

## Darwin Initiative Final Report

### Darwin project information

Project reference	21-012
Project title	Enhancing rural livelihoods and biodiversity conservation through responsible tourism, Myanmar
Host country(ies)	Myanmar
Contract holder institution	Harrison Institute
Partner institution(s)	Myanmar Bird & Nature Society; Grow Back for Posterity; University of Mandalay
Darwin grant value	£ 239,795
Start/end dates of project	April, 2014 to March, 2017
Project leader's name	Paul Bates
Project website/blog/Twitter	<a href="http://www.destination-ayeyarwady.com/">http://www.destination-ayeyarwady.com/</a>
Report author(s) and date	Paul Bates, Beatrix Lanzinger, Malcolm Pearch, Hpone Thant, and Thein Aung, 30 June, 2017.

*The exchange rate throughout this report is taken as 1100 Myanmar kyat = 1 US\$ - actual exchange rates varied during the course of the project from 995 kyat/\$ to 1380kyat/\$.*

### 1 Project Rationale

The project is focused on the upper Ayeyarwady River Corridor (Mandalay to Kyaukmyaung Sector) in the central dry zone of Myanmar (Fig. 1). This area is recognised as being of national and international importance for biodiversity. It is listed as a conservation priority in the *Myanmar Biodiversity Conservation Vision* (2013) and includes 3 Key Biodiversity Areas (KBAs 7, 85, 122) and one Important Bird Area (IBA 21).

It is also an increasingly important area for national and international tourism, especially for cruise boats. The Union of Myanmar Tourism Association (UMTA) has selected the upper Ayeyarwady River Corridor as a priority for tourist expansion with Mandalay as the focal point.

Within the area, the project focused on the conservation needs of the critically endangered Irrawaddy River dolphin (population size 60-80 individuals throughout range - Mandalay to Bhamo Sector) and rare and endangered birds, especially migrant waterfowl that utilise the river corridor between November and March. As such, the project addressed challenges caused by:

- increased tourism on the Ayeyarwady River, especially relating to increased river use within KBAs 7 and 85 and the expanding and unregulated market of 'dolphin watching' tours
- the impact of pollution, poor waste management and human disturbance on the dolphin and other riverine faunal elements, especially birds, in KBAs 7 and 85.

In terms of poverty alleviation, the project focused on two poor, rural, riverine communities, based in Hsithe and Myitkangyi villages, whose fishermen/women have a culture of fishing co-operatively with dolphins (for further information about co-operative fishing, see <https://www.destination-ayeyarwady.com/conservation>). Households within these two communities typically combine fishing with agriculture, depending on season and availability of work. When working, they have an average daily income of between 4500 kyats and 5800 kyats (= \$4.09-\$5.27), although this is variable and there is considerably less work available during the rainy season (June to October). Those most reliant on fishing are facing increasing poverty on account of:

- dwindling fish stocks caused by over-fishing and electric fishing
- a reduction in the number of dolphins
- enhanced erosion of the riverbanks which has led some households having to relocate 3 times in recent years; there has also been considerable loss of their agricultural land.

These challenges were identified by:

- the two riverine fishing-village communities who communicated their concerns to the local CSO, Grow Back for Posterity, an initial partner in the project
- WCS (Wildlife Conservation Society) who have undertaken unpublished surveys and some conservation work of the Irrawaddy River dolphin over the last 20 years
- colleagues within the tourism trade, including UMTA (Union of Myanmar Tourism Association).

The project had 4 primary objectives:

- to attract international tourists with an interest in ecotourism/nature tourism to the two rural communities of Hsithe and Myitkangyi and to Myanmar generally through publishing the country's first detailed ecotourism/nature tourism website (this latter objective was not part of the initial proposal but was included subsequently)
- to harness the economic wealth of some of these international tourists\* to promote biodiversity conservation and poverty alleviation within the two rural, riverine village communities of Hsithe and Myitkangyi – both villages are home to fishing communities who have traditionally fished cooperatively with dolphins
- to increase the competence and number of Myanmar guides who can lead ecotourism/nature watching/bird watching tours
- to change attitudes and behaviour relating to the environment, pollution, waste management and dolphin conservation amongst those using the Ayeyarwady River (Mandalay to Kyaukmyaung sector), including boat crews, tour guides, travel agents, tourists, local government, and at the two riverine communities of Hsithe and Myitkangyi.

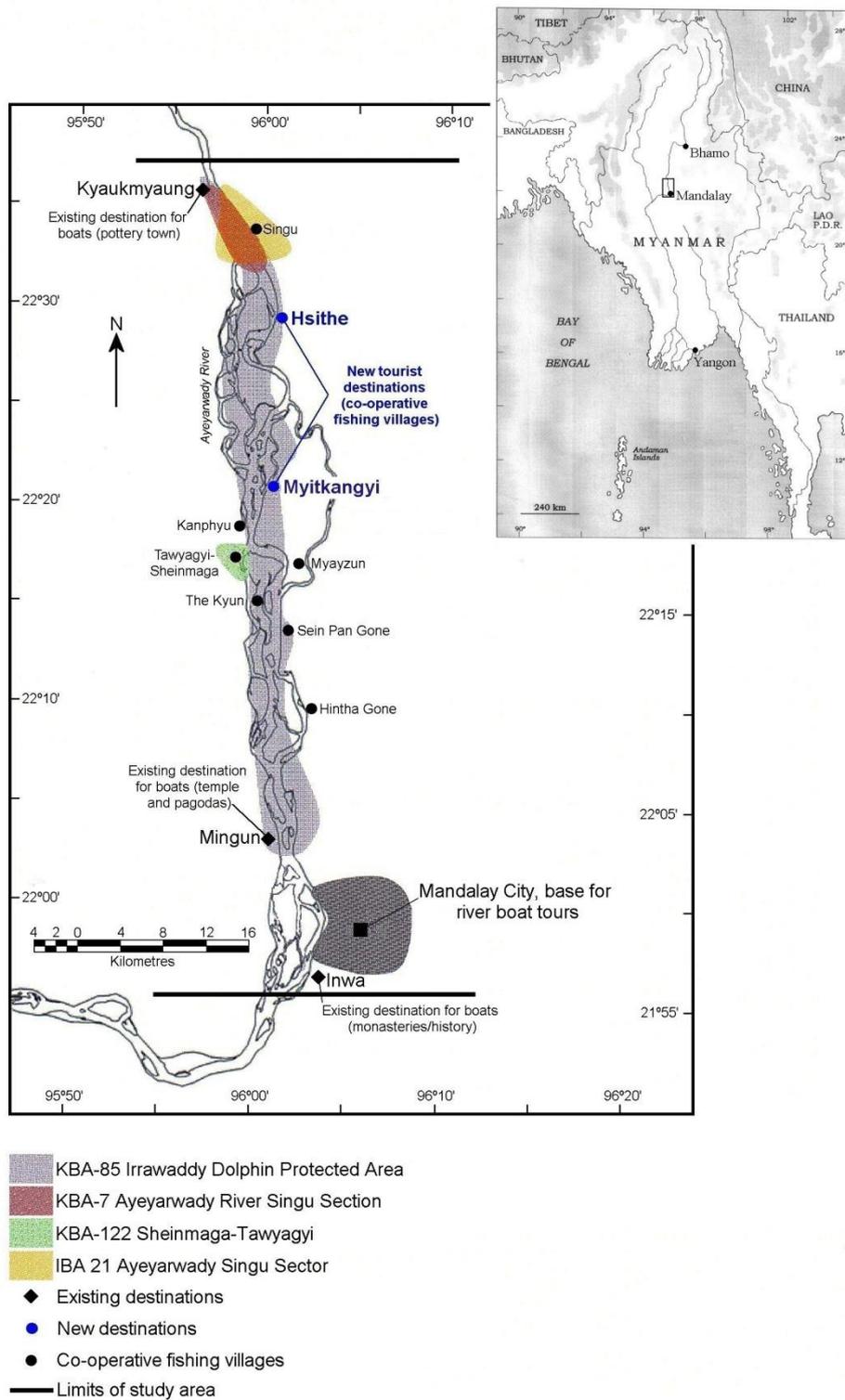
\*: (estimated to be worth nationally in Myanmar between \$5.00 and \$10.18<sup>i</sup> billion by 2020)

## 2 Project Partnerships

The project is based on a series of partnerships. Our most active are with:

**i: Communities of the new destinations at Hsithe and Myitkangyi.** These partnerships have developed strongly over the course of the project and resulted in collaborations in:

- successfully hosting 148 national and international tourists from 12 different travel agencies to both new destinations (see Annex 7.1a, Figs 1 to 5) and <https://www.destination-ayeyarwady.com/>)
- successfully hosting inspection tours by 50 individuals from 12 travel companies to both new destinations (see Annex 7.1a, Figs 11-13 and an example report of Tour Mandalay travel agents <http://www.tourmandalay.travel/irrawaddy-community-conversation-project/>; numerous other emails reporting on visits are available if required as evidence)



- successfully hosting one Myanmar government inspection tour to Hsithe destination (Annex 7.1b, Figs 14-16)
- successfully designing, developing, opening and managing two new Visitor Centres – one at each destination (both opened in November, 2016); each centre has a small shop, cafe and information centre (Annex 7.2, Figs 1 to 17) and <https://www.destination-ayeyarwady.com/copy-of-visitor-centres2>)
- successfully hosting 68 workshops and training days (listed in Annex 7.3). These included:

- hosting environmental education programmes for approximately 1000 children and adults (Annex 7.3, Figs 1 to 11)
- learning to host tourist visits (including soft, interpersonal skills); management of the destination centres; and financial management
- co-writing of management plans for Hsithe and Myitkangyi (in English and Myanmar) (Annex 7.11)
- developing designs and making new handicrafts to sell to visiting tourists (Annex 7.3, Figs. 12-18) and <https://www.destination-ayeyarwady.com/handicrafts>
- learning to cook lunches for tourists, and jams and chutneys to sell to tourists (Annex 7.3, Figs 19-25)
- developing and providing new activities (such as fish net casting) for the tourists <https://www.destination-ayeyarwady.com/learn-to-fish> , <https://www.destination-ayeyarwady.com/boat-trips>

Demand for assistance emanated from communities; the communities were involved in all aspects of the project relating to developing tourist destinations and dolphin conservation within their communities; they actively participated in decision making, workshops, and training days; they have become self-sufficient in hosting national/international visitors to their destinations and also in undertaking new livelihood interventions, such as making mango jam (see photos from June, 2017, (Annex 7.3, Figs. 24 & 25).

That said, post-project, we continue to maintain an almost daily contact with the villagers concerning follow-up visits and activities. We will continue to do so in the critical next year in order to support the villagers in further developing the destinations. This work will be supported financially by a variety of sources, including directly by the Harrison Institute and donations (see below). The village communities provided data for this final report.

**ii: Ministry of Hotels and Tourism (MoHT), Union of Myanmar:** The project developed a very positive partnership with the Ministry of Hotels and Tourism (Annex 7.4). This resulted in:

- the granting of permission by the Minister for the project to be carried out
- the granting of permission by the Minister to develop 'bed and breakfast' at the two destinations in a potential Phase 2 of the programme. This is an important development as currently 'bed and breakfast' is not an official government policy and has not been permitted in most areas of Myanmar. It would however contribute greatly to income generation within the two new destination villages
- the Minister arranging for a charitable donation of \$5,000 to be given to the project as seed money to help initiate the potential Phase 2 programme (Annex 7.4, Figs 3 & 4)
- an inspection tour of Hsithe destination led by U Aung Phyoo, the Assistant Director in charge of CBT (community-based tourism) Projects at Department of Hotels and Tourism, Ministry of Hotels & Tourism (Annex 7.1b, Figs 14-16).

**iii: GBP (Grow Back for Posterity)** is a local CSO who identified (1) the conservation needs of the upper Ayeyarwady River Corridor; (2) the need for environmental education; (3) the needs for poverty alleviation in the fishing communities of Hsithe and Myitkangyi.

