

# Darwin Initiative – Final Report

(To be completed with reference to the Reporting Guidance Notes for Project Leaders  
(<http://darwin.defra.gov.uk/resources/reporting/>) -

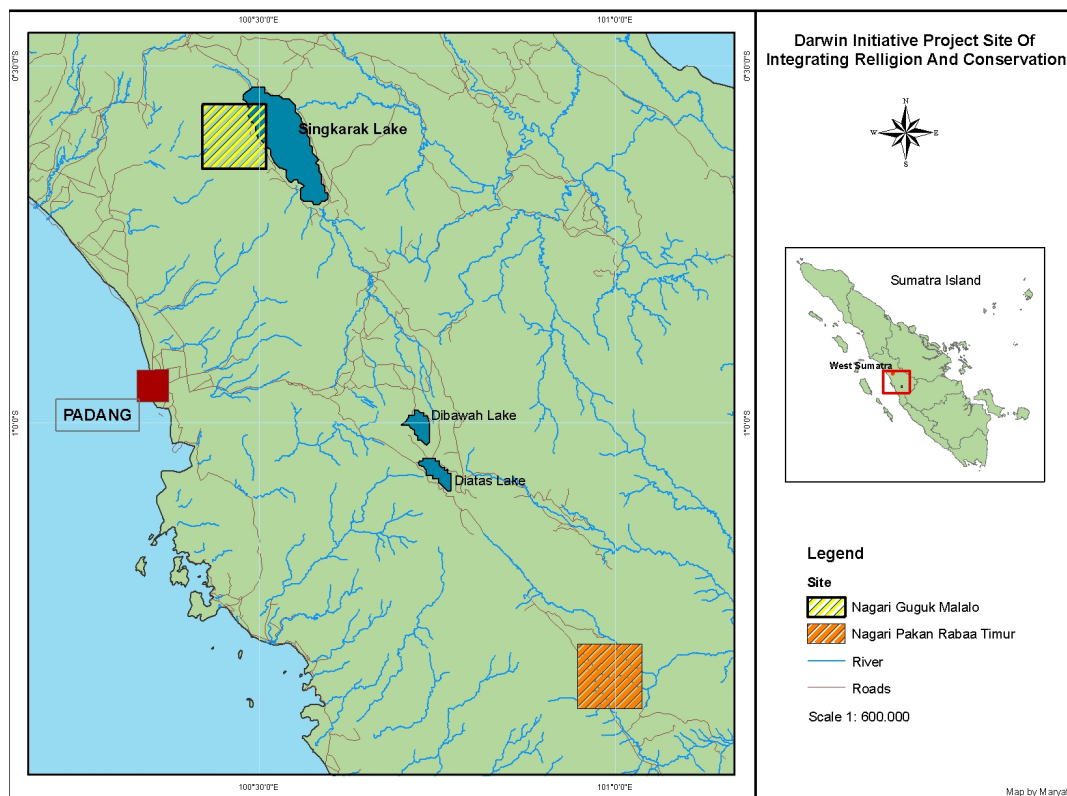
it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

## Darwin project information

Project Reference	17-009
Project Title	Integrating religion within conservation: Islamic beliefs and Sumatran forest management
Host country(ies)	Indonesia
UK Contract Holder Institution	Durrell Institute of Conservation and Ecology (DICE), University of Kent
UK Partner Institution(s)	Islamic Foundation for Ecology and Environmental Sciences (IFEES)
Host Country Partner Institution(s)	British Council (BC)- Indonesia; Conservation International-Indonesia Programme (CI-IP); Fauna and Flora International-Indonesia Program (FFI-IP); Indonesian Conservation of Natural Resources Agency for West Sumatra province (BKSDA), Department of Forestry (DoF), Qbar, University of Andalas (UNAND).
Darwin Grant Value	£229,321
Start/End dates of Project	1 July, 2009 -30 June, 2012
Project Leader Name	Professor Stuart R. Harrop
Project Website	<a href="http://www.kent.ac.uk/dice/research/islam_conservation.html">http://www.kent.ac.uk/dice/research/islam_conservation.html</a>
Report Author(s) and date	Jeanne McKay and Yoan Dinata, with input from local partners, CI-IP and FFI-IP, June 2012

## 1 Project Background

Initiated through a Darwin Initiative (DI) scoping award and a subsequent Rufford (pilot) project, DICE and local partners identified the strong potential for using Islamic and customary teachings on the environment to change behaviour in conserving natural resources in Indonesia - especially when linked to the multiple benefits to human welfare provided by local ecosystem services in the biodiversity-rich location of Sumatra. However, a lack of awareness about these teachings and institutional capacity to implement them hindered sustainable natural resource management. This then led to DICE and the pilot project partners (namely QBar, BKSDA, FFI-IP, UNAND, CI-IP and IFEES) to go on to develop the full DI project proposal. This full project was the first to promote and apply a practical faith-based conservation approach in West Sumatra, one of Indonesia's most biodiversity and carbon rich provinces. The project focussed on two rural field sites (known as *Nagari* or customary lands) and an urban site (Padang, the capital of West Sumatra province) – see map below.



## 2. Project support to the Convention on Biological Diversity (CBD)

**CITES:** The project supported CITES in that many at risk species are found within the project area and by enhancing local pro-conservation attitudes and awareness, the result is a greater understanding of the need to enforce CITES restrictions on trade. It should be noted that Dr Darnaedi (Indonesia's CBD National Focal Point for Subsidiary Body for Scientific, Technical and Technological Advice, SBSTTA) was consulted during the development of the DI proposal and provision of all biodiversity data to be collected was discussed with the CITES contact person for Indonesia. As agreed, both were provided with a copy of the project's biodiversity assessment reports from the DI field sites giving them new information from previously data deficient areas. These data are intended to aid both organizations in providing recommendations for species protection within Indonesia.

