental fish trade.





8. .

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





# Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07 –

Project summary	Measurable Indicators	Progress and Achievements April 2006-Mar 2007	Actions required/planned for next period
<b>Goal:</b> To draw on expertise releval in resources to achieve	nt to biodiversity from within the United K	Gingdom to work with local partners in co	untries rich in biodiversity but poor
The conservation of biological dive	rsity,		
The sustainable use of its component	ents, and		
The fair and equitable sharing of the be	enefits arising out of the utilisation of gen	etic resources	
Purpose  Conservation of threatened marine biodiversity of Bali Barat National Park and neighbouring buffer zone, through a participatory approach of developing an integrated coastal management plan and establishing a sustainable fishery enterprise – based on MAC standards.	1. Fully MAC certified profitable live fish export enterprise in place. 2. Evidence of recovery of fish stocks and reefs within zone (measurable 5 yrs after project implementation) 3. Increased levels of public participation and more effective dialogue with local government in management of marine resources.	<ol> <li>MAC documents and verifications         <ul> <li>published accounts.</li> </ul> </li> <li>Baseline survey report (yr2) and subsequent annual survey reports         <ul> <li>Fish catch data</li> </ul> </li> <li>Records, minutes of village meetings illustrating public participation and dialogue.</li> </ol>	<ol> <li>The fishing communities are willing to give up use of cyanide and explosives for harvesting fish, and adopt MAC practices / standards which require constant verification and documentation.</li> <li>The shift from current fishing practices (often involving the use of cyanide and explosives) to MAC methods will result in a measurable increase in fish stocks in the district, as demonstrated in previous projects by WWF Indonesia.</li> <li>Willingness on the part of all stakeholders including communities and representatives of government to engage in participation and dialogue.</li> </ol>
Outputs			
(insert original outputs – one per line)	(insert original output level indicators)	(report completed activities and outcomes that contribute toward outputs and indicators)	(report any lessons learned resulting from the project & highlight key actions planning for next period)





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Year 3 150 community members trained in techniques for sustainable fishery management	Year 2 expected output year 1 and 2: At least 75 fishermen applying MAC standard.	Year 1 In year 1: 138 fishermen trained by MAC and certified as collectors. 5 companies trained by MAC and certified as exporters	Year 2 55 fishermen recommended to certified by MAC, with correction action needed (December 2006). By March 2007 correction action completed and auditor accepted. It is expected that after April 2007 the fishermen will officially have the certificate. The number of certified fishermen have already exceeded the target of year 3.
Research: Ecological & resource stock data gathered & analysed	Year 1 Research on Ecological Carrying Capacity of the district initiated	Year 1 Report available on Ecological Assessment	Year 2 Report available. Ecological Carrying Capacity conducted as data base gathering to monitor the condition of coral reefs of 4 villages, and to empower the local community with monitoring skills to their marine resources so they will understand the "total allowable catch", the role of "no take zone" and the negative impacts of destructive fishing practices, and over fishing.
Livelihoods of communities enhanced	Year 1 First Group of fishermen start to apply MAC standards.	Year 1 Kelompok Ikan Hias Laut Lestari in Pejarakan completed training (63 fishermen). Other villages in the district also trained and certified with the total number of certified fishermen 138. New fishermen group established in Panyabangan.	Year 2 Two Memorandum of Understanding took place: 1)A partnership between community fishermen group, local government agency, exporter and LEAD Indonesia to promote green and fair trade on ornamental fish, (2) Community fishermen group and exporter to buy and sell eco fish that meet MAC standard, supported by LEAD Indonesia that brings access to retail market and provide promotion





			awareness materials.
Communities better able to engage in participatory dialogue with local government & other stakeholders	Year 1 Village meeting for local government & key stakeholders	Year 1 A workshop among key stakeholders & government officials hold in November 2005	Year 2 One meeting between the community and the local government officials to review IUP bill (fishing business license). Other informal meeting took place among LEAD staff and expert with the local government officials to discuss the policy issues. Two meeting among stakeholders (government, business community and LEAD) to explore partnership that promotes green and fair trade on ornamental fish.
Dissemination of Project results and lessons learned	Not available since this is the first year of the project	Not available since this is the first year of the project	Not available.