Positive collaboration in Year 1 and Year 2 included:

- developing a relationship with the fishing communities of Hsithe and Myitkangyi
- instigating, developing and carrying out 2 environmental workshops in December, 2014 and April, 2015 (Annex 7.5a, Figs. 1 to 5) and producing a training course guide and a protocol (Annex 7.5b) which have been circulated to boat owners and crews (Annex 7.5a, Figs. 6 & 7)
- jointly developing the GBP website (<http://www.growbackposterity.com/>)
- working with the media to promote biodiversity conservation in the Ayeyarwady River corridor <https://www.youtube.com/watch?v=GCniilrSYI>

Problems in the relationship related to:

- a failure of GBP to meet commitments, for example completing work related to investments in 3 livelihood interventions: production of fuel biscuits and hare breeding at Tawyagyi-Sheinmaga and the growing of loofahs at Myitkangyi
- a failure of senior staff to commit time to the project and participate in crucial project activities (owing to subsequent employment in Yrs 2 & 3 elsewhere with other international NGOs), especially relating to Tawyagyi-Sheinmaga – one of the project's initial nature tourism destinations and home to endangered Eld's deer.
- a refusal to help upgrade the environmental safeguards protocol (Annex 7.5b) in the light of the second annual review of the project
- a refusal to contribute to other project activities such as the Nature tourism (ecotourism) website <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/>
- a refusal to contribute a scientific paper on dolphin conservation on the Ayeyarwady River
- a failure to complete technical formalities with CEPF (Critical Ecosystems Partnership Fund) for obtaining a \$20,000 grant for a project entitled '*Conservation of Sheinmaga-Tawyagyi and adjacent Irrawaddy River Dolphin Protected Area*' (Annex 7.5c). This had been provisionally awarded to GBP, following close collaboration with the Harrison Institute in the writing and submitting of the proposal (a considerable amount of work). Sadly, GBP did not take up the award and the money was lost. This CEPF project would have complemented and added considerably to the outcomes of the Darwin project in Tawyagyi-Sheinmaga.

This was an initially promising relationship that turned into a challenging and ultimately disappointing one, which impacted negatively on the biodiversity conservation aspect of the project, particularly since it necessitated that the proposed conservation of the Tawyagyi Wildlife Sanctuary and its Eld's deer to be omitted from the final project. GBP was not involved in the writing of this final report and no future collaboration is anticipated.

**iv: Myanmar Bird and Nature Society (MBNS)** who identified the need for more ecotourism/bird specialist guides to support an expansion of ecotourism/ nature tourism in Myanmar. This partnership has developed strongly, such that:

- MBNS organised and led a two month training course for 31 ecotourist/bird watching guides in Year 1 and a one month course for 22 ecotourist/bird watching guides in Year 2, plus a shorter course for 17 individuals in Year 2 (Annex 7.6)
- MBNS with the support of the Harrison Institute successfully applied to CEPF for \$20,000 additional funding for conservation work on wetlands adjacent to the Ayeyarwady River – project entitled '*Identifying priorities for wetland conservation in the Dry Zone, Upper Myanmar*' (Annex 7.7)
- MBNS jointly developed with the Harrison Institute the MBNS website <http://www.myanmarbirdnaturesociety.com/>

MBNS provided data for this final report. There is on-going collaboration with the Harrison Institute on a range of projects including (i) those relating to bird surveys in and around the Ayeyarwady River and (ii) the development of a new Masters curriculum for environmental protection in 4 Myanmar universities. This is a one million euro project whose funding proposal has been submitted to the EU by project principal investigator, Dr Swen Renner of BOKU, Vienna (Annex 7.8, Fig. 11).

**v: University of Mandalay (UM):** The partnership with UM has developed strongly such that UM:

- participated in field visits to the new destinations and worked extensively on building trust between the village communities of Hsith and Myitkangyi and the project team (Annex 7.8, Figs. 1-3)
- co-organised with the Harrison Institute and other international scientists in Years 1-3 (all funded by a variety of external grants):
  - a 5 day workshop on bat conservation (Annex 7.8, Fig. 4)
  - a 10 day training workshop on field and laboratory techniques for studying birds, bats and rodents (Annex 7.8, Figs 5 & 6)

- a 3 day bird workshop (Annex 7.8, Figs. 7 & 8)
- a 7 day training workshop on rodent research at the University of Mandalay (Annex 7.8, Figs 9 & 10)
- a 3 day workshop for the submission of a one million euro grant application to the EU's Erasmus MUNDUS II programme for upgrading the curriculum in the environmental sciences at 4 Myanmar universities (Annex 7.8, Fig. 11).

**vi: Union of Myanmar Tourism Association (UMTA) and Myanmar Tourism Federation (MTF):** The partnerships with UMTA and, MTF developed strongly such that:

- the project team worked with MTF to develop a national ecotourism/nature tourism website for Myanmar (Annex 7.9, Figs. 1 and 2 and <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/>). This website is currently being tested and corrected before final publication.

**vii: GeoDiscover Travel:** The project team worked extensively with Ms Hnin Witt Yee of GeoDiscover Travel:

- to develop a sustainable and culturally sensitive management system for visitors to the new destinations - <https://www.destination-ayeyarwady.com/contact>
- to promote the two new destinations to Myanmar/international travel agents and boat operators. This involved extensive meetings with 66 travel companies in Yangon (Annex 7.10a, Figs. 1 to 9 and Annex 7.10b) with follow-up calls and emails and resulted in:
  - inspection visits by 50 staff from 12 travel agents (see above)
  - positive feedback from travel agents following inspection visits (Annex 7.10, Fig. 10)
  - 148 tourists visiting the two new destinations (see above)
  - positive feedback from tourists following their visits (Annex 7.10, Fig. 10).

There is on-going dialogue between GeoDiscover Travel, the village communities, travel agents and the Harrison Institute as we continue to support our Myanmar team who are promoting the destinations to the tour companies, arranging the visits and supporting the villagers. Ms Hnin Witt Yee continues to promote and support the destinations.

### 3 Project Achievements

#### 3.1 Outputs

**Output 1: Environmental safeguards to conserve biodiversity in the Upper Ayeyarwady River Corridor (Mandalay to Kyaukmyaung Sector), understood, agreed and implemented.**

The project achieved some, but not all, of its objectives for Output 1.

It successfully achieved Indicator 1, namely:

- the training of boat crews, tour guides, members of Inland Water Authority and Department of Fisheries in sustainable management of the environment. *Baseline 0 individuals trained; Target 60; Achieved 112 (62 individuals in a workshop in December, 2014; 50 individuals in a workshop in April, 2015)* (Annex 7.5a).
- production of a booklet on environmental issues relating to the Irrawaddy River Dolphin Protected area, published in English and Myanmar (*Baseline 0; Target 0; Achieved 1*) and protocol, published in English and Myanmar, for interacting with Irrawaddy River dolphins – widely circulated and available online <https://www.destination-ayeyarwady.com/conservation> (*Baseline 0, Target 1; Achieved 1*) (Annex 7.5b)

It successfully achieved Indicator 2, namely:

- The education of children and adults from the two new destination villages in the importance of waste management and other environmental issues relating to rural life, including fishing and farming (*Baseline 0; Target 945; Achieved approx. 1000*). The programme involved:
  - reinforcing of message about waste management through the local schools and through the head of the village/head of the fishermen
  - appointing 2 villagers as part-time cleaners

- o practical workshop in Hsithe village (30 October, 2016) – approx. 60 children <https://www.destination-ayeyarwady.com/conservation>
- o formal workshop in Hsithe village (9 February, 2017) – approx. 700 children and adults (Annex 7.3, Figs. 2 & 3)
- o formal workshop in Myitkangyi village (9 March, 2017) – approx. 300 children and adults (Annex 7.3, Figs. 1 and 7 to 11)
- o co-developing with the villager committees of Hsithe and Myitkangyi a management plan for each village written in Myanmar and English language (Annex 7.11) for Hsithe: [https://docs.wixstatic.com/uqd/cec980\\_8335d0e59a72440789d05ffbbb184ce6.pdf](https://docs.wixstatic.com/uqd/cec980_8335d0e59a72440789d05ffbbb184ce6.pdf) ; [https://docs.wixstatic.com/uqd/cec980\\_39796fb339f7476bae81d9555465d5ff.pdf](https://docs.wixstatic.com/uqd/cec980_39796fb339f7476bae81d9555465d5ff.pdf) for Myitkangyi: [https://docs.wixstatic.com/uqd/cec980\\_57cbd2d1478c4987a8883c67d8daa978.pdf](https://docs.wixstatic.com/uqd/cec980_57cbd2d1478c4987a8883c67d8daa978.pdf) ; [https://docs.wixstatic.com/uqd/cec980\\_0132e2e2756e4b458e8afa913e3efaf1.pdf](https://docs.wixstatic.com/uqd/cec980_0132e2e2756e4b458e8afa913e3efaf1.pdf)

It failed to achieve Indicators 3 and 4, namely:

- The setting up of social media systems to be used by international visitors to report regularly on environmental behaviour on the Ayeyarwady River (*Baseline 0, Target >4, Achieved 0*) and number of wildlife sightings submitted by tourists to the data logging system on the project website (*Baseline 0; Target 50; Achieved 15* – however, all but 2 of these were by project staff; in addition, project staff also included further sightings on the Harrison Institute Facebook page).

This is disappointing since binoculars, wildlife/bird identification charts and reporting forms were distributed to all visitors to the new destinations for use on the river journey to and from the destinations. The charts were a similar style to those used the Sam Veasna Organisation in Cambodia (Annex 7.19, Figs 4 & 5). We have reports from the boatmen and photographic evidence that visitors used the binoculars but only 2 reports were submitted <https://www.destination-ayeyarwady.com/wildlife>. With only 5 months of visitors regularly visiting the destinations it has not been possible to revisit this aspect of the project and determine why visitors are so reluctant to contribute sightings. The reporting process – ticking boxes on the form (with an attached pencil), which was supplied to the tourists in the boats was very simple and straight forward. We suspect therefore that either the visitors were not interested or did not feel qualified to identify different species. We had recognised this risk from the outset in the Logframe under Output 1, Assumptions 3 and 4.

## **Output 2 Two new destinations for river boats developed with equitable sharing of economic benefits, enhanced social safeguards and improved social provision**

The project over-achieved in all of its objectives for Output 2.

It successfully achieved Indicator 1, namely:

- Tourism Assessment Processes (TAPs) have been written for the two destinations (Hsithe and Myitkangyi) and are available online, for example [http://media.wix.com/uqd/cec980\\_17a3e3072fb3405889b544cab76baf5b.pdf](http://media.wix.com/uqd/cec980_17a3e3072fb3405889b544cab76baf5b.pdf) (Annex 7.12). (*Baseline 0; Target 2; Achieved 2*).
- The number and scope of livelihood interventions greatly exceed that originally envisaged (*Baseline 0; Target >5; Achieved 27*) (Annex 7.13a). This has ensured that currently visitor spend going directly to the community) is between 29,400 and 55,000 kyats (\$26.73 - \$50.00) per person with an additional average 16,000 Kyats (\$14.55) for handicrafts (Annex 7.14)
- The proportion of women to men directly involved in project in each of the activities is 56.2% (♀) and 43.8% (♂) (Annex 7.13a).

## **Output 3: Enhanced capacity in human resources to facilitate and develop responsible tourism.**

The project has achieved all its objectives for Output 3.

It successfully achieved Indicator 1, namely:

- The training of ecotourist/bird guides (*Baseline 0; Target 18; Achieved 72*) – for details see (Annex 7.6). In total 33 females and 39 males were trained. However, more males (38♂ as compared to 17♀) joined the two long courses (with a duration of one and two months respectively) and more females joined the short 3 day course (16♀ as compared to 1♂). This was by preference of the applicants.
- The Nature Tourism (Ecotourism) in Myanmar website <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/> is currently being developed in collaboration with the Myanmar Tourism Federation (MTF), MBNS and University of Mandalay. A draft of the website is available and is being reviewed by project partners, prior to completion. We are currently sounding out the possibility that the Minister of Hotels and Tourism would agree to contribute a short forward to the home page. It will be an open access site and it is anticipated that it will be launched on 1 September, 2017. It is the first such comprehensive guide for Myanmar and provides detailed information on opportunities for:
  - bird watching - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/bird-watching>
  - trekking - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/trekking>
  - cycling - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/cycling>
  - dolphins and the Ayeyarwady River <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/dolphins-and-ayeyarwady-river>
  - horse riding - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/horse-riding>
  - diving/sailing/kayaking - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/diving-sailing-kayaking>
  - climbing - <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/climbing>

### 3.2 Outcome

The project achieved most, but not all, of the Outcome.

It successfully achieved Indicator 1, namely: The number of additional poor, rural, riverine villages serving as new tourist destinations (*Baseline 0; Target 2; Achieved 2*).