**CBD:** The project necessarily supported many of the CBD convention provisions, but particularly, in a comprehensive manner, those concerned with local and traditional practices (Articles 8(j) and 10(c)), along with education and awareness (13) and indeed, bearing in mind the bottom-up nature of the project closely follows many of the provisions in the new Access and Benefit sharing protocol finalised at the Nagoya conference. The CBD targets which have now been replaced with the Aichi targets (expressly subscribed to by the UK government and the European Union) are also highly relevant to the project and since Annex 3 does not lend itself to referring to these please note that the project particularly supports fulfilment of many of the Aichi targets, These are too numerous and extensive to mention herein – suffice to say that the project's original idea is directly relevant to the very first of the targets under Strategic Goal A: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

## 2 Project Partnerships

This project was afforded both the benefits and challenges of working with a dynamic and multiple partner base - the majority of whom were involved in the design of the original proposal and remained enthusiastically supportive and involved in its activities throughout the project's lifespan: FFI-IP; BC; CI-IP; IFEEES; Qbar; and, UNAND co-organised several productive meetings and training workshops with local and rural community partners. CI-IP and IFEEES also designed training materials and promoted project work in the local and international media and through their newsletters, radio interviews and national and international meetings. Further, Dr Fachruddin Mangunjaya (CI-IP) and the DI PO co-authored a peer reviewed scientific article entitled, 'Reviving an Islamic Approach for Environmental Conservation in Indonesia' for the September 2012 issue of 'Worldviews: Global Religions, Culture and Ecology', an international academic journal that studies the relationships between religion, culture and ecology worldwide. This brought international attention to the project its pragmatic Islamic approach to natural resource management.

Additional partner funding was received from the BC that covered all international and local expenses for our UK-based project partner Fazlun Khalid (IFEES) to attend, as the key note speaker, the international Muslim Action on Climate Change Conference held in Bogor, Java, from 9-10<sup>th</sup> April 2010. As co-sponsors of the event, funds for in-country costs were provided by Indonesia-based project partners BC and CI-IP. As part of the DI's commitment to building local conservation capacity, and with match funding from the Indonesian Islamic Council (the country's top Muslim clerical body), the project sponsored two of its religious leader partners to serve as the project's religious emissaries for West Sumatra. Over 100 religious scholars and conservation leaders from across Indonesia, Asia, the Middle East and the UK attended this conference. Excellent project exposure was achieved via the presentation, a breakout session led by the DI PO as well as the through DI project brochures (>100) which were provided in the participant's welcome pack.

BC also covered the costs for Dr Shafwan Nawawi, the Chairman of Indonesian Dai Association, to attend as the DI project's religion liaison and CI-IP provided the accommodation and meals for the DI PO and Field Manager. Following on from this auspicious international conference, the BC provided financial support for the DI religious leader training workshop in Padang (14-15<sup>th</sup> April 2010). This enabled the project to benefit from the existing presence and expertise of partner representatives from the UK (IFEES) and Indonesia (CI-IP) who provided expert co-facilitation of the DI religious leader training workshop and subsequent outreach materials. Further, the BC provided training on climate change related issues and financial sponsorship for DI partners and staff to attend their meetings and teacher training workshops. In PY2, BC sponsored two teachers from the DI field sites to attend their 'Climate for Classrooms' ([www.climate4classrooms.org](http://www.climate4classrooms.org)) teacher training in Jakarta (23-25<sup>th</sup> September 2010) and the DI Ecosystem Services Coordinator completed Phase Two of Al Gore's global initiative ('Grand Connectors Training for Climate Change') that was held in Jakarta (24<sup>th</sup> April 2010). Further, in PY3 the BC provided match funding for the costs of a joint DI/BC project information booth during the 16<sup>th</sup> annual Environmental Event Series held in the Jakarta Convention Center from 14-16<sup>th</sup> June 2012 as part of Indonesia's Environmental Week. The high profile event was attended by 64,175 visitors from across Indonesia and the DI/BC booth was prominently located at the conference hall's entrance, next to the Ministry of Environment's stand.

Fazlun Khalid (IFEES) and the DI Principal Investigator gave a joint presentation, showcasing the DI project, entitled, 'Islam and Rainforest Conservation in Sumatra' at the Zoological Society of London (ZSL), on 8, June 2010. Over 100 people from academic institutions and NGOs were in attendance. The DI Principal Investigator also showcased the project specifically in 2011 at the Biodiversity Institute Symposium, held at Oxford University (attended by leading conservation scientists and social scientists and NGO representatives from around the world along with many UK university students), where he gave a presentation entitled *Religion, culture and biodiversity*. He also presented the project in a non-academic context in 2010 at Canterbury when he gave a plenary address to the Kent Inter-Faith Group (comprising an audience of representatives of Christian, Jewish, Muslim and many other faiths). The address was entitled: *The relationship between religion and conservation - a case study in Sumatra*. As a result of that speech he was asked to repeat the talk to the University of Kent's women's group as their annual speaker. This was duly done in 2011 in Canterbury with an emphasis on gender aspects of the project.

FFI-IP did not require a technical agreement or an MOU. It provided financial support for the DI Field Manager (a new position completely funded by FFI during PY1 with 50% match funding from DI/FFI for PY2 and PY3), annual monitoring and evaluation project appraisals and expertise regarding the design and construction of DI community field schools and nurseries in the two DI field sites as well as training on seed propagation, plant care, composting, natural pesticide production and organic farming techniques in both project sites.

Local NGO Qbar required a project-based Technical Agreement and once signed, coordinated Focus Group Discussions, Participatory Rural Assessments (PRAs), and supported daily outreach activities in both project sites (e.g. overseeing the DI field schools and tree nurseries and providing support in the establishment of a community-based natural resource management initiative in the customary forest or 'Hutan Nagari' (further explained in Section 3.2).

BKSDA required no Technical Agreement and remained extremely supportive of the project, attending all stakeholder meetings as well as donating 2000 high quality mahogany seedlings to the DI field schools.

The long awaited signed MOU between UNAND and the University of Kent resulted, instead, in a simplified Technical Agreement between UNAND and the DI project. This allowed for the selection of two DI/UNAND MSc scholarship students and two joint DI/UNAND facilitated training workshops on biodiversity identification and monitoring techniques. Unfortunately, UNAND was unable to provide match funding for an additional two DI/UNAND scholars and the two existing scholarship students were not provided with sufficient support from their academic supervisors to ensure the completion of their degrees in the previously agreed timeframe (two years). As a result, the DI PO and DI field staff provided

extensive support to both students in PY3 and it is now anticipated that both degrees will be completed by the new academic year beginning in September 2012.

With respect to the final project book, all partners were invited to submit a chapter pursuant to their particular expertise and role in the project. A few partners were unable to meet previously agreed upon deadlines - despite clear work plans, follow up meetings from in-country DI staff and several extensions. This presented challenges for both the DI staff and those project partners who met their deadlines as they then had to assume additional responsibilities (often at short notice) in order to complete the remaining work. To date, all chapters have been received, translated into English and are undergoing final print layout before being sent to a professional proof reader.