# Annex 2 Project's full current logframe -

Project summary	Measurable Indicators	Means of verification	Important Assumptions			
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:						
The conservation of biolog	ical diversity,					
The sustainable use of its	components, and					
The fair and equitable shar	ing of benefits arising out of the ut	ilisation of genetic resources				
Purpose	Fully MAC certified profitable	1. MAC documents and	1. The fishing communities are willing to give up use			
	live fish export enterprise in	verifications + published	of cyanide and explosives for harvesting fish, and			
Conservation of	place.	accounts.	adopt MAC practices / standards which require			
threatened marine			constant verification and documentation.			
biodiversity of Bali Barat						
National Park and			2. The shift from current fishing practices (often			
neighbouring buffer zone,			involving the use of cyanide and explosives) to MAC			
through a participatory	2. Evidence of recovery of fish		methods will result in a measurable increase in fish			
approach of developing	stocks and reefs within zone	2.a) Baseline survey report	stocks in the district, as demonstrated in previous			
an integrated coastal	(measurable 5 yrs after project	(yr2) and subsequent annual	projects by WWF Indonesia.			
management plan and	implementation)	survey reports				
establishing a sustainable		b) Fish catch data	3. Willingness on the part of all stakeholders			
fishery enterprise -			including communities and representatives of			
based on MAC	3. Increased levels of public		government to engage in participation and dialogue.			
standards.	participation and more effective					
	dialogue with local government					
	in management of marine	3. Records, minutes of village				
	resources.	meetings illustrating public				
		participation and dialogue.				
Outputs						
1. 150 Community	Community members have	Training records and	There will be sufficient interest in communities in			
members trained in	gained MAC Certification in	evaluation materials including	becoming trained in sustainable fishery practices and			





162/14/057 - Conserving Reefs Through Community Ownership and Enterprise

techniques for	sustainable fishery techniques.	MAC Certification	gaining MAC certification.
sustainable fishery	Sustamable hisrary teeriniques.	documentation.	gaining wite certification.
management.	2. Baseline data by yr 2, Annual	decamentation.	
management.	monitoring data in subsequent		2. Authorisation of research by appropriate
	vears	2. Copies of baseline surveys	authorities
2. Research: Ecological &	youro	& subsequent annual survey	
resource stock data		reports	
gathered and analysed	3. Increase in disposable		
	income by yr 3		
3. Livelihoods of	, , ,	3.a) Gauged against socio-	3. Communities willing to forego practices resulting in
Communities enhanced.		economic baseline established	quick short-term gains for longer term well-being.
	4. Increased levels of		
	participation and dialogue in		4. Community representatives and other
4. Communities better	decision-making. Increased	4. Evidence of community	stakeholders prepared to adopt participatory
able to engage in	trust between communities and	consultation, minutes of	approach.
participatory dialogue	decision makers.	meetings, official reports.	
with local government			
and other stakeholders			
	5. Report produced, report		
	presented at regional and	5. Copies all publications and	
5. Dissemination of	international conferences	other materials sent to Darwin	
Project results and		Initiative	
lessons learned			





Activities	Activity Milestones (Summary of Project Implementation Timetable)
Pre Implementation: develop the project institution and project team Finalised with administration work for partnership MOU signed by all partners Establishing field station and project team Developing 'marine resources management body' in Buleleng District Detailed Training Needs analysis Recruits selected to be trained as trainers	April – July 2005
Implementation: 1. Training of Trainers a. Training MAC standard to trainers and fishermen:	
2. Marine Resources Management: Conducting research and advocacy Socio-Economic Profile of the district Ecological Carrying Capacity of the reef resources Advocacy to government agencies Develop natural resource management plan and policy	August 2005 – July 2007  August 2005 – April 2006
3. Develop community fishery enterprise: a. Develop fishermen group: achieve consensus and alignment of interests b Develop community enterprise: develop management system c. Training related to enterprise development d. Connecting to international market and develop long term business plan	
	June 2005 – December 2007
III. Documentation and Dissemination of project results and lessons learned Writing detailed description of the project 14-057 Annual Report - 2 Publish the case study Disseminate to relevant institutions and	2007 - Year 2 Page 6 of 30

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Annex 3	Socio_Economic_Profile_of_Fishermen_Communities_second_year.pdf - revise
Annex 4	Fact_Sheet_of_Progress_Report_second_year.pdf
Annex 5	Summary_ Policy_Advocacy _Report.pdf
Annex 6	Developing_Community_Based_Marine_Resource_Management_English_summary
Annex 7	Developing_Community_Based_Marine_Resource_Management_Bahasa_Indonesia_full
Annex 8	Abu_Khaira_Profile
Annex 9	MAC Info Package
Annex 10	Poster_ Eco_Fish - Icon Eco Fish - Shop Sign – remove Darwin logo
Annex 11	Poster_on_Policy_Issues









# Checklist for submission

	Check
Is the report less than 5MB? If so, please email to <u>Darwin-Projects@ectf-ed.org.uk</u> putting the project number in the Subject line.	
Is your report more than 5MB? If so, please advise <u>Darwin-Projects@ectf-ed.org.uk</u> that the report will be send by post on CD, putting the project number in the Subject line.	<b>✓</b>
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.	
Have you completed the Project Expenditure table?	✓
Do not include claim forms or communications for Defra with this report.	