- Extensive information is provided about both destinations on the project website <https://www.destination-ayeyarwady.com/> and in Annexes 7.1, 7.2, 7.3 and 7.13 (amongst others)
- Information about the destinations
  - features on a range of tourist agency websites and is included in TripAdvisor and Lonely Planet <https://www.destination-ayeyarwady.com/>. In the future, it will also feature in the German tour guide book *Stefan Loose* (Annex 7.15).
  - is published in Myanmar newspapers, for example The Daily Voice (Annex 7.15)
- The development of Hsithe and Myitkangyi provides a successful blueprint for the Ministry of Hotels and Tourism for destination development and meets objectives outlined in the Community Involvement in Tourism document, published by the Ministry (see especially page 8 in <http://www.harrison-institute.org/Community%20Involvement%20Tourism%20in%20Myanmar.pdf>).
- A presentation about the development of the 2 new destinations was given to the Minister of Hotels and Tourism who subsequently:
  - gave permission for the implementation of a possible Phase 2 development at the destinations – the provision of ‘bed and breakfast’
  - ensured that the project received a donation of \$5,000 to kick-start this potential Phase 2 (Annex 7.4).

It achieved part one of Indicator 2, namely: The number of people benefiting in Hsithe and Myitkangyi.

Direct benefit: *Baseline 0, Target 300 [15 interventions x20 average number of people involved in each intervention]; Achieved 27 interventions at Hsithe/ 23 Interventions at Myitkangyi, which provided 283 part-time/needs-based employment opportunities in both villages.*

- Photographic evidence is provided on the website <https://www.destination-ayeyarwady.com/> and Annex 7.13b of villagers providing services to tourists.
- A list of services and the number of individuals providing them is provided in Annex 7.13a
- The 2 local managers (in Hsithe and Myitkangyi respectively) have detailed cash books that record all financial transactions relating to the project, including those benefiting from the project (Annex 7.13b, Fig. 3).

Part two of Indicator 2 was difficult to assess, namely:

Indirect benefit: *Baseline 0, Target 1575 [combined population of villages x 50% - proportion of total village population indirectly linked to the project]; Achieved 1575?*

- We believe we achieved this target, although it proved difficult to assess whether individuals who were not directly involved in the project were positively impacted by the project. However, we believe we achieved the target since
  - most of those involved in the project had extended families living within the villages with whom they shared their income
  - there was a movement of money through the community to local grocery and hardware shops, tea shops, farmers, tailors, barbers, individuals providing tuitions to children and those employed by ferries; also monasteries would benefit from larger donations given by the villagers and they in turn would be able to help those in difficulty with more support
  - the project invested heavily in the villages, employing local villagers to undertake all activities relating to the project such as carpentry, maintenance, flood defences, new livelihoods, ferry services for project staff and tourists and a range of other services.

However, in retrospect, we would not select such an indicator since without extremely detailed and lengthy surveys it is impossible to determine with great accuracy this indirect impact. The problems of assessing the impact was not addressed in the assumptions.

It successfully achieved Indicator 3, namely: Economic benefit to the community (rural and Mandalay) of additional tourist footfall/ticket sales on river boats as a result of visiting the two new destinations. *Baseline 0; Target: \$3,000; Achieved: \$4140*

- The project received 198 paying visitors – the vast majority in Year 3, following the opening of Hsithe on 1 November, 2016 and Myitkangyi on 30 November, 2016. Of these, 148 were tourists from 12 travel agencies. One hundred and one came for day trips and 97 by cruise boat. In addition, 50 individuals from 12 agencies came on inspection trips (these individuals also paid for their visits since they utilised villagers' time and resources) (Annex 7.1).
- In order to minimise disturbance, and potential social and cultural problems, the aim of the project was to maximise income from each visitor rather than maximise visitor numbers. All visits had to be pre-booked with only one tour per village permitted for each day. All visitors had to pay an entrance fee, pay for at least one activity and were encouraged to take lunch at the visitor centres.
- Currently, for day visitors, average spend directly in the village (for services, lunch, local river transport, guiding) is between 29,400 and 55,000 Kyats/person (\$26.73 - \$50.00/person depending on the number of visitors in the party). In addition, visitors spend on average about 16,000 kyats (\$14.55) on handicrafts (Annex 7.14). All this money stays in the village, where it is split between the individual(s) providing the service (50%), the community fund (20%), dolphin conservation (20%) and local management (10%) <https://www.destination-ayeyarwady.com/contact>.
- For those arriving by cruise boat average spend is less, 18,000 Kyat (\$16.37) per visitor.

Economic benefit to the communities from funds directly invested into the 2 new destinations (*Baseline 0; Target \$12,000; Achieved \$33,973*).

- In Years 1 to 3, the project directly invested 37,370,300 Kyat (\$33,973) within the 2 new destinations.
- In the development stage, project personnel paid for all services provided by the community – food, ferry services, gardening, local management of the project, materials for workshops, carpentry, weaving, and materials for building. This ensured that the local community also benefitted from the project in Years 1 and 2 prior to the official opening of the destinations in November, 2016. Detailed accounts of all monies spent in the village are available.

Indicator 4. In Year 1 income from all sources excluding subsistence agriculture and fishing was approximately 275,000 Kyats (\$250) per working adult, males and females approximately equal. For those directly involved in the project, turnover increased by \$38,113 (\$4,140 + \$33,973). With 283 employment opportunities, this approximates to \$134.67 (148,137 Kyats) per working individual, which is an average increase of 53.9% per person. However, there was considerable variation in income received with some, such as the visitor centre managers, working almost full time, whilst others, for example those in loofah production, played a much smaller role.

Unfortunately the project failed to achieve Indicator 5, namely:

The number of Irrawaddy River dolphins found dead each year in the Mandalay-Kyaukmyaung sector. *Baseline: 1.3 deaths/year (comprising 13 deaths for the period 2005-2014); Target: 1.08 deaths (20% reduction); Achieved: 3.0 deaths (3 in year 2016 – compared to 2 in year 2014 and 4 in year 2015)* (Annex 7.16).

During the project, positive measures to promote dolphin conservation included:

- in Year 1, bringing together at a workshop within the international conference ‘*Tourism on the Upper Ayeyarwady: maximising the opportunities, minimising the risks*’ (held in Mandalay) all stakeholders relevant to Irrawaddy River dolphin conservation. These includes members of the local fishing communities, members of Myanmar national and local government, Myanmar and international scientists, members of NGOs [WCS, FFI], members of CSOs [GBP, MBNS], and the media. The workshop discussed future policy and actions to promote dolphin conservation (Annex 7.17).
- in Year 1, successfully undertaking a survey of the Ayeyarwady River (Mandalay to Bhamo Sector) to determine potential threats to dolphins and other wildlife and circulating this report [https://docs.wixstatic.com/uqd/cec980\\_742b9e4442da4b839ed0e1c3da39cc37.pdf](https://docs.wixstatic.com/uqd/cec980_742b9e4442da4b839ed0e1c3da39cc37.pdf) in Year 2. It is available at <https://www.destination-ayeyarwady.com/conservation> (Annex 7.18).
- in Year 1, undertaking a study visit to Kratie, Cambodia to learn lessons from this CRDT sponsored project about approaches to dolphin conservation <http://www.crdt.org.kh/irrawaddy-dolphin-conservation/> and (Annex 7.19) and incorporating these ideas into the environmental plans for nature tourism on the Ayeyarwady River
- in Years 1 and 2, based on outcomes of the Mandalay workshop (see above) successfully carrying out training workshops for 112 tour guides, boat crews and operators, members of the Inland Waterways and Department of Fisheries in how to observe wildlife (especially dolphins) without causing distress and how to look after the river environment (Annex 7.5a)
- in Years 1 to 3, raising the profile of dolphin conservation with all aspects of Myanmar society – including the government, local Ayeyarwady River communities, tourists and the Myanmar tourism industry, and the media (see above for a range of examples).
- in Year 3, offering an alternative to dolphin watching cruises, which potentially disturb the dolphin. Our project promoted the cultural interest of observing and interacting with the fishing community that has traditionally fished cooperatively with dolphins rather than observing the dolphins *per se* <https://www.destination-ayeyarwady.com/> and <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/dolphins-and-ayeyarwady-river>

- in Years 1 to 3, raising the profile of the dolphins (with government, local communities, travel industry) as a species that if conserved will provide long term income for riverine communities through nature/eco- tourism (Annexes 7.3, 7.4, 7.5a, & 7.17)
- in Year 3, raising funds from tourists visiting the 2 new destinations to fund future dolphin patrols by the fishermen and women. 20% of all income generated by the project is devoted to village-led, dolphin conservation <https://www.destination-ayeyarwady.com/contact>

Unfortunately, this in itself has not yet reduced the number of dolphin deaths, which appear to be rising in number and are caused by a combination of factors which will require longer term action, including:

- control of electric fishing – currently existing laws are not enforced for fear of violent reprisals on local communities who report the electro-fishing activities and the police who seek to arrest them (Annex 7.20).
- pollution and increased sedimentation – most of which originates from illegal mining and forestry operations in Kachin State in the upper reaches of the Ayeyarwady River, above Bhamo and is already adversely affecting bird populations <https://www.pressreader.com/myanmar/the-myanmar-times/20170222/281517930887464>

However, the project has shown the Myanmar government the importance of the dolphin as a unique, endemic species that attracts many tourists to the Ayeyarwady region and that is frequently reported on in the media. This is an important strategy to try and encourage the authorities to increase resources for enforcing laws on electric fishing. This may be successful if there is also external, international pressure from conservationists and the tourism industry.

We partly achieved part one of Indicator 6, namely:

The project team gathered baseline data on the numbers, diversity, and seasonality of the bird fauna and recorded dolphin sightings within the Irrawaddy Dolphin Protected Area (*Baseline 0; Target >30; Achieved 15*)

- however, we failed to interest the visiting tourists to complete record sheets for wildlife sightings, despite providing binoculars, user-friendly species identification charts, and simple tick-box sheets (with pencils attached) for recording sightings <https://www.destination-ayeyarwady.com/wildlife>.

We partly achieved part two of Indicator 6, namely

Number of international publications reporting on wildlife/environmental threats in the Ayeyarwady River (*Baseline 0; Target 1, Achieved 2 reports*).

- The project produced:
  - one detailed report on environmental threats in the Ayeyarwady River (Mandalay to Bhamo sector) [https://docs.wixstatic.com/uqd/cec980\\_742b9e4442da4b839ed0e1c3da39cc37.pdf](https://docs.wixstatic.com/uqd/cec980_742b9e4442da4b839ed0e1c3da39cc37.pdf) and Annex 7.18
  - one report on the wildlife of the Ayeyarwady River (Mandalay to Bhamo sector) [https://docs.wixstatic.com/uqd/cec980\\_4f49aa7dba26429eb715faddc822cb9c.pdf](https://docs.wixstatic.com/uqd/cec980_4f49aa7dba26429eb715faddc822cb9c.pdf) and Annex 7.18
- In addition we also produced:
  - one report on the local culture of the Ayeyarwady River (Mandalay to Bhamo sector) [https://docs.wixstatic.com/uqd/cec980\\_8ad6ef7bf2cf42708e1ba4aed4fdf949.pdf](https://docs.wixstatic.com/uqd/cec980_8ad6ef7bf2cf42708e1ba4aed4fdf949.pdf) and Annex 7.18
- All are freely available online and have been circulated widely both within Myanmar and internationally but are not, as yet, published in an international, peer-reviewed, journal. This research was co-funded by CEPF (Critical Ecosystem Partnership Fund).

### 3.3 Impact: achievement of positive impact on biodiversity and poverty alleviation

**Impact:** *To develop long-term partnerships and promote good practice, ensuring that the projected growth of international tourists visiting Myanmar supports equitable, sustainable development and contributes to environmental protection and biodiversity conservation.*

The project met the objectives of the impact statement.

Namely, it successfully developed:

- partnerships in order to develop responsible tourism on the Ayeyarwady River (Mandalay to Kyaukmyaung sector) that will contribute in a sustainable way to poverty alleviation in two new destinations (Hsithé and Myitkangyi) and biodiversity conservation, especially of the Irrawaddy River dolphin. These partnerships involved:
  - the two local village communities (Hsithé and Myitkangyi) who have traditionally fished cooperatively with river dolphins
  - central government, especially the Ministry of Hotels and Tourism and the Department of Fisheries
  - local government of Mandalay and Sagaing Divisions
  - local authorities, especially the Inland Water Authorities and tourism police
  - local tour guides, especially the MandalayTour Guides Association and cruise boat operators and crew
  - Myanmar tourism bodies, especially the UMTA (Union of Myanmar Tourism Authority) and MTF (Myanmar Tourism Federation)
  - Myanmar/international travel agencies (12 already sending clients to the destinations)
  - local conservation NGOs and CSOs
  - the Myanmar university sector.
- good practice (including protocols, guidelines and management plans) to support equitable, sustainable development in the two new destinations (Hsithé and Myitkangyi) by:
  - working closely with the tourism industry to ensure that the local communities will continue to benefit from tourism whilst minimising the potential negative effects of hosting large numbers of visitors <https://www.destination-ayeyarwady.com/contact>
  - working closely with the local communities, including through 68 training workshops and jointly developing management plans that provide long term guidance on working with national/international tourists (Annex 7.3)
  - working closely with tour guides and boat operators and crew (including drawing up guidelines) that will help minimise the impact of river tourism on wildlife, especially conservation-dependent species (Annex 7.5b)
  - explaining the project's philosophy of responsible tourism to senior members of central and local government and local authorities (Annexes 7.4 & 7.17).