From the grassroots level, strong partnerships were created and strengthened over the lifespan of the project. No formal commitment was required between the project and the village and religious leaders. In particular Mr Syafril and Mr Dasirzal Dahlan (who were involved with the project since its pilot stage) continued to provide strong support in the 2010 and 2011 DI Ramadan and Green Mosque Conservation Campaigns and the development of outreach materials. The leaders of local women's and farmer's groups (representing >45 groups) remained dedicated and enthusiastic throughout the project. As a result, the two DI nurseries and field schools remain well cared for under the direction of the communities themselves, suggesting that the community partners have been sufficiently empowered and that the nurseries will be sustained.

### Other Collaborations

- The West Sumatra Tiger Corridor Initiative: In partnership with FFI-IP and the Panthera Foundation, the DI project collaborated with local NGOs and communities to support the development of a landscape-wide initiative to protect tigers and their forest habitat. FFI-IP was successful in securing a US\$50,000 grant for this area, which overlaps and complements the DI site and field activities. Also, DI and FFI-IP's Mentawai Gibbon and tiger project shared the costs of a project base in Padang.
- Provincial Forestry Agency (PFA): Mr Hendri Octavia, the PFA Head for West Sumatra, supported the DI project and Qbar to complete the first phase for both DI project sites to formally apply for *Hutan Nagari* status in West Sumatra. He will continue support for the next steps that are required at the provincial government and national Ministry of Forestry levels.
- Padang State University: On 22<sup>nd</sup> November 2010, the DI Field Coordinator gave a talk about the project and its activities at a Forest and Climate Change seminar held during the University's annual environmental week. The DI project also provided 100 seedlings (a mixture of endemic species) to be planted in the Padang State University campus (April 2011) as part of a conservation awareness raising exercise inspired by the DI's Green Ramadan and Green Mosque Campaign.
- Wildlife Conservation Society-Indonesia Program (WCS-IP): DI staff collaborated with WCS-IP staff to support their objective of raising community awareness on natural resource management issues during the 2011 Ramadan campaign through joint outreach and field activities.
- University of Edinburgh: Professor Michael Northcott, Professor of Ethics and Director of Research at the School of Divinity ([www.ed.ac.uk/schools-departments/divinity/staff-profiles/northcott](http://www.ed.ac.uk/schools-departments/divinity/staff-profiles/northcott)) visited the project in the field. Specialising in religion and ecology in Southeast Asia, he learned of the DI project through an article published on FFI's website and wished to see firsthand the work on integrating Islam and conservation in West Sumatra. He plans on including the DI information in his research and publications on religion and ecology in Southeast Asia.
- Rincong: The DI PO met with the Director of this local NGO, at her request, to discuss the DI project and the organisation's interest in replicating the DI Ramadan and Green mosque campaigns in Aceh province, located in northern Sumatra (which is Indonesia's only province with Sharia law). All DI materials associated with these activities were provided to Rincong for guidance in a 2012 Ramadan environmental campaign.
- The BBC World Service sent their Indonesia team to a project site (Guguk Malalo) to cover the seminal DI work being done as part of the BBC World Service radio documentary series entitled 'The Climate Connection: Lost in Translation.' The piece aired in Indonesia on 16<sup>th</sup> December 2010 during primetime and was relayed by 100 local stations including Classy FM in Padang and also aired numerous times in the UK (30<sup>th</sup> December 2010 and 1-2<sup>nd</sup> January 2011). An estimated 5.1 million Indonesians alone listen to BBC world service.

## 3 Project Achievements

Please see Annex 1.

### 3.1 Impact: achievement of positive impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

Innovative approaches are needed for biodiversity conservation. Within and beyond the DI project site, Islam plays a central role in the daily lives of millions, and through religious teaching the DI project used this opportunity to promote the importance of biodiversity conservation and its sustainable use to a range of key stakeholders who have been previously uninvolved in environmental issues (e.g. religious leaders and women's groups). Involving these groups in sustainable natural resource management based on religious principles provided a new conservation model that discouraged forest clearance and secured ecosystem services and biodiversity that was both culturally appropriate (through the teachings of Islam) and replicable (the bilingual DI book which describes the Darwin Initiative model). Further by compiling the first biodiversity assessment reports and ecosystem and natural resource use maps in the project sites has supported both communities to apply to the provincial government for the rights to sustainably manage their resources and protect their forests.

The project's social impact was very positive as it involved members of the community participating directly in both the planning and implementation of project activities. This created a strong sense of ownership and pride in the now independently run DI tree and plant nurseries. It also generated a strong commitment from each community to continue conducting an annual green mosque campaign, community litter clean ups and replanting activities around their water sources (using species from the community managed DI nurseries). In order to ensure that those that might otherwise be marginalised in a project of this nature and in that context, in these activities women and women's groups were given a deliberate and prominent role - with great success and enthusiasm from the participants (so much so that a specific publication on the gender aspects of the project is now in the planning process). What was somewhat unexpected was the noted pause for reflection and appreciation received from many religious leaders and devout Muslims (who considered themselves to be well versed on the teachings of the Qur'an) when introduced for the first time by DI project partners and staff to its many environmental teachings.

### 3.2 Outcomes: achievement of the project purpose and outcomes

The project was successful in achieving its purpose and its outcomes. For example, the DI Green Mosque Campaign in Guguk Malalo received nationwide media attention which aided in its winning the provincial nomination to represent West Sumatra in a national environmental competition sponsored by the Ministry of Forestry, where it came 5th out of 25 entries because of the community's enthusiasm and commitment to protecting their local environment. This has resulted in Guguk Malalo receiving special consideration for financial investment and support from the Government of Indonesia for future conservation activities that will build on the DI. Further, all of the required information for each field site has been collected to proceed with their application of *Hutan Nagari* status which grants each community a special autonomy to sustainably manage their natural resources under customary law. From the joint partner training workshop given to teachers and religious leaders, positive changes (50% to 92% increase) in knowledge and understanding over ecosystem services were recorded through pre- and post-training surveys. Based on the results from another survey, i.e. the Community Nursery Cultivation and Production Programme, participants at both project sites displayed similar low levels of understanding prior to the training with an improved understanding after the training, (from 60% to 85% in Guguk Malalo and 50% to 75% in Pakan Rabaa Timur). This suggests that it is highly likely that the field schools and nurseries will be a sustainable means of providing wide economic and environmental benefits through land intensification and a reduction in the demand to further convert forests into farmland. Finally, the pre- and post-questionnaire surveys from the Ramadan campaign conducted in the mosques showed Islamic teachings on water conservation had raised levels of concern because the proportion of people who prioritized funding for watershed forest conservation in the exit group was significantly higher than that of the entry group. The pre- and post-questionnaire results from the Ramadan campaign administered in the *pesantrens* (religious boarding schools) showed women respondents tended to correctly identify the services provided by watershed forests and, were more likely to contribute their time to conservation activities. Finally, the project provided a series of ecosystem services maps overlaid with religious management systems in each of the project sites for the first time in Indonesia (see 'Maps' under Appendix 1). These maps, which were produced with strong community participation are being used to support each communities' application to the provincial government for *Hutan Nagari* status. Outputs (and activities).