All of these activities when taken together successfully ensure that:

- there is sufficient local capacity in the two new destinations to support
  - long term sustainable tourism that contributes to poverty alleviation amongst the rural poor
  - enhanced locally-led environmental protection, especially relating to waste management and pollution
  - enhanced biodiversity conservation of rare and critically endangered species, especially the Irrawaddy River dolphin
- a greater understanding amongst government, local authorities, tourism authorities, travel agents about the positive role tourism can play in promoting sustainable economic development in previously poor, rural areas, whilst at the same time supporting the conservation of natural and cultural heritage and providing excellent visitor experience.
- **Contribution did your project make to human development (poverty alleviation) and wellbeing?**

The project contributed directly to:

- economic development through directly investing \$33,973 in the two destinations (Hsithé and Myitkangyi) in Years 1 to 3, (including developing the visitor centres, training workshops, local transport, and flood amelioration)
- future, on-going economic development at Hsithé and Myitkangyi through developing human resources and infrastructure that have sufficient capacity to host visiting tourists

- so far 148 tourists and 50 individuals on inspection trips have been successfully hosted. For visitor spend see Annex 7.14.
- economic development by promoting 27 different livelihood interventions (Annex 7.13)
- indirect economic development of Mandalay and surrounding area for example through car hire to reach Kanpyu and Singu (the jetty points for the final boat journey to Myitkangyi and Hsithe - <https://www.destination-ayeyarwady.com/visiting> ), through joining river cruises
- alternative livelihoods – the project provides incomes that are independent of resource-based activities such as agriculture and fishing that can be adversely affected by one-off extreme weather events (some associated with climate change), disease and pests, and external issues such as upstream pollution and sedimentation. Handicrafts for example are now in the process of being sold not just within the two villages but also at other locations in Myanmar including Mandalay and Inle Lake (Shan State) and also potentially on cruise boats and online
- gender equity – in Year 1, initial meetings with the villagers involved mostly fishermen; by Year 3, the managers were one male and one female respectively and the supporting committees were gender equitable whilst those involved in livelihood interventions (ie earning money directly from the project) has a predominance (56.2%) of females. (Annex 7.13a)
- enhanced education for both children and adults, especially on environmental issues. This was achieved both directly – through workshops and training days – and indirectly through school lessons and assemblies that reinforced the message – education materials included formal talks but also singing, drawing, games and practical activities relating to waste management (Annex 7.3, Figs. 1 to 11) and <https://www.destination-ayeyarwady.com/conservation>
- skills development – in both soft, transferable skills (such as team work, time-keeping, hosting and interacting with foreigners and professionalism [to meet high standards required by foreign visitors] and hard skills (management and book keeping, new handicrafts, catering and food hygiene, gardening, building and design, designing and implementing flood defences and waste management). In the rapidly expanding economy of Myanmar, these skills are transferable and are not only relevant to the project but will assist the villagers in maximising their opportunities for employment and social advance both within and outside the project area. Furthermore, these skills are already being transferred within the villages. For instance in Hsithe, mothers are already teaching their daughters (and in Myitkangyi daughters are teaching friends) how to make exciting designs in bags made from recycled material, which are sold in the visitor centres and elsewhere and which are popular with tourists
- developing innovation – increasingly, villagers themselves are coming up with new ideas and new innovative designs for handicrafts – initially all new ideas for handicrafts were supplied by the Darwin project team (many transferred from handicrafts observed in Cambodia), so this is a noticeable transition
- increase in civic pride – there is a noticeable increase in civic pride amongst those villagers most involved in the project. This is reflected in their attitude to the visitor centres (for example in keeping the toilets spotlessly clean, preparing handicrafts in the shop for visitors, tending the gardens, watering the plants, clearing litter, reporting of any problems [by mobile phone to in-country staff], and undertaking repairs)
- increased confidence and broader outlook – the presence of Darwin project staff and foreign visitors within the villages has contributed to greater confidence amongst the villagers. Villagers who were once shy are now confident and outward going. This will be positive for children, who will have a greater understanding of wider cultures and social systems, and for women, who now travel to Mandalay (for example) for training - previously it was mostly (although not exclusively) men who travelled outside the village
- care of the vulnerable – the project supported those in need – so for example when three children were orphaned by the death of their fisherman father (their mother had died previously), the older boy (aged 18) was employed as part-time gardener and tour guide by the visitor centre in Hsithe.

## 4 Contribution to Darwin Initiative Programme Objectives

### 4.1 Contribution to Global Goals for Sustainable Development (SDGs)

The project is relevant to the following 9 SDGs by:

- 1.2: reducing the proportion of men, women and children of all ages living in poverty (Outcome, Indicators 2, 3 & 4)
- 1.5: helping to build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events (Output 2, Indicators 2 & 3) – developing alternative incomes from handicrafts and tourism reduces reliance on agriculture, which can be catastrophically affected by one-off extreme weather events, for example drought or flooding. It also reduces reliance on fishing, which is experiencing a marked fall in fish stocks within the river.
- 5.5: ensuring women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life – currently one of the two village managers is female; the village project committees in both destinations are gender equitable; and there is a bias towards women in the participation in new livelihood interventions (Output 2, Indicator 3)
- 8.3: promoting development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial service (Outcome, Indicator 2; Output 2, Indicator 2; Output 3, Indicator 1)
- 8.4: helping to achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value (Output 2, Indicators 2 & 3) – the project is also support individuals with particular hardships – for example employing a young man (aged 18) as a part-time gardener and tour guide who can support the education of his younger sister.
- 10.1: progressively achieving and sustaining income growth of the bottom 40 per cent of the population at a rate higher than the national average (Output 2, Indicator 2) (Outcome, Indicators 3 & 4; Output 2, Indicators 2 & 3)
- 12.5: substantially reducing waste generation through prevention, reduction, recycling and reuse (Output 1, Indicators 1 & 2)
- 13.1: strengthening resilience and adaptive capacity to climate-related hazards and natural disasters (Outcome, Indicator 1) – see 1.5 above.
- 15.5: taking urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species (Outcome 1, Indicators 5 & 6)
- 17.9: enhancing international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation (Outcome and all Outputs). The project specifically responds to the Myanmar government’s *Tourism Master Plan (2013-2020)* and the *CIT (Community Involvement in Tourism) Master Plan 2014*.

### 4.2 Project support to the Conventions or Treaties (CBD, CMS, CITES, Nagoya Protocol, ITPGRFA)

The project supports Myanmar in meeting its objectives under the CBD in relation to:

- Article 7: identification and monitoring - especially the critically endangered Irrawaddy dolphin (*Orcaella brevirostris*), endemic birds, and water birds within the Ayeyarwady

River Corridor (Mandalay to Kyaukmyaung sector) (Outcome Indicator 5; Output 1 Indicator 4).

- Article 8: in situ conservation – especially the critically endangered Irrawaddy dolphin; endemic birds, and water birds (Outcome Indicator 5 & 6; Output 1 Indicators 1, 2, 3, & 4)
- Article 10: sustainable use of components of biological diversity – especially education about sustainable fishing methods, including the enforcement of laws against electric fishing and environmental pollution (Output 1 Indicators 1 & 2)
- Article 11: incentive measures – especially in relation to the economic development of destinations and livelihoods that support directly and indirectly the conservation of the critically endangered (Irrawaddy dolphin) species; endemic birds, and water birds (Output 1 Indicators 1 & 2)
- Article 12: research and training – the project facilitates and supports programmes for education in the University of Mandalay and CSOs and technical education of ecotourism guides in measures for the identification, conservation and sustainable use of biological diversity (Output 3 Indicator 1)
- Article 17: exchange of information – between diverse stakeholders including local communities, government, business, NGOs, CSOs, the tertiary education sector (Output 1 Indicators 1, 3 & 4).

The project also supports the rationale, vision, mission, and goals B, C, and E of the CBD's Biological Diversity Plan 2011-2020 <http://www.cbd.int/sp/elements/> including that:

- biological diversity underpins local livelihoods and economic development, and is essential for the achievement of the Millennium Development Goals, including poverty reduction (Output 1 Indicator 1)
- pressures on biodiversity are reduced and benefits arising are shared in a fair and equitable manner (Output 1 Indicator 1)
- decision making is based on sound science and the precautionary approach (Output 1 Indicator 1, 3 & 4).

It addresses specifically nine 'Aichi Biodiversity Targets' namely: 1/2/5/8/11/12/14/18 and 19 <http://www.cbd.int/nbsap/training/quick-guides/>, which cover diverse issues such as raising awareness; water pollution; prevention of extinction; and respect of traditional knowledge.

### **4.3 Project support to poverty alleviation**

Please see section 3.3.

### **4.4 Gender equality**

The project was designed with a strict gender equality focus, which complied with the International Development (Gender Equality) Act. M&E was designed to be sufficiently robust to capture gender-specific disaggregated data. Outputs that supported gender equality included:

- equal representation of men and women on the village steering committees of the project in both Hsithe and Myitkangyi
- one female village managers, supported by male assistant manager in Hsithe village and male manager, supported by a female assistant manager at Myitkangyi village (Annex 7.11)
- 68 training workshops in the villages with female (70%) and male (30%) participation

- 27 different livelihood interventions with female (56.2%) and male (43.8%) participation Output 2, Indicators 1, 2, and 3 (Annex 7.13).
- environmental workshops for village school children with approximately 50%-50% gender balance (Output 1, Indicator 2) (Annex 7.3)
- training of 112 tour guides, staff of the Inland Water Authority, and Department of Fisheries with female (56%) and male (44%) participation (Output 1, Indicator 1) (Annex 7.5)
- long training courses in ecotourism/bird identification for 53 tour guides for females (30%) and males (70%) (Output 3, Indicator 1) (Annex 7.6)
- short training courses in ecotourism/bird identification for 17 tour guides for females (94%) and males (6%)(Output 3, Indicator 1) (Annex 7.6)
- female Myanmar project staff member, Ms Hnin Witt Yee, selected by Minister of Hotels and Tourism to represent Myanmar and the project at a 'Regional workshop on Methods and Strategies for Implementing Public Private Partnerships in the Tourism Sector for Cambodia-Laos-Myanmar-Viet Nam Plus Thailand' 3-5 May, 2017 in Laos (Annex 7.21).

#### 4.5 Programme indicators

- **Did the project lead to greater representation of local poor people in management structures of biodiversity?**

Yes. The fishing communities of Hsithe and Myitkangyi villages (where co-operative fishing with dolphins is a tradition):

- were included as local experts in international workshops on Irrawaddy River dolphin conservation and were equal in status to local/international NGOs and CSOs (Annex 7.17, Fig. 3 to 5).
- were included as local dolphin experts in training programmes (about dolphin conservation and the environment) for tour guides, Inland Water Authority staff, and Department of Fisheries staff (Annex 7.5a) .
- gave interviews to the media about dolphin conservation (Annex 7.17, Fig. 4) and participated in a series of TV documentaries, such as <https://www.youtube.com/watch?v=GCniiljrSYI>

- **Were any management plans for biodiversity developed?**

No formal management plans for biodiversity were developed, although data for such a plan were gathered and included in an open-access document – *Threats to Wildlife in the Upper Ayeyarwady River Corridor* (Annex 7.18)

- **Were these formally accepted?**

N.A.

- **Were they participatory in nature or were they 'top-down'? How well represented are the local poor including women, in any proposed management structures?**

N.A.

- **Were there any positive gains in household (HH) income as a result of this project?**

Yes, there were positive gains in HH income at the two poor, rural, riverine village communities (Hsithe and Myitkangyi)

- **How many HHs saw an increase in their HH income?**

283

- **How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?**

53.9% for 283 households. Input into village \$38,113 (comprising investment of \$33,973 + tourism turnover of \$4,140).  $\$38,113/283 \text{ households} = \$134.67$ . Average baseline income = \$250.