The project did meet its original outputs and surpassed expectations for Output 4 (Activity 4.5) with the BBC radio documentary featuring the DI project work and its subsequent award for top documentary at the Climate Change Adaptation Film Festival held at the Second Climate Change Adaptation Forum, 2011 (see under Annex 4). Finally the DI project and BC were invited by the Ministry of Environment to host a joint information booth at the 16<sup>th</sup> annual Environmental Event Series as part of the Government of

Indonesia's Environmental Week (first referenced under Output 2) For unexpected problems and their resolution, please see under 'Project Partners'.

### 3.3 Project standard measures and publications

Please see Annexes 4 and 5.

### 3.4 Technical and Scientific achievements and co-operation

The DI religious leaders delivered water conservation-themed sermons during *ceramah* (a themed religious address featuring key note speakers specifically conducted during the Muslim holy month of Ramadan) and Friday prayer sermons (when mosque attendance is obligatory) in 10 mosques (8 urban, 2 rural) reaching over 1,000 people. The DI team also provided a water conservation themed module in 10 *pesantrens* (8 urban, 2 rural), and directly within mosques (356 students). Overall, 874 pre- and post-questionnaires were administered and collected by 15 previously trained DI volunteers.

#### Methodology

All questionnaire responses were compiled and analysed within SPSS statistical software. A binomial test was performed to measure changes on the proportion of respondents prioritizing watershed forest conservation before and after the sermon or curriculum, which were analysed separately.

### 3.5 Capacity building

Both DI/UNAND MSc scholars have completed their coursework and field work and will be defending their research according to university requirements. The DI community managed Field Schools and associated tree nurseries and related trainings (nursery management, vegetative and generative plant reproduction, organic fertilizer composting and the production of organic fertilizers) to 46 participants (46 participants (10 women) in Guguk Malalo and 27 participants (5 women) in Pakan Rabaa Timur) and activities derived from them (composting etc.) have empowered key DI stakeholders (e.g. leaders of women's groups, farmer groups and *pesantren* students). 1,000 cacao seedlings were planted in the DI nurseries and used in conjunction with donated high income yielding tree species (e.g. durian, mahogany and rubber) from project partners to replant 250 hectares of degraded land in Pakan Rabaa Timur and over 100 hectares in Guguk Malalo with a further 50 agar wood trees planted in 1 hectare of degraded land in a neighbouring community( as a pilot site and part of community outreach)-all which will provide a sustainable source of income for the communities. The distribution of printed training materials provide further community support to conserve biodiversity and ecosystem services (e.g. restoring degraded watershed forest and buffering it with an agroforest).

Partner training materials were adapted specifically for the DI project and trialled at the joint partner Ulama training workshop (13 participants) which formed the basis of the 2011 Ramadan campaign reaching over 1,000 people. In addition to the above tree nursery training (73 participants), a joint DI partner biodiversity training workshop (58 participants), rapid assessment and community patrolling training (16 participants), 2 in-site PRAs (56 participants), community mapping exercises (50 participants), field school trainings (>100 participants) were also conducted. Further, the DI Biodiversity and Ecosystem Services coordinator was trained as a trainer of trainers sponsored by the British Council under former US vice President, Al Gore's Cimate Connectors training programme.

This is DICE's first faith-based conservation project and through the work of the project's PI and PO, DICE has built its own capacity to be an effective partner through becoming more involved with the role religion can play in protecting the environment (e.g. promoting the DI work in various lectures & symposiums, popular and peer reviewed publications etc.). New partnerships between DICE and CI-IP, IFEES and BC-Indonesia, have been made and will continue after the project (see below under 3.7).

### 3.6 Sustainability and Legacy

Sustainability (defined here as the local partners taking on full responsibility for ensuring continuation post-DI project) has been achieved for the two DI nurseries and field schools, the *pesantren* environmental curriculum, the Ramadan Green Mosque Campaign in Guguk Malalo (now formally adopted by the *Nagari* government), the *Hutan Nagari* regulation (drafted by the community and the local government) and supported by a bilingual book about the DI project.

The DI project Field Manager has become a full-time staff member of FFI-IP and will manage its entire West Sumatra programme (which consists of province-wide tiger and forest conservation project, a Mentawai gibbon project and a government conservation capacity building project), the Biodiversity and Ecosystem Services Coordinator has a full-time position working as a conservation biology researcher at

UNAND and the Religion and Education Coordinator returned to his hometown to work in graphic design that supports various conservation NGOs in Indonesia, such as FFI-IP.

The new partnerships formed during this DI project are likely to continue: BC and the DI PO submitted a joint proposal to the Asian Development Bank to design a national environmental curriculum for Indonesia (including a component focusing on a faith-based approach to conservation). The BC, CI-IP and IFEEES will continue to work together on religious and education activities in Indonesia, e.g. Dr Fachruddin Mangunjaya (CI-IP) has a long-standing relationship with IFEEES and having been formally introduced and financially co-supported by BC throughout the DI project, will continue to promote the teachings of Islam on protecting the environment in Indonesia; QBar will continue its work within the DI project sites. DICE and FFI-IP continue their partnership in tiger conservation activities in West Sumatra. The DI Field Manager is now working full-time for FFI and will continue his role in overseeing conservation projects and activities in West Sumatra and as such will remain in touch with all of the DI stakeholders.

## 4 Lessons learned, dissemination and communication

The key lesson learned here was that although the participation and feedback from as many partners as possible is important, it should not be obtained at the expense of completing key activities on time, on budget and with the unwavering support of the majority of its partner base. Also, whilst MOUs are often preferred as a means to demonstrate a partner's commitment, they require a substantial investment of time and effort to produce, especially amongst bureaucratic UK and foreign academic institutions. This often leads to a delay in starting project activities. Further, these documents are not legally binding within the host country and thus do not ensure that agreements will be honoured. Therefore, project/activity-based technical agreements with associated timelines were more easily obtained and preferred by this project. It should also be mentioned that no formal agreements were required with village and religious leaders as the relationship was based on trust and mutual understanding between them, project staff and project partners which worked very well. Further, through strong community consultation, the project focused its attention on two instead of the original three proposed *Nagari* which proved to be more realistic in terms of project capacity staff and budget. This did not affect the other outputs which in many cases were exceeded (e.g. the number of hectares replanted).

The information relating to project achievements has been disseminated and applied widely. Materials (Ramadan environmental curriculum, *pesantren* environmental curriculum, Friday prayer templates etc.) produced by the DI project will continue to be used by project partners and stakeholders. Also 100 bilingual copies of the DI book will be distributed amongst project partners and stakeholders as well as being accessible in an electronic format that will firstly be distributed to all Indonesian and international people or organisations engaged by the project, but will also enable continual distribution after project completion.

### 4.1 Darwin identity

The DI logo was prominently displayed in the project HQ (in a prominent part of the West Sumatra provincial capital), on project t-shirts, within all project documentation and meeting/conference and workshop/training banners. The DI was mentioned by name in a BBC world service radio documentary (relayed by 100 local and national stations and several times in the UK, reaching >3 million listeners), local newspaper articles and all popular articles and blogs produced (see under Annex 5). Further, the DI logo was prominently displayed at the joint DI/BC information booth during Environment Week hosted by the Indonesian Ministry of Environment in the Jakarta Convention Centre from 14-17<sup>th</sup> June 2012. The project was attended by 64,175 participants from across Indonesia and project brochures were handed out which included the DI logo and an explanation of the programme and the project in both English and Indonesian. Further, the DI logo will be included in the final project book as well as a description of the programme within its introductory chapter. The DI was also referred to and identified through its logo in all presentations mentioned herein and is referred to in all publications completed and planned.

DI support was recognised both with a clear identity as well as forming part of a larger programme depending on the specific output. Within a local context, it was sometimes useful to explain the DI in terms of an umbrella programme which supported multiple partners.

All of our project partners and stakeholders are familiar with the DI as a distinct entity. However, it was sometimes difficult for local partners to understand and/or remember the exact organisational structure of the DI project in terms of its relationship with DEFRA, the University of Kent (as the implementing agency) and its multiple partner framework. This was also difficult when trying to develop MOUs and which ultimately led to the more easily produced and preferred project-based partner technical agreements. It is worth mentioning that at the national Environmental Expo in Jakarta, (the capital of

Indonesia), at first glance those who were unfamiliar with the programme assumed it was Australian (from the similarly named capital of the Northern Territory) and not British.

## 5 Monitoring and evaluation

A mid-term monitoring and evaluation review for the University of Kent- DI project was conducted by FFI-IP as a project partner. The main review took place from 5-8<sup>th</sup> October 2010 and was conducted by meeting with representatives from the project. The objectives of the internal mid-term review were to: assess programme activities that have been conducted in accordance with the DI work plan; and, discuss work plan development for the remaining project period. This independent report and subsequent follow up meetings with partners was effective and useful for ensuring that project outputs were clearly understood and achieved.

### 5.1 Actions taken in response to annual report reviews

The project received one review in PY1 which was positive and in turn responded to some general queries and suggestions in the PY2 annual report by, a) completing the negotiation of a project-based technical agreement (instead of an MOU) with UNAND which led to the collaboration on various training workshops and the production of a joint DI/UNAND biodiversity manual, b) demonstrating that at the community level, the DI project worked with local religious leaders (PRAs, workshops and Ramadan Campaign); women's and farmer groups (PRAs and via the biodiversity and nursery training workshops) and with the local religious schools (two Ramadan conservation campaigns, seminars and conservation curriculum designed and delivered to local religious schools). From a governance perspective, the religious and customary leaders of both project sites received project and project partner support (maps, biodiversity assessments, public consultations) to aid in their proceedings for the establishment of *Hutan Nagari*. The communities in both project sites remain active in their support of the field schools. Finally, a BBC radio documentary provided local community members and religious leaders in Guguk Malalo with a voice through personal interviews as well as recordings of several Ulama giving conservation-themed sermons in the local mosques. The DI PO also interviewed a leader of a local women's group which was blogged on FFI's website. Detailed information on partner responsibilities and in-country staff was provided as were the Terms of References for DI staff positions. It is also important to thank DEFRA for allowing the project an extension in response to damage caused by the devastating West Sumatra earthquake as this was well received by all project partners and local staff.

## 6 Finance and administration

### 6.1 Project expenditure

#### Staff costs

Staff employed	Proportion of time spent on this work	Date work commenced and finished	Cost (£)
Jeanne McKay, Project Officer	80%	01/07/09-30/06/12	
Yolomalinda, B & E Coordinator	90%	01/07/09-31/03/11	
Jomi Suhendri, Community Outreach	10%	15/01/10-01/31/11	
Fachruddin Mangunjaya, Facilitator	17%	01/07/09-31/03/12	
Realino Nurza	75%	01/07/10-01/11/10	
Part-time field guides	2%	01/12/09-31/03/10	
Y. Dinata, West Sumatran Field Manager	50%	01/01/10-31/03/11	
I. Saakti, Religion and Education Coordinator	100%	01/10/10-31/03/11	
Randa, Office boy/security	100%	01/04/10-31/03/11	
Fieldworkers & Trainers	15%	01/04/10-03/31/11	
F. Khalid, Islamic Expert	6%	13/04/10-17/04/10	
G. Campbell-Smith, Consultant (Questionnaire survey)	1%	02/12/10-06/12/10	
Workshop Support Staff	5%	01/04/10-01/31/11	
Local fieldworkers, Coordinators and Field Manager	Fieldworkers (10%), Coordinators (100%), Field Manager (50%)	01/04/11-31/03/12	
Local Fieldworkers	10%	01/04/12-30/06/12	



### Total Darwin Costs

Item	Original	Final	Variance
Staff costs			- 0.28
Overhead Costs			-
Travel and subsistence			3.46
Operating Costs			0.32
Capital items (see below)			- 0.73
Others (see below)			- 0.28
<b>Total</b>			<b>0.00</b>