$\$134.67/\$250 = 53.86 = 53.9\%$

#### 4.6 Transfer of knowledge

The project transferred knowledge to practitioners and policy and decision makers:

- by the project hosting an international conference ‘*Tourism on the Upper Ayeyarwady: maximising the opportunities, minimising the risks*’ on 28 October, 2014 in Mandalay, which included representatives of National and local government, local authorities, international and national NGOs and CSOs, staff and students from Myanmar universities (zoology and tourism sectors), representatives of the two fishing communities, international scientists, members of UMTA [Union of Myanmar Tourism Association] and MTF [Myanmar Tourism Federation], representatives of cruise boat companies, and representatives of Myanmar travel agents (Annex 7.17).
- through project members U Hpone Thant, Ms Hnin Witt Yee, Beatrix Lanzinger, and Paul Bates maintaining on-going dialogue with senior representatives of UMTA [Union of Myanmar Tourism Association] and MTF [Myanmar Tourism Federation]
- by project members Paul Bates, Beatrix Lanzinger and Dr Thein Aung participating in the international conference ‘*On Ecotourism in Protected Areas, Myanmar*’, which took place in Nay Pyi Taw on 19-21 May, 2015 (Annex 7.22, Fig.2) and <https://www.pata.org/join-the-international-ecotourism-conference-in-nay-pyi-taw-myanmar/>
- by project member Paul Bates presenting results of Ayeyarwady River surveys, with particular reference to birds and the Irrawaddy River dolphin to an international audience of conservationists, funders, and decision makers at a CEPF (Critical Ecosystem Partnership Fund) workshop on 3-5 March, 2015 in Seim Reap, Cambodia
- by the project team presenting results of the project to the Minister of Hotels and Tourism and senior civil servants in Nay Pyi Taw on 13 February, 2017
- by project member U Hpone Thant presenting results to a workshop on Myanmar CBT (community-based tourism) that took place on 17 January, 2017 (Annex 7.22)
- by project member Ms Hnin Witt Yee presenting results of the project to senior decision makers and funders at a ‘*Regional workshop on Methods and Strategies for Implementing Public Private Partnerships in the Tourism Sector for Cambodia-Laos-Myanmar-Viet Nam Plus Thailand*’ 3-5 May, 2017 in Laos (Annex 7.21).
- through on-going dialogue with the Myanmar media, radio, TV and print (Annex 7.6, 7.17 and numerous other examples)
- through articles published by the IUCN, CEPF and Darwin Initiative (Annex 7.23).

#### Did the project result in any formal qualifications?

No

#### 4.7 Capacity building

Project staff member, Ms Hnin Witt Yee (♀) was selected to co-present a report on the project to the Minister of Hotels and Tourism in Nay Pyi Daw (13 February, 2017) and was subsequently selected by the Minister to be a representative of Myanmar at a ‘*Regional workshop on Methods and Strategies for Implementing Public Private Partnerships in the Tourism Sector for Cambodia-Laos-Myanmar-Viet Nam Plus Thailand*’ 3-5 May, 2017 in Laos (Annex 7.21)

Project staff member, Aung Toe Khaing (♂) was selected to co-present a report on the project to the Minister of Hotels and Tourism in Nay Pyi Daw (13 February, 2017).

Project staff member, Dr Thein Aung (♂) of MBNS (together with Dr [Ms] Thirida Wei Aung, ♀, MBNS volunteer), were awarded a \$20,000 grant for '*Identifying priorities for wetland conservation in the Dry Zone, Upper Myanmar*' by CEPF (Critical Ecosystem Partnership Fund) (Annex. 7.7). This is the first international grant awarded to MBNS (Myanmar Bird and Nature Society) and directly resulted from experience gained through working on the project.

Partly as a result of the Darwin project, staff member, Dr Thein Aung, ♂, of MBNS and Dr [Ms] Thirida Wei Aung, ♀, MBNS volunteer, together with Darwin project volunteer Dr Sai Sein Lin Oo, ♂, of the University of Mandalay were included in a 1 million euro application to the EU's Erasmus+ fund for a project to develop the curriculum in environmental protection in postgraduate higher education in four Myanmar universities (Annex 7.8, Fig. 11).

Former project staff member Aung Myo Chit, ♂, together with project volunteer Ms Su Hlaing, ♀, and Ko Phyo, ♂, were awarded a CEPF grant for a project entitled '*Conservation of Sheinmaga-Tawyagyi and adjacent Irrawaddy River Dolphin Protected Area*'. This was the first international grant awarded to GBP (Grow Back for Posterity) and directly resulted from experience gained through working on the project. Sadly, GBP did not take up the award and the money was lost.

## 5 Sustainability and Legacy

The two new destinations, Hsithe and Myitkangyi are achievements that are well-placed to endure since they have strong village management, good training, good infrastructure and resources and have been extensively marketed. They already have bookings for the 2017-2018 season, including, for example, two parties of 20 students from the Netherlands through Destination Asia (Annex 7.24).

Azure Sky Travel in conjunction with Bagan Flotilla Company is currently offering to tour agencies exclusive two-day, one night cruises to the destinations. In addition, there are many other enquiries and inspection tours planned, including bookings with Sunbird Travel and Azure Sky Travel.

Furthermore, UK and Myanmar-based Harrison Institute staff, together with Myanmar project staff from GeoDiscover Travel, are continuing to support these destinations, especially in relation to marketing and promotion with travel agents and cruise boat companies. Currently, they are also assisting with forthcoming bookings and general problem-solving. This is considered important for at least the next 12 months.

The Harrison Institute is currently searching for funds to instigate 'bed and breakfast' at the destinations (starting with Hsithe), which would considerably increase the income for the villagers from tourists. A \$5,000 seed money donation for this Phase 2 development was received, courtesy of the Union Minister of Hotels and Tourism, and we are now actively seeking matching funds. There have also been offers of support (including building materials) from in-country private donors.

A donation of £1,000 was recently made to the two schools of Myitkangyi by one British tourist who visited Myitkangyi village in January, 2017 (Annex 7.1)

Aspects of the project relating to the training of ecotourism/ bird watching guides (Annex 7.6) also have a bright future. In Myanmar, there is an acute shortage of guides competent in these skills. Good career prospects are reflected in the high daily wages that can be commanded, which range from \$100 to \$200/day for the best bird guides.

The ecotourism/ nature tourism website <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/> is the first of a much-needed media presence to promote Myanmar as an international nature tourism destination. With support from MTF (Myanmar Tourism Federation) and with an annual maintenance fee of \$700, it provides a great opportunity to show-case Myanmar's natural heritage and show to the Myanmar government and other decision makers the economic value of nature as well as its intrinsic value.

Currently, all project staff are all still involved in various aspects of the project, albeit at a reduced level. There is a long term commitment by the Harrison Institute to Myanmar, where it has been working for the past 18 years.

All resources (visitor centres, exhibits, equipment, toilets..) within the two destinations of Hsithe and Myitkangyi are the property of the village fishing committees.

## 6 Lessons learned

Most aspects of the project worked well. Particularly successful were:

- the developments of Hsithe and Myitkangyi as sustainable destinations for tourists interested in wildlife and Myanmar village culture
- training of ecotourism guides/bird guides
- the building of networks between a broad range of stakeholders in the public/private sectors
- marketing of the destinations to Myanmar and international travel agents – since the destinations meet an expanding need in the tourism market
- promoting future ecotourism/ nature tourism to Myanmar through a new website <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/> - and thereby contributing value to nature/wildlife in Myanmar
- involving villagers in numerous training days and workshops and especially in the environmental workshops and thereby enthusing them about promoting new livelihoods, outside agriculture and fishing, that offer new skills and new opportunities; also a greater understanding of protecting the environment.

The following aspects of the project did not work well:

- collaboration with one in-county CSO, 'Grow Back for Posterity'. The discipline needed for the rather structured, output/outcome-led approach of the Darwin Initiative is not really understood by some of our in-country CSO partners who have worked for many years in a much, freer more relaxed style of project work. This has led to some problems. In contrast, the villagers have responded positively to the 'drum-beat of the timeline' and have proved to be very flexible, inventive, professional and accommodating to new ideas and livelihoods.
- Other problems included
  - the accidental sinking of our study vessel the M.S. Hintha (whilst on other business). This restricted for some time our access to the destinations, where government policy prohibited us to undertake homestay.
  - the exceptional floods of 2016 also impacted adversely on the accessibility to one of the destinations, Myitkangyi (Annex 7.2, Figs 15-18)
  - exchange rate fluctuations, which saw a 26.5% reduction in GBP/\$ exchange rate between Year 1 (average of about \$1.70/ 1 GBP) and Year 3 (average of about \$1.25/ 1 GBP).

In hindsight (and we would recommend this to other projects), we would:

- draw-up a more detailed plan of roles and responsibilities for all project members, prior to the commencement of the project
- prioritise and focus on one destination rather than co-developing two village destinations at the same time
- build-in a greater margin within the budget for fluctuating exchange rates.

Key lessons learnt include:

- selecting realistic indicators. However, this requires the Darwin Initiative selection committee to also be realistic about what can be measured and what cannot, for

example in terms of trends in wildlife populations, where most cannot be assessed over a 3 year timeline (despite what anyone claims!!)

- an understanding that achieving many and varied indicators in the short term may not translate into long term sustainability. Day to day training and reinforcement of training is time-consuming and not glamorous in terms of indicators or immediate headlines but is the only way to ensure long term viability for most projects
- an understanding that logframes, indicators and timelines are excellent drivers of projects but so too is cultural sensitivity, which may require a more subtle use of timelines and objectives. Too stringent and formal logframes may also prohibit a project from adapting to changing circumstances and changing opportunities.

## **6.1 Monitoring and evaluation**

There have been no changes to the M&E plan. We measured progress/success of the project by ensuring that we:

- completed activities (as stated in the application) according to the timeline (as stated in the application)
- achieved targets for outputs and outcome indicators (as stated in the application or updated) according to the timeline (as stated in the application)

Comprehensive M&E evaluations were conducted by the senior staff of the collaborating organisations prior to submitting the half year and this annual report to Darwin Initiative. Each staff member was responsible for ensuring that particular activities were completed. The coordinator, Paul Bates, was responsible for ensuring that these activities contributed to the successful completion of the three outputs and that these in turn achieved the outcome. In particular, the reviews determined that:

- the activities progressed in line with the timetable
- the project accomplished, wherever possible, the pre-established indicators of outputs
- there were no negative or unexpected findings.

Although there was no formal external M&E, there was ongoing external input into the programme, especially from:

- the 63 travel agencies and boat operators that we contacted; they provided feedback from 50 individuals conducting 12 inspection tours and from the visits of their 148 customers on all aspects of the visitor experience, helping us to refine our training programme for the villagers and meet particular concerns about a range of issues, such as waste management, providing information, and tour guides
- international and Myanmar-based CBT/CIT (Community-based tourism/Community Involvement in Tourism) specialists based in Myanmar; discussions led to refining our approach within the two new destinations and learning from the positive and negative aspects of other similar projects.

## **6.2 Actions taken in response to annual report reviews**

All changes to the original Indicators in the Outcome and Outputs over the course of the project have been agreed with the Darwin Initiative.

It was not possible to restore any form of relationship with the local CSO, GBP (Grow Back for Posterity). Rather progress was much more focused, efficient and productive once a clean break had been established. All remaining project partners, including the local communities, worked together in harmony and with the clear aim of maximising the success of the project in all its aspects.

An environmental safeguards protocol was published in English and Myanmar for dolphin watching.

Management plans in English and Myanmar were drawn up and distributed in Hsith and Myitkangyi destinations

All options for wildlife monitoring were considered but sadly there was little input or interest from the visiting tourists in providing data to the project

Training has been extensive and reinforced on a regular basis, both through official training workshops and informal basis through constant support, encouragement and skills development.

### Have you discussed the reviews with your partners and other collaborators?

Project partners have limited interest and understanding of detailed reports written in English. When explained in general terms, partners have been very supportive.