### Capital items

Capital items – description	Capital items - location	Capital items – cost (£)
2 lap top computers	Project Office – west Sumatra	
2 printers/scanner, cartridges, paper	Project Office – west Sumatra	
Screen protectors, Computer Equipment, (mouse, Keyboards etc), Vehicle parts & furniture; Materials for Field Schools (x2); Nursery materials seedlings, soil, gardening tools	West Sumatra (Padang, Guguak Malalo and Pakan Rabbaa)	
Billboard	Host Partner	
Vehicle costs	Host Partner	
Tree and plant nursery costs	Host Partner	
Field equipment, vehicle maintenance, office supplies (computer upgrade, printer ink cartridges and new field laptop battery).	Project office and west Sumatra (field sites)	
<b>Total</b>		

### Others

Other items – description	Other items – cost (£)
Books/Outreach materials: project pamphlets, staff business cards, maps, reference books, photocopies of reference materials	
Books, Research Materials	
Book purchases	
Printing costs for project training materials and publications	
<b>Total</b>	

## 6.2 Additional funds or in-kind contributions secured

PY1 (£37,950), PY2 (£11,867), PY3 (£2012)

## 6.3 Value of DI funding

DI funding has enabled the host country and partners the opportunity to pilot, for the first time, a practical means with which to apply a faith-based approach to conservation in West Sumatra. The impact of this funding will continue and build in effect (see under 3.7). Not only has the project received UK academic and media attention (Oxford University, University of Edinburgh, the BBC, etc.) its work has also begun influencing other parts of Indonesia (Banda Aceh, North Sumatra) and Java (through the BC's 'Climate 4 Classroom' (C4C) and C4C Adaptors training programme).

## Annex 1 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>		<p>The prior text within this report describes how progress has taken place through bringing over UK expertise in biodiversity conservation, sustainable use and project management and also expertise in the environmental tenets of Islam. Necessarily, because of the engagement of marginalised people (such as women), the project has also facilitated methods and a culture for the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.</p>	
<p><b>Purpose:</b> Improve understanding amongst local and national stakeholders and enhance their capacity to conserve and manage forests, biodiversity and ecosystem services sustainably and equitably in West Sumatra.</p>	<p>Stakeholder understanding increased by 80% by Yr2. 100% of focal communities conserving forest and ecosystem services through ratified management plan, resulting in behavioural change by Yr3.</p>	<p>Training of 16 local religious leaders, 20 teachers and 5 local community groups completed.</p> <p>Establishment of 2 DI field schools and nurseries (&gt;1,000 seedlings) &amp; associated training completed (&gt;100 people during 3 days in each site).</p> <p>Community mapping conducted (56 participants) and ground-truthed with GPS.</p> <p>Community natural resource use management plans (2) developed by DI staff, partners and stakeholders and approved by both local communities covering &gt;500 hectares in total.</p> <p>Questionnaire surveys administered before and after training workshops showed stakeholder understanding was significantly raised (e.g. from 35% pre-training to 80% post nursery training PY2).</p>	

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
		<p>BBC World Service (WS) radio documentary series (relayed by 100 local and national stations and several times in the UK, reaching &gt;3 million listeners. Newsletter articles (5), FFI's website blog (1), UKC website (1), Facebook page (1) with 195 subscribers, newspaper article (4); international conference (1), UK presentations (4). and on the ground via community training workshops and stakeholder meetings (3). The bilingual DI book on Islam &amp; Conservation (150 pages, 8 chapters and 12 contributors) in final production stage, Articles for peer reviewed publication drafted (2 accepted, 1 in preparation), all training materials (4), Ramadan <i>pesantren</i> conservation curriculum (1) &amp; conservation-themed prayer sermons (2) finalised and distributed to partners.</p>	
<p><b>Output 1.</b> Multi-stakeholder governance framework for forest and ecosystem services established and active on the ground.</p>	<p>Participatory land-use plan (with natural resources use, conservation and agroforest zones) and legally instituted framework (3 <i>Nagari</i>, Yr3).</p>	<p>Participatory land-use plan developed; the establishment of a customary forest governance system (<i>Hutan Nagari</i>) drafted by the local communities and their respective <i>Nagari</i> government. Currently undergoing provincial government verification of the total area registered for each <i>Nagari</i>. Indicator appropriate with the exception of number of <i>Nagari</i> (see under lessons learned).</p>	
<p>Activity 1.1 Establish and support an operational governance mechanism for forest management</p>		<p>(Pakan Raba Timur: <i>Nagari</i> Regulation Drafting Outputs: TORs for 4 required activities completed: focus group discussions (FGDs), community workshops (CWs) completed to determine <i>Nagari</i> borders, public consultations and <i>Nagari</i> Regulation Declaration completed. Guguk Malalo: <i>Nagari</i> Regulation Drafting; Outputs: FGDs and CWs are complete with proposed areas for Islamic management systems, a <i>Nagari</i> Forest Management Unit, <i>Nagari</i> Forest Regulations Committee and a Community Mapping Team were formed to complete the process.</p> <p>At the communities' request, the DI staff and local NGO partner Qbar provided support for the establishment of (<i>Hutan Nagari</i> that adopts the Islamic (<i>Hima</i>) management system (for the first time) and serve as a Best Management Practice pilot for future government replication in West Sumatra.</p>	