## 7 Darwin identity

The Darwin Initiative is publicised (with links and/or logo):

- in all dealings with Myanmar central government and local government (Annexes 7.4 & 7.17)
- on the websites of
  - the project [www.destination-ayeyarwady.com](http://www.destination-ayeyarwady.com) facebook <https://www.facebook.com/pages/Harrison-Institute-Centre-for-Biodiversity-Research/193357067346886?fref=ts>
  - on tour company website - see credit at the bottom of the page of <http://www.diethelmtravel.com/Myanmar/Pages/ContentDetail.aspx?contentID=143&country=myanmar> and links on <http://www.ssttourism.com/destination-ayeyarwady/>
  - project partner <http://www.myanmarbirdnaturesociety.com/> and former partner <http://www.growbackposterity.com/>
  - other organisations – such as page 11 of <http://www.myanmar-responsiblebusiness.org/pdf/SWIA/Tourism/Tourism-SWIA-Myanmar-Linked-Initiatives.pdf>
- on the project leaflet (Annex 4.10, Fig. 10), which has been widely circulated both within the travel business (including 63 travel agents), trade organisations for tourism, and conservation organisations
- on all information boards and vinyls at the 2 new destinations (Annex 7.2) and <https://www.destination-ayeyarwady.com/copy-of-visitor-centres2>
- at all conferences, workshops and presentations (Annexes 7.17 and 7.22)
- labels on handicrafts – which are sewn into the bags and wallets and are attached to all other merchandise, these labels include the Darwin Initiative logo on the reverse side of the label (Annex 7.2, Fig. 8)
- on hats and t-shirts of participants and on vinyls and all training manuals in the training workshops (Annexes 7.5 and 7.6)
- in media reports both on MITV and in the printed format (Annex 7.6)
- on the new nature tourism/ecotourism website <http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/> .

## 8 Finance and administration

### 8.1 Project expenditure

Project spend (indicative) since last annual report	2016/17 Grant (£)	2016/17 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
<b>Note:</b> <b>PA = Project application</b> <b>BA = Budget amendment</b>				

<b>(BA approved on 06.09.2016)</b>				
Staff costs (Lead Organisation) (see below) <b>BA</b>			0.00	
Staff costs (Partner Organisations) (see below) <b>BA</b>			-9.3	
Overhead costs (Lead Organisation) <b>PA</b>			0.00	
Consultancy costs (Partner Organisations) <b>PA</b>			0.00	
Overhead costs (Partner Organisations) <b>PA</b>			0.00	
Travel and subsistence (Lead Organisation) <b>BA</b>			+9.2	
Travel and subsistence (Partner Organisations) <b>BA</b>			+3.6	
Operating Costs (Partner Organisations) <b>PA</b>			+7.8	
<b>TOTAL</b>	<b>79565.00</b>	<b>79565.00</b>	<b>0.00</b>	

<b>Staff employed (Name and position)</b>	<b>Cost (£)</b>
<b>LEAD ORGANISATION:</b>	
Paul Bates <b>PA</b>	
Nikky Hammond <b>BA (budget was 2000)</b>	
Beatrix Lanzinger <b>BA (budget was 2000)</b>	
Malcolm Pearch <b>PA</b>	
<b>TOTAL (Lead Organisation)</b>	
<b>PARTNER ORGANISATIONS:</b>	
Hpone Thant <b>PA</b>	
Kyaw Nein <b>BA (budget was 4000)</b>	
Thein Aung <b>PA</b>	
Aung Myo Chit <b>BA (budget was 5025)</b>	
Hnin Witt Yee <b>BA (no PA budget)</b>	
Aung Toe Khaing <b>BA (no PA budget)</b>	

<b>TOTAL (Partner Organisations)</b>	<b>13381.17</b>
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<b>Capital items – description</b>	<b>Capital items – cost (£)</b>
N/a	
<b>TOTAL</b>	<b>0.00</b>

<b>Other items – description</b>	<b>Other items – cost (£)</b>
N/a	
<b>TOTAL</b>	<b>0.00</b>

## 8.2 Additional funds or in-kind contributions secured

<b>Source of funding for project lifetime</b>	<b>Total (£)</b>
Harrison Institute (additional salaries, overheads capital items)	
Partners (additional salaries, overheads)	
SEABCRU (training in biodiversity research techniques)	
Prince of Songkla University	
Rufford Foundation (training CSO and university staff and students in biodiversity research techniques)	
C.E.P.F. (surveys of threats to wildlife on Ayeyarwady River)	
<b>TOTAL</b>	<b>195,363.00</b>

<b>Source of funding for additional work after project lifetime</b>	<b>Total (£)</b>
Ministry of Hotels and Tourism (\$5000: received) – development of bed and breakfast at destinations	
EU Erasmus+ KA2 (1 million euros: proposal submitted) – proportion of travel to Myanmar, accommodation... and funds for research of fauna of Ayeyarwady corridor as part of training programmes	
CEPF (\$20,000: approved, awaiting release of money); project led by MBNS on wetland birds in areas adjacent to Mandalay and Ayeyarwady River	
Donation – in addition, a donation of £1000.00 was made by a UK visitor to Myitkangyi village for the purpose of buying books and	

stationary for 300 children at the two schools (see Appendix 7.1, Figs 7 to 9).	
<b>TOTAL</b>	<b>70,000.00</b>

### 8.3 Value for Money

We believe that the project offered excellent value for money for the Darwin Initiative, which at all times was portrayed as the lead funding agency. For every £1 invested by Darwin Initiative, the project found an additional 81.5 pence of co-funding such that the £239,795 project had a final budget of £435,158.

The project worked with a very small staff who were totally committed to achieving a positive outcome. Staff salaries from Darwin of £41,881 (Year 3) in no way reflect the hours of service provided by the staff, especially as in the field the 2 UK staff and one Myanmar Harrison Institute staff were often working for 10 to 14 hours each day, for 7 days a week, for long periods of a time with little or no rest.

The situation was further exacerbated in the final year owing to the poor £/\$ exchange rate, which meant that no additional staff could be hired.

The skills of the small, devoted staff ensured that many services could be provided in-house and at a very low cost (marketing, design of visitor centres, photography, design of labels and branding, handicrafts, skills for the 68 village workshops, and information boards) The project staff compiled and designed 4 websites of which only one, the Nature Tourism website had any outside involvement. Without such in-house, multi-tasking this project would not have been viable, without considerable extra funding.

## Annex 1 Project's original (or most recently approved) logframe, including indicators, means of verification and assumptions.

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

### Impact

To develop long-term partnerships and promote good practice, ensuring that the projected growth of international tourists visiting Myanmar supports equitable, sustainable development and contributes to environmental protection and biodiversity conservation.

### Outcome

To promote inclusive, equitable, sustainable tourism in upper Ayeyarwady River Corridor that supports biodiversity conservation and meets the challenges of, and benefits from, a projected three-fold increase in international tourism.

Indicator 1	<p>Number of <u>additional</u> poor, rural, riverine villages in upper Ayeyarwady River Corridor (Mandalay to Kyaukmyaung Sector) serving as:</p> <p>(1) new destinations for river-boats operating out of Mandalay</p> <p>(2) blueprints for sustainable destination development for the Ministry of Hotels and Tourism, Ministry of Forestry and Environmental Conservation and UMTA (Union of Myanmar Tourism Association).</p> <p>Baseline: 0*; Target: 2 (with a total population of 3150 villagers) in Yr3.</p> <p>*: currently there are three destinations [Inwa, Mingun, Kyaukmyaung], so with the two new destinations [Myitkangyi and Hsithe] this will increase the number to five.</p>
Indicator 2	<p>Number of people benefiting in Hsithe and Myitkangyi from the new destination development.</p> <p>Direct benefit: Baseline 0; Target: 300 people in Yr 3 (15 livelihood interventions [cafes, guiding, craft shops, vendors, transport, homestay*] x 20 [average number of people involved in each intervention]).</p>

	<p>Indirect benefit: Baseline: 0; Target in Yr3: 1575 (combined population of villages x 50% [proportion of total village population indirectly linked to project]).</p> <p>*: Ministry of Hotels and Tourism is currently reviewing its policy on homestay, which at present is not generally permitted in rural areas.</p>
Indicator 3	<p>Economic benefit to the community (rural and Mandalay) of additional tourist footfall/ticket sales on river boats in the Upper Ayeyarwady River Corridor as a result of:</p> <p>(1) enhanced visitor choice offered by the development of two new destinations<sup>i,ii</sup></p> <p>(2) publicising river cruises on the project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>) and on the website <a href="http://www.myanmar-ecotourism.org">www.myanmar-ecotourism.org</a> (currently under construction)</p> <p>Baseline: 0; Target: US\$3,000<sup>iii, iv</sup> per annum in Yr3 from tourist visits.</p> <p>Baseline: 0; Target: &gt;US\$12,000 by end of Yr 3 invested by the project in training and services in the two new destinations</p> <p>i: the three current destinations are becoming overcrowded and tour operators are asking for new destinations offering different attractions.</p> <p>ii: currently there are 18 'international' boats and 22 local boats operating out of Mandalay with an average crew size of 7; additional boats are currently being renovated and new boats commissioned.</p> <p>iii: ticket income (average \$30/person/day trip) is spent (<i>inter alia</i>) on (1) crew wages (typically \$12,600 per boat based on 7 crew with an annual income per person of \$1800 per annum (men and women); (2) annual maintenance of boat (\$15,000/boat); (3) renovating boats (cost between \$50,000 and \$150,000+ spent on carpenters, crafts-men/-women), (4) food and drink (typically \$10 per person per day). For longer two day/one night trips there are many additional services such as laundry (typically \$10 per person) and much higher costs of food and drink.</p> <p>iv: equates to 25 tourists visiting one or both of the two sites per month during the 4 month high season (November-February)</p>
Indicator 4	<p>Income (from sources excluding subsistence agriculture and fishing) measured in US\$ (and/or mobile phone ownership) of women and men (disaggregated) in the two new destinations. Baseline: \$250 (national average in 2010); Milestone: baseline + 20% in Yr2; Target: baseline + 40% in Yr3.</p>
Indicator 5	<p>Number of Ayeyarwady River dolphins found dead* each year in Mandalay-Kyaukmyaung Sector. Baseline: 10 year average, to be determined; Milestone: stabilised in Yr2; Target: reduction by 20% in Yr3.</p> <p>*: it is difficult to count accurately the number of live dolphins in the river (although data may become available from external studies being undertaken by Myanmar and Australian scientists); we will therefore measure the health of the population by assessing mortality levels based on reports of dead dolphins.</p>
Indicator 6	<p>Baseline data are collected as part of a citizen science project on numbers, diversity, and seasonality of bird fauna and Irrawaddy River dolphin movements in 2 sections of the Ayeyarwady River both within the Irrawaddy Dolphin Protected Area: (i) in Singu to Hsithe sector and (ii) Sheinmaga to Myitkangyi sector.</p> <p>Baseline: 0; Target in Year 3: &gt;30 reports.</p> <p>Number of international publications reporting on wildlife/environmental threats in the Ayeyarwady River.</p> <p>Baseline: 0 individuals; Target: 1 in Yr3.</p>

### Verifying outcomes

Indicator 1	<p>The two additional destinations (Hsithe and Myitkangyi) included in schedules of tour/boat operators, published on boat operators/tour operator websites, advertisements and printed flyers.</p>
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	An illustrated report on the development of the new destinations compiled, posted on the website ( <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> ), submitted to and discussed with the Ministry of Hotels and Tourism, Ministry of Forestry and Environmental Conservation and UMTA (Union of Myanmar Tourism Association). Articles about the report included in Myanmar newspapers (Myanmar Times) and magazines (Myanmar Tourism Journal), on-line journals such as Weekly11 <a href="http://www.elevenmyanmar.com/">http://www.elevenmyanmar.com/</a> and 7Days News Journal <a href="http://www.7daynewsjournal.com/">http://www.7daynewsjournal.com/</a> and on Facebook sites such as <a href="https://www.facebook.com/todaytourismmagazine">https://www.facebook.com/todaytourismmagazine</a>
Indicator 2	Surveys and questionnaires of the staff working in the livelihood interventions and of villagers in the communities hosting the interventions. Results and reports listed in project notes supported by photographic evidence. Short summaries posted on project website ( <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> ). Reports on the developing the destinations and livelihood interventions included in articles in the Mandalay newspapers and other media outlets (see above).
Indicator 3	The value of the enhanced footfall/ticket sales will be measured by multiplying the number of visits to the two new destinations (obtained from published schedules of the boats) x the estimated number of visitors on each trip x the ticket price x the proportion of the trip to the new destination(s) [ie if the cost of the ticket is \$30 and includes 3 destinations, of which one is a Darwin destination, then the proportion is one third and the value attributable to the Darwin project is \$10 per passenger].  The impact of the website ( <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> ) in publicising Mandalay river boat cruises will be measured by counting the website ‘hits*’.  *: it should be noted that every ‘hit’ turned into an actual visitor to the Upper Ayeyarwady River Corridor is worth \$130 per day in tourist spend (however, currently it is considered it will not be possible to count reliably the precise number of additional tourists generated by the website).
Indicator 4	Project data from household economic surveys and focus group reports conducted in the two new destinations.
Indicator 5	Data recorded in project diary. Data from media reports (newspapers, TV, internet) and scientific reports from national and international specialists (including James Cook University, Australia) conducting research on cetaceans in the Upper Ayeyarwady River Corridor.
Indicator 6	Data recorded in project diary and included in project reports. Data included in a scientific paper submitted by project staff to an international peer-reviewed journal.