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
<b>Output 2.</b> Forest monitoring and protection systems and procedures strengthened and implemented	1 field survey monitoring manual produced, distributed and used to train 30 community and 6 Dept of Forestry (DoF) rangers (25% female, Yr1). 18 joint community/DoF protection and monitoring patrols in forests produce baseline data (Yrs1 & 2) and monitoring data (Yrs 2&3).	1 training course and 1 training manual produced and distributed to 56 community members including 3 Dept of Forestry rangers (1 female). Biodiversity monitoring patrols (16) including 2 Forestry Rangers (1 female) have produced baseline and monitoring data. Biodiversity reports completed for each project site. <i>Nagari</i> Pakan Rabaa Timur contained: 71 bird species (including 15 Near Threatened); 40 mammal species (including 5 Endangered and 1 Critically Endangered); 198 plant species (including the iconic <i>Rafflesia hasseltii suringar</i> and 8 Endangered) and 8 fish species (including 1 Near Threatened); and, ii) <i>Nagari</i> Guguk Malalo contained: 63 bird species (including 4 Near Threatened), 23 mammal species (including the Critically Endangered Sumatran tiger and 5 Endangered), 141 plant species and 8 fish species (including 1 Near Threatened). Indicator appropriate except for the number of available female government rangers (as it was much lower than 25%) and the availability of DoF rangers to attend trainings.	
Activity 2.1. Community training workshops to raise awareness, involve stakeholders and build a locally managed conservation dynamic		Community training workshops held in community mapping, biodiversity assessment training, religious management systems, climate change and ecosystem services. Field school training focused on training local community members in: nursery management, vegetative and generative plant reproduction, organic fertilizer composting and the production of organic fertilizers (73 participants).	
Activity 2.2. Facilitate training and participatory mapping of traditional land-use and natural resource management system		PRA community mapping exercises were used to create ecosystem service maps for each <i>Nagari</i> which were then ground-truthed through 115 data points for Guguk Malalo and 140 data points for Pakan Rabaa Timur to create maps on agroforestry and religious management systems which formed the spatial data required for <i>Hutan Nagari</i> .	
Activity 2.3. Train and support local forest and biodiversity monitoring		3 day biodiversity training courses and a manual produced for local communities and local and government agencies (58 participants in both project sites). Separate rapid biodiversity assessment and community patrolling training were conducted over 3 days in each <i>Nagari</i> (16 participants).	
Activity 2.4. Drafting and signing of local conservation management agreements		Biodiversity assessments conducted in both <i>Nagari</i> , community mapping conducted on ecosystem services, agroforestry systems and religious management systems finalised for each <i>Nagari</i> . A <i>Nagari</i> regulation was drafted by the local community and <i>Nagari</i> government and is awaiting the signature of the provincial government.	
<b>Output 3.</b> Forest and ecosystem services and local livelihood opportunities enhanced.	4 Sumatran MSc students (50% female) complete first-class (>70%) research on agroforestry, forestry, and ecosystem services, livelihood benefits assessed in 3 <i>nagari</i> (Yr2).	2 West Sumatran MSc students completed their coursework and field research and are awaiting University appointments to defend their respective theses; 2 DI Field schools established and locally managed with >75 villagers trained in nursery and agroforestry techniques. The establishment of and training conducted in the field schools and nurseries were designed to empower local	

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
	<p>3 Darwin Field Schools &amp; nurseries established &amp; locally managed in 3 <i>nagari</i> (Yr2), with &gt;75 villagers trained in arboriculture/agroforestry.</p> <p>Agroforest systems of native and commercially important species reforested/replanted in &gt;300 ha in 3 <i>nagari</i> (Yr3).</p>	<p>stakeholders through delivering support to biodiversity and ecosystem services (e.g. managing the nurseries independently) and receiving alternative sources of incomes from NTFPs such as cacao (e.g. 1000 seedlings planted in nurseries) and other high income yielding trees (e.g. 50 agarwood trees planted in one DI pilot plot of degraded land). In PY3 &gt;250 ha were replanted in Pakan Rabaa Timur (&gt;300 people attended the planting ceremony) and 6000 tree seedlings (durian, mahogany, rubber trees) planted in &gt;100 ha of derelict land in Guguk Malalo. A further 100 ha (on land from participating DI Farmer groups) were replanted with cocoa seedlings grown in the DI nurseries (&gt;400 people attended the planting ceremony). Indicators appropriate except for the number of MSc students (see under partners) and number of <i>Nagari</i> (see under Lessons Learned).</p>	
3.1. Establish Darwin Field Schools with community managed tree nurseries		2 Darwin Field schools and nurseries have been established and are under complete community management.	
3.2. Support reforestation and rehabilitation on degraded land		Training conducted in both field schools and nurseries focusing upon identification of land suitability, nursery management including plant care, organic composting and pesticide production and natural resource management based on the Islamic principles with a special focus on <i>Ihya Al-Mahwat</i> (rehabilitation of degraded land).	
3.3. Research into forest ecosystem services		Community mapping exercises and the subsequent ground-truthing for GIS purposes has resulted in three sets of maps (ecosystem services, land use, and religious management systems) for each <i>Nagari</i> , forming part of the information required to establish <i>Hutan Nagari</i> in both project sites.	

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
4. Environmental conservation awareness and education raised and integrated within rural and urban communities and widely disseminated.	<p>Religion and conservation material produced and revised by Yr2, &gt;50 rural religious &amp; &gt;40 urban school teachers , delivered to 20+ urban schools (&gt;300 pupils) &amp; &gt; 3 rural <i>nagari</i> (&gt;500 villagers).</p> <p>100% of target schools (20) using Darwin curriculum in teaching, 20 local environmental projects designed and implemented.</p> <p>3 regional press, coverage in 4 international newsletters (reaching &gt;12,000 people/yr), 1 international conference attended, 4 scientific articles written, 1 project website (Yr3)</p>	<p>Ramadan curriculum from PY2 pilot campaign provided to 160 students and revised for PY3 (360 students). Environmental outreach seminars and training on religion and conservation principles provided in 2 rural <i>Nagari</i> (&gt;500 villagers). Friday prayer sermons given by religious leaders over the month of Ramadan reached &gt; 1,000 rural and urban community village members - each in PY2 and a PY3).</p> <p>British council were provided with religion and conservation curriculum for their participating schools-&gt;20), BBC World Service (WS) radio documentary series (relayed by 100 local and national stations and several times in the UK, reaching &gt;3 million listeners. Newsletter articles (5), FFI's website blog (1), project website (1), DI Facebook page (1), DI Blog site (1), newspaper article (1); international conference (1), UK presentations (2). PY3 focused on the compilation and translation of a multiple partner authored book on the DI project as a case study and the preparation of information for peer reviewed journal submission (2 accepted, 1 in preparation), Book chapter (1), national environmental expo (1). Indicators appropriate.</p>	
4.1. Formalise a religion and environmental conservation curriculum and train religious, traditional and village leaders		<p>Ulama training workshops (2 in Padang and 1 in each project site) conducted for religious, traditional and village leaders. A religious leaders training module was designed and adapted based on feedback received from the workshop participants. A religion and conservation curriculum was developed for <i>pesantrens</i> and piloted during the first conservation-themed Ramadan campaign and then adapted and used for the following Ramadan campaign (see below).</p>	
4.2. Develop and formalize school and university curriculum on a religion and environmental conservation		<p>A conservation themed curriculum and sermon guidelines piloted during the Ramadan Campaign PY2. Sermon guidelines were developed for local <i>Ulamas</i> to deliver conservation messages (9 urban, 1 rural) mosques, 2 conservation-themed religious bulletins were produced and a conservation curriculum was designed specifically for <i>pesantrens</i> for the DI conservation of water-themed Ramadan Campaign (PY3) reaching &gt;1,000 people.</p>	
4.3. Deliver outreach in urban and rural communities, and support delivery of local environmental projects		<p>DI Field Schools have provided outreach and training to local community members, forestry staff (100 participants) and the nurseries have provided seedlings for extensive replanting activities on degraded land and as part of clean up campaigns around important water sources (e.g. Lake Singkarak and local watersheds).</p>	
4.4. Monitor and evaluate changes in attitudes and behaviour towards conservation of different target groups		<p>874 pre and post questionnaires were administered and collected by 15 previously trained DI volunteers for the 2011 DI Ramadan conservation campaign. E.g. results showed raised levels of concern as the proportion of mosque goers who prioritized funding for watershed forest conservation in the exit group (259) was significantly higher than that of the entry group (253). The</p>	