#### Outcome risks and important assumptions

Assumption 1	All stakeholders remain committed to the project; the two proposed destinations are suitable for tourists (following the TAP [Tourism Assessment Process]); tourist numbers to Mandalay do increase by the projected number and tourists remain interested in taking river-tours.
Assumption 2	Tourist footfall and spend in the new destinations is sufficient to support 15 new livelihood interventions.
Assumption 3	The existing 40 river boats and the additional boats currently being renovated and commissioned do visit the new destinations. Boat trips and destinations benefit from being promoted on the project website ( <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> )
Assumption 4	Livelihood interventions are developed in the two new destinations by Yr2 and reliable data on income (or alternatively mobile phone ownership as an indicator of wealth) can be accurately sampled.
Assumption 5	Data are sufficiently robust to make meaningful comparisons between years for a species with such a small population (approximately 80 individuals).

Assumption 6	Project can provide sufficient data to write a scientific paper.
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## Outputs

Output 1	Environmental safeguards to conserve biodiversity in the Upper Ayeyarwady River Corridor (Mandalay to Kyaukmyaung Sector), understood, agreed and implemented.
Output 2	Two new destinations (Hsithe and Myitkangyi) for river boats developed with equitable sharing of economic benefits, enhanced social safeguards and improved social provision.
Output 3	Enhanced capacity in human resources to facilitate and develop responsible tourism.

## Measuring outputs

Output 1	
Indicator 1	<p>a: Number of boat crew and service personnel, tour guides (belonging to the Mandalay Branch of the Myanmar Tour Guides Association [MTGA]), members of the Inland Water Transport Authority and Department of Fisheries attending education workshops on sustainable management of the environment, including drawing up a protocol for operating in KBAs, interacting with wildlife and responsible waste disposal. Baseline: 0, Target: 60 attendees at workshops in Yr2</p> <p>b: Protocol to be circulated amongst all participating stakeholders and published on the project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>). Baseline: 0, Target: 1 protocol in Yr2</p>
Indicator 2	<p>a: Number of children and adults from the new destination villages attending education ‘workshops’, which will include traditional puppet shows, films, and informal talks that explain in an easily understood and enjoyable format the importance of the environment to rural, riverine communities – ie importance of waste management, sustainable hunting and fishing practices and use of toxic substances. Baseline: 0; Milestone: 315 villagers (10% of village populations) to attend by Yr2; Target: 945 villagers (30% of village population) to attend by Yr3.</p> <p>b: One guideline to be drawn up in Myanmar language and circulated in the villages, with English and Myanmar versions to be published on project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>). Baseline: 0, Target: 1 guideline in Yr3</p>
Indicator 3	<p>Number of social media systems used by international visitors to report regularly on boat travel on the Upper Ayeyarwady River, including environmental behaviour – guidelines for reporting environmental issues posted on the project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>). These systems (words and photographs) will be an indirect monitoring system of environmental behaviour. Baseline: 0, Milestone: 2 (Facebook, Tripadvisor) in Yr2; Target: &gt;4 (additionally, twitter and blogs) in Yr3.</p>
Indicator 4	<p>Number of wildlife sightings submitted by tourists and Myanmar naturalists to data logging system on the project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>). Baseline: 0, Milestone: 30 in Yr2; Target: 50 in Yr3.</p>

## Output 2

Indicator 1	Number of TAP*/management plans for destination development in Hsithe and Myitkangyi agreed by all stakeholders. Baseline: 0; Target: 2 (Hsithe and Myitkangyi in Yr2. *TAP: Tourism Assessment Process.
Indicator 2	Types of livelihood interventions (ie street vendor, café, tour guiding, tourist transport provision, tourist craft shops, homestay*) at the two new destinations. Baseline: 2 types (street vendor and café); Target: >5 in Yr3. *: when permitted by Ministry of Hotels and Tourism.
Indicator 3	Proportion of women sharing equally with men in wage employment (excluding subsistence agricultural/fishing) in Hsithe and Myitkangyi. Baseline: to be determined; Target: 50% in Yr3.

### Output 3

Indicator 1	Number of ecotourist guides (women and men disaggregated) trained by project. Baseline: 0; Milestones: 6 guides in Yr1; 12 guides in Yr2; Target: 18 guides in Yr3. (ie 6 individuals each year).
Indicator 2	Publish in collaboration with the Myanmar Tourism Federation (MTF) an international, open access, website 'Nature tourism (Ecotourism) in Myanmar' <a href="http://www.myanmar-ecotourism.org">www.myanmar-ecotourism.org</a> listing nature tourism/ecotourism activities, service providers (travel companies), and locations – jointly hosted by MTF and Harrison Institute.

### Verifying outputs

Output 1	<p><b>Indicator 1a:</b> Attendance record of each workshop with name of attendee and organisation/company that they represent. Reports in Mandalay media (newspapers, radio, TV) on the workshops. Advertisements in Mandalay newspapers promoting attendance of the upcoming workshops.</p> <p><b>Indicator 1b:</b> Text of protocol available on project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>).</p> <p><b>Indicator 2a:</b> Project reports and photographs. Reports in Mandalay newspapers, radio, TV. Posters (in Myanmar language) advertising upcoming 'workshop' in each destination village.</p> <p><b>Indicator 2b:</b> Text of guideline available on project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>).</p> <p><b>Indicator 3:</b> List of social media sites (URL//) on the internet, facebook, twitter, blog and Tripadvisor, which are receiving comments concerning environmental issues in project area.</p> <p><b>Indicator 4:</b> Analysis of data received by the data logging site, hosted at <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>.</p>
Output 2	<p><b>Indicator 1:</b> Printed/digital copies of TAPs/management plans available in Myanmar and English language, with summaries posted on the project website (<a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a>). Project diary, minutes and photographs of discussion process and signing of guidelines by community stakeholders and NGOs.</p> <p><b>Indicator 2:</b> Project data and photographs from village surveys. Reports in Mandalay media (newspaper, internet, TV, radio).</p> <p><b>Indicator 3:</b> Project data from household surveys and focus groups.</p>

	<b>Indicator 4:</b> Project data from surveys undertaken at the monastery schools with children, parents and monks.
Output 3	<b>Indicator 1:</b> Project notes on training programme with syllabus and assessment scores. Certificates issued by MBNS (Myanmar Bird and Nature Society). CVs published for each ecotourist guide on the project website <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> with a list of skills, and internships and employment post training programme. <b>Indicator 2.</b> Open access website published online at <a href="http://www.myanmar-ecotourism.org">www.myanmar-ecotourism.org</a>

### Output risks and important assumptions

<b>Output 1</b>	<p><b>Assumption 1:</b> River boat crews, tourist guides, and members of the Inland Water Transport Authority and Department of Fisheries are willing to participate in workshops, support ideas of sustainable, responsible tourism and agree to a protocol.</p> <p><b>Assumption 2:</b> Communities are willing to support ideas of mutually beneficial environmental safeguards and agree a set of guidelines.</p> <p><b>Assumption 3:</b> Tourists will be sufficiently interested and informed to make useful contributions for monitoring environmental behaviour by boat crews and communities.</p> <p><b>Assumption 4:</b> Tourists will be sufficiently interested and informed to contribute to the data-logging system.</p>
<b>Output 2</b>	<p><b>Assumption 1:</b> Hsithe and Myitkangyi are suitable destinations for tourism; their communities continue to support being new destinations for river boats and are willing to follow an inclusive, equitable, sustainable strategy leading to an agreed management plan.</p> <p><b>Assumption 2:</b> The communities of Hsithe and Myitkangyi are able to respond to the increased opportunities for business.</p> <p><b>Assumption 3:</b> Women and men are accorded equal rights and opportunities within the local culture; data are sufficiently robust to determine equality or otherwise.</p> <p><b>Assumption 4:</b> Improved disposable income is used for educational purposes and the project does indirectly promote the idea that education is an important part of living in a sustainable environment.</p>
<b>Output 3</b>	<p><b>Assumption 1:</b> 18 individuals (number of women and men disaggregated) complete the training course for ecotourist guides successfully.</p> <p><b>Assumption 2:</b> MTF remain interested in publishing a nature tourism website.</p>

### Activities

Output 1	
Activities 1.1.a-c	<p>a: Develop a protocol for environmental safeguards for river boats - formal/informal discussions, consultations, meetings, and workshops involving business [UMTA and boat owners], Myanmar Tour Guides Association, Inland Water Transport Authority, Department of Fisheries, and in-country NGOs [FREDA, GBP, MBNS].</p> <p>b: Publish protocols (web-based and paper format in Myanmar and English languages).</p> <p>c: Implement protocols based on corporate responsibility but monitored by tourists publishing reports on social media.</p>

Activities 1.2.a-b	a: Develop and agree guidelines for environmental safeguards - formal/informal discussions, meetings, and workshops involving Hsithe and Myitkangyi, Inland Water Transport Authority, Department of Fisheries, and in-country NGOs [FREDA, GBP, MBNS].  b: Implement environmental safeguards based on enhanced education of children and adults in the destination communities.
Activities 1.3.a-b	a: Develop (1) environmental monitoring system and (2) on-line wildlife data-logging systems.  b: Publish, implement, monitor and update systems on the internet.

### Output 2

Activities 2.1.a-b	a: Conduct TAPs/develop master plans for the two new destinations (assessment preparation, assessment, cost benefit analysis, recommendations and implementation) - formal/informal discussions, meetings, and workshops involving stakeholders in Hsithe and Myitkangyi, boat operators, Inland Water Transport Authority, and in-country NGOs [FREDA, GBP, MBNS]  b: Support training for establishing livelihood interventions (eg cafés, guiding, transport)  c: Implement social, economic, and environmental assessments.
Activity 2.2	Conduct study visits to other ASEAN examples of community development linked to tourism and biodiversity conservation.
Activities 2.3.a-b	a: Develop website <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> (in English, Myanmar and German) with a list of attractions, advice for responsible tourism and data-logging for wildlife observations.  b: Publish and update website.

### Output 3

Activities 3.1.a-b	a: Train 6 ecotourist guides each year for three years on 3 month study courses.  b: Host their CVs and contact details on the project website.
Activity 3.2	Compiling Myanmar nature tourism website <a href="http://www.myanmar-ecotourism.com">www.myanmar-ecotourism.com</a> .

26. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project.

Activity	No of Months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1 Risk assessment (health and safety) (for all Outputs)	1	x	x			x				x			
1.1.a: Developing protocols for environmental safeguards for river boats	6	x	x	x	x	x	x						
1.1.b: Publishing protocols	1							x					
1.1.c: Implementing protocols	6							x	x	x	x	x	x
1.2.a: Developing guidelines for environmental safeguards for Hintha Gone and Tawyagyi	6	x	x	x	x	x	x						
1.2.b: Implementing protocols	6							x	x	x	x	x	x
1.3.a: Developing environmental monitoring and data-logging systems	4		x	x	x	x							
1.3.b: Publishing, implementing, updating the systems on the internet	4						x	x	x	x	x	x	x
Output 2													
2.1.a: Conducting TAPs/developing master plans (Hintha Gone/ Tawyagyi)	8	x	x	x	x	x	x						
2.1.b: Establish strategic partnerships (business, communities, NGOs)	4			x	x	x	x	x	x	x	x	x	x
2.1.c: Implement social, economic, environmental impact assessments					x				x			x	
2.2: Study visits to ASEAN examples of community development/ biodiversity conservation	2		x				x						
2.3.a: Develop project website <a href="http://www.destination-mandalay.com">www.destination-mandalay.com</a>	6		x	x	x								
2.3.b: Publish and update website					x	x	x	x	x	x	x	x	x
Output 3													
3.1.a: Train 6 ecotourist guides	9		x				x				x		
3.1.b: Two students trained in ‘Sustainable Tourist Management’	12					x	x	x	x				

M&E workshops for project stakeholders (for all Outputs)	3		x		x		x		x		x		x
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## Annex 2 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements
<p><b>Impact</b></p> <p>To develop long-term partnerships and promote good practice, ensuring that the projected growth of international tourists visiting Myanmar supports equitable, sustainable development and contributes to environmental protection and biodiversity conservation</p>		<p>Strong partnerships have been developed between local communities, local authorities, tourism business, central government, and most conservation CSOs &amp; NGOs. We have promoted good practice both in the sustainable and equitable development of two new tourist destinations and in environmental protection.</p>
<p><b>Outcome</b> To promote inclusive, equitable, sustainable tourism in upper Ayeyarwady River Corridor that supports biodiversity conservation and meets the challenges of, and benefits from, a projected three-fold increase in international tourism.</p>	<p>1: Number of additional rural, riverine villages serving as new tourist destinations. Baseline: 0; Target: 2 in Yr3.</p> <p>2: Number of people benefiting from the new destination development. Direct benefit: Baseline 0; Target: 300 in Yr 3; Indirect benefit: Baseline: 0; Target in Yr3: 1575.</p> <p>3: Economic benefit to the communities. Baseline: 0; Target: US\$30,000 p.a. in Yr3.</p> <p>4: Income measured in US\$ of women and men (disaggregated) in the two new destinations. Baseline: \$250 Milestone: baseline + 20% in Yr2; Target: baseline + 40% in Yr3.</p> <p>5: Number of River dolphins found dead. Baseline: 10 year average (1.3 deaths). Milestone: stabilised in Yr2; Target: reduction by 20% in Yr3</p> <p>6a: 15 citizen science reports submitted. Baseline 0, Target 30.</p>	<p>1: two new destinations, Hsithe and Myitkangyi, were launched (after the rainy season) in November, 2016 and are fully functional.</p> <p>2: the two destinations provide 283 employment opportunities in direct livelihood interventions. In addition, the community fund (20% of all income) will directly assist all villagers within Hsithe and Myitkangyi.</p> <p>3: Economic benefit is \$38,113 (\$33,973 has been invested in the village communities of the destinations to prepare them for tourism, with a further \$4,140 generated from tourists).</p> <p>4: For those directly involved in the 283 employment opportunities, average income increased from \$250 to \$384.67. This represents an average 53.9% increase.</p> <p>5: 3 dolphin deaths in 2016, which considerably exceeds the 10 year baseline of 1.3 deaths.</p> <p>6a: 15 formal citizen science loggings were received. However, all but 2 of these were from individuals working for the project.</p> <p>6b: One detailed report on environmental threats was compiled and is available on the internet. In addition, 2 reports – one on threats to wildlife and one on cultural heritage in the Ayeyarwady River Corridor were compiled.</p>

	6b: Number of publications. Baseline 0, Target 1.	
<p><b>Output 1.</b> Environmental safeguards to conserve biodiversity in the Upper Ayeyarwady River Corridor (Mandalay to Kyaukmyaung Sector), understood, agreed and implemented.</p>	<p>1a: Number of individuals attending workshops on sustainable environmental management. Baseline: 0, Target: 60 attendees in Yr2</p> <p>1b: Environmental protocol to be agreed amongst all stakeholders and circulated and published. Baseline: 0, Target: 1 protocol in Yr2.</p> <p>2a: Number of individuals (all age groups and both sexes) from the new destination attending environmental workshops on waste management, sustainable hunting and fishing practices. Baseline: 0; Milestone: 315 villagers to attend by Yr2; Target: 945 villagers by Yr3.</p> <p>2b: Environmental guideline to be drawn up. Baseline: 0, Target: 1 guideline in Yr3.</p> <p>3: Number of social media systems used to report on environmental behaviour. Baseline: 0, Milestone: 2 (Facebook, Tripadvisor) in Yr2; Target: &gt;4 (additionally, twitter and blogs) in Yr3.</p> <p>4: Number of wildlife sightings submitted to data logging system on the project website. Baseline: 0, Target: 50 in Yr3.</p>	<p>1a: 112 individuals have attended 2 workshops on sustainable environmental management in Yrs 1 &amp; 2.</p> <p>1b: Protocols agreed amongst stakeholders and circulated. Training manual published online.</p> <p>2a: A series of workshop completed for approximately 1000 individuals completed.</p> <p>2b: Environmental guidelines drawn up and included in Village master plans for Hsithe and Myitkangyi – available in English and Myanmar.</p> <p>3 &amp; 4: The citizen science project, with identification guides based on a format observed in Cambodia, was not successful. To date, there has been little interest and/or input from visiting tourists.</p>
<p>Activity 1.1 a: Develop a protocol for environmental safeguards for river boats with stakeholders; b: Publish protocols (web-based and paper format in Myanmar and English languages); c: Implement protocols based on corporate responsibility but monitored by tourists publishing reports on social media.</p>		<p>1a: Protocol finalised in April, 2015; 1b: Protocols circulated to all relevant stakeholders and published in English and Myanmar; 1c: Protocols circulated to relevant individuals and cruise boats and available on the project website.</p>

<p>Activity 1.2, a: Develop guidelines for environmental safeguards for rural communities. b: Implement environmental safeguards based on enhanced education of children and adults in the destination communities.</p>	<p>1.2.a &amp; b: Guidelines discussed and implemented with destination committees and incorporated in Management Plans. b. Workshops for approximately 1000 school children and adults conducted in Years 2 and 3.</p>
<p>Activity 1.3. a: Develop (1) environmental monitoring system and (2) on-line wildlife data-logging systems. b: Publish, implement, monitor and update systems on the internet.</p>	<p>1.3.a &amp; b: 15 reports received (see above) – not successful</p>
<p><b>Output 2.</b> Two new destinations for river boats developed with equitable sharing of economic benefits, enhanced social safeguards and improved social provision.</p>	<p>1: TAPs for destination development. Baseline: 0; Target: 2 in Yr2. 2: Types of livelihood interventions at the two new destinations. Baseline: 2; Target: &gt;5 in Yr3. 3: Proportion of women sharing equally with men in wage employment. Target: baseline +50% in Yr3.</p> <p>1: TAPs have been drawn up for both destinations and are available online. 2: 27 different intervention types achieved for both destinations – 27 operational in Hsithe village and 23 in Myitkangyi. 3: 56.2% ♀ and 43.8% ♂ participation in new livelihoods.</p>
<p>Activity 2.1. a: Conduct TAPs/develop master plans for 2 destinations; b: Support training for establishing livelihood interventions; c: Implement social, economic, and environmental assessments.</p>	<p>2.1.a: TAPs completed for Hsithe and Myitkangyi. 2.1.b: Training for 27 livelihood interventions completed 2.1.c: Assessments through feedback from 198 visitors and 20 travel agents. Other assessments not undertaken through lack of manpower.</p>
<p>Activity 2.2. Conduct study visits to other ASEAN examples of community development linked to tourism and biodiversity conservation.</p> <p>Project team members visited Cambodia to observe: i: best practice in community projects (including homestay) in Kratie ii: an ecotourism project based on river dolphins in Kratie iii: a community wetlands conservation project in Tonle Sap iv: locally made handicrafts in Siem Reap.</p> <p>Within Myanmar, visits to Community-based tourism/conservation projects were also undertaken in Shan, Kayah and Yangon States/Divisions.</p>	<p>2.2: Ideas from this visit have been incorporated into: i: design and management of the destinations at Hsithe and Myitkangyi ii: ideas for dolphin conservation in the Mingun to Kyaukmyaung river sector iii: citizen science project for observing wildlife on the Ayeyarwady River iv: the design of handicrafts in the destinations at Hsithe and Myitkangyi. Within Myanmar, visits to Community-based projects were undertaken in Shan, Kayah and Yangon States/Divisions.</p>
<p>Activity 2.3. Develop, publish and update website <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> with a list of attractions, advice for responsible tourism and data-logging for wildlife observations.</p>	<p>2.3 The website <a href="http://www.destination-ayeyarwady.com">www.destination-ayeyarwady.com</a> was published in Year 2. This is targeted at individuals and tour companies who wish to promote responsible nature tourism to the two new destinations.</p>

<p><b>Output 3.</b> Enhanced capacity in human resources to facilitate and develop responsible tourism.</p>	<p>1: Number of ecotourist guides trained by the project. Baseline 0, Target 18.</p> <p>2: Publish a Nature Tourism/ Ecotourism website for Myanmar.</p>	<p>1: 55 ecotourist guides (17 ♀ and 38 ♂) were trained in Yrs 1 and 2 in long courses and an additional 17 (16 ♀ and 1 ♂) in short courses in Yr 2.</p> <p>2: The website is written, designed and uploaded <a href="http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/">http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/</a> It awaits final editing and corrections.</p>
<p>Activity 3.1. a: Train 6 tourist guides for each of the 3 years. b. Host their CVs and contact details on the project website.</p>		<p>3.1.a: Training of 55 guides is completed.</p> <p>3.1.b: It proved impossible to post their CVs and contact details on the project website as this was considered sensitive information by the tour companies that regularly employ the guides. The companies wished to discourage guides from operating independently.</p>
<p>Activity 3.2. Compile Nature Tourism website</p>		<p>3.2 Text and photographs for the activities of bird watching, trekking, cycling, horse riding, climbing, dolphins and the Ayeyarwady River and diving/sailing and kakaying has been posted on the website: <a href="http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/">http://myanmars.biz/temp/myanmar-ecotourism.org/index.php/en/</a> . The website requires final editing and minor revision before being posted as an open-access site.</p>

## Annex 3 Standard Measures

Code	Description	Total	Nationality	Gender	Title or Focus	Language	Comments
<b>Training Measures</b>							
1a	Number of people to submit PhD thesis						
1b	Number of PhD qualifications obtained						
2	Number of Masters qualifications obtained						
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training						
4b	Number of training weeks provided to undergraduate students						
4c	Number of postgraduate students receiving training (not 1-3 above)	6	Myanmar	5 ♀, 1 ♂	biodiversity field techniques		
4d	Number of training weeks for postgraduate students	3					
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification (e.g., not categories 1-4 above)						
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	220	Myanmar	119 ♀, 111 ♂	ecotourism/ bird guide training; environmental training/ dolphin watching for tour guides, boat crews..; training in Hsithe &		

					Myitkangyi destinations		
6b	Number of training weeks not leading to formal qualification	816					
7	Number of types of training materials produced for use by host country(s) (describe training materials)	4					
<b>Research Measures</b>		<b>Total</b>	<b>Nationality</b>	<b>Gender</b>	<b>Title</b>	<b>Language</b>	<b>Comments/ Weblink if available</b>
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)						Participatory process?
10	Number of formal documents produced to assist work related to species identification, classification and recording.	1					
11a	Number of papers published or accepted for publication in peer reviewed journals						
11b	Number of papers published or accepted for publication elsewhere	3 reports submitted to CEPF/IUCN and available online				English	Available on project website
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country						
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country						

13a	Number of species reference collections established and handed over to host country(s)						
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	1	Myanmar			English/ Myanmar	
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work were presented/ disseminated.	3					

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)		Visitor centres at Hsithe and Myitkangyi Villages (sponsored by Harrison Institute)
21	Number of permanent educational, training, research facilities or organisation established		
22	Number of permanent field plots established		Please describe

Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work						



## Annex 4 Aichi Targets

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

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

## Annex 5 Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details. Mark (\*) all publications and other material that you have included with this report

Type *	Detail	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers	Available from
(e.g. journals, manual, CDs)	(title, author, year)				(name, city)	(e.g. web link, contact address etc)
Report	Natural Heritage of Ayeyarwady River (Annex 7.18)	UK	UK	male		
Report	Threats of Wildlife Ayeyarwady River (Annex 7.18)	UK	UK	male		
Report	Cultural Heritage of Ayeyarwady River (Annex 7.18)	UK	UK	male		

## Annex 6 Darwin Contacts

Ref No	21-012
Project Title	Enhancing rural livelihoods and biodiversity conservation through responsible tourism, Myanmar
<b>Project Leader Details</b>	
Name	Dr Paul Bates
Role within Darwin Project	P.I.
Address	Harrison Institute, Bowerwood House, 15 St Botolph's Road, Sevenoaks, Kent, TN13 3AQ, Myanmar
Phone	
Fax/Skype	
Email	
<b>Partner 1</b>	
Name	Dr Thein Aung
Organisation	Myanmar Bird and Nature Society
Role within Darwin Project	Trainer, Workshop organiser, Bird specialist
Address	
Phone	
Email	
<b>Partner 2</b>	
Name	Dr Sai Sein Lin Oo
Organisation	Department of Zoology, University of Mandalay
Role within Darwin Project	Trainer, Workshop organiser
Address	
P	
Email	
<b>Partner 3</b>	
Name	Ms Hnin Witt Yee
Organisation	GeoDiscover Travel
Role within Darwin Project	In-country Marketing Manager
Address	
Phone	
Email	
<b>Partner 4</b>	
Name	U (Mr) Hpone Thant
Organisation	UMTA (consultant)
Role within Darwin Project	Advisor on tourism/government policy

Address	
Fax/Skype	
Email	