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
		<p><i>pesantren</i> participants before (n = 198) and after (n = 158) also showed an increase in understanding of the benefits provided by watershed forests (from 44.9 % to 62.0%)and that women were more likely to contribute their time to conservation activities</p>	
4.5. Exposure of Darwin Initiative regionally and nationally and internationally		<p>BBC World Service (WS) radio documentary series (relayed by 100 local and national stations and several times in the UK. Newsletter articles (5), UKC website (1), Facebook page (1), project blog (1), newspaper article in the UK's Science Daily (1); international conference (1), UK presentations (4), Indonesian presentations (3),National environmental expo (1).</p>	

## Annex 2 Project's final logframe, including criteria and indicators

### LOGICAL FRAMEWORK

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p>Sub-Goal: West Sumatra's biodiversity-rich forests are effectively managed and conserved through a faith-based conservation initiative that provides sustained ecosystem services to local communities.</p>	<p>100% of focal communities sustainably managing forest areas at project end.  Forest cover mapped (Yrs1 &amp; 3) and showing 95% of project area still intact.</p>	<p>End of project M&amp;E report.  GIS/satellite image data comparisons.</p>	
<p>Purpose Improve understanding amongst local and national stakeholders and enhance their capacity to conserve and manage forests, biodiversity and ecosystem services sustainably and equitably in West Sumatra.</p>	<p>Stakeholder understanding increased by 80% by Yr2. 100% of focal communities conserving forest and ecosystem services through ratified management plan, resulting in behavioural change by Yr3.</p>	<p>M&amp;E report from knowledge and attitude questionnaire surveys, annual spot check field assessments/audits. M&amp;E report using conservation behaviour indicators.</p>	<p><i>Project aims, objectives and activities are unambiguously explained to stakeholders. Partners commit to fulfill project objectives within agreed timeframe and management plan.</i></p>
<p>Outputs 1. Multi-stakeholder governance framework for forest and ecosystem services established and active on the ground.</p>	<p>Participatory land-use plan (with natural resources use, conservation and agroforest zones) and legally instituted framework (3 <i>nagari</i>, Yr3).</p>	<p>Summary of legislation, legal documents, supervision reports, reports on participatory mapping and GIS maps.</p>	<p>Critically important areas identified, e.g. watershed forests. Co-operative relations between stakeholders are developed to ensure effective and equitable partnership.</p>
<p>2. Forest monitoring and protection systems and procedures strengthened and implemented.</p>	<p>1 field survey monitoring manual produced, distributed and used to train 30 community and 6 Dept. Forestry rangers (25% female, Yr1).  18 joint community/Dept. Forestry protection and monitoring patrols in forests produce baseline data (Yr1) and monitoring data (Yrs 2&amp;3).</p>	<p>Field training manual, reports on training and M&amp;E of field teams, annual assessment reports from field co-ordinators.  Patrol reports, wildlife, threat and GIS/satellite image data stored and analysed within database, threat and species trends identified.</p>	<p>Adequate number of trainees is available to represent each village. Representatives complete training, data collection techniques are understood and practiced.  Patrols focus on critically important watershed forests, Dept. Forestry and project staff foster and maintain goodwill within communities and sufficient high-quality data collected.</p>



Project summary	Measurable Indicators	Means of verification	Important Assumptions
3. Forest and ecosystem services and local livelihood opportunities enhanced.	<p>4 Sumatran MSc students (50% female) complete first-class (&gt;70%) research on agroforestry, forestry, and ecosystem services, livelihood benefits assessed in 3 <i>nagari</i> (Yr2).</p> <p>3 Darwin Field Schools &amp; nurseries established &amp; locally managed in 3 <i>nagari</i> (Yr2), with &gt;75 villagers trained in arboriculture/agroforestry.</p> <p>Agroforest systems of native and commercially important species reforested/replanted in &gt;300 ha in 3 <i>nagari</i> (Yr3).</p>	<p>4 dissertations from Uni. Andalas MSc programmes on 'Gender and Forest Management', 'Water Resource Management' and 'Forestry'.</p> <p>Agroforestry needs assessment report, and bi-annual assessments, monthly community M&amp;E reports on species productively.</p> <p>Assessment report by Uni. Andalas on trained nursery officers (3), planting, crop yields and economic evaluation of agroforestry benefits.</p>	<p>Adequate number of representative and qualified graduates is available for selection and completes their studies.</p> <p>Sufficient number of community members attend training. Local communities cooperate with one another to equitably share and manage the livelihood benefits.</p> <p>Adequate numbers of seedlings available and planted according to management plan.</p>
4. Environmental conservation awareness and education raised and integrated within rural and urban communities and widely disseminated.	<p>Religion and conservation material produced and revised by Yr2, &gt;50 rural religious &amp; &gt;40 urban school teachers, delivered to 20+ urban schools (&gt;300 pupils) &amp; &gt; 3 rural <i>nagari</i> (&gt;500 villagers).</p> <p>100% of target schools (20) using Darwin curriculum in teaching, 20 local environmental projects designed and implemented.</p> <p>3 regional press, coverage in 4 international newsletters (reaching &gt;12,000 people/yr), 1 international conference attended, 4 scientific publications, 1 project website (Yr3)</p>	<p>Production of 1 teacher's handbook, 1 education curriculum and 1 book on Islam and conservation.</p> <p>Pre-and post questionnaire surveys on religion and conservation (rural and urban schools).</p> <p>Newspaper clippings, copies of newsletter and published articles, number off hits on website.</p>	<p>Religious leaders remain active in relevant positions village committees, school committee members, outreach focuses on relevant themes, e.g. ecosystem services and benefits.</p> <p>Feedback from recipients is received and incorporated into outreach material. Schools continue to use project teachings within curriculum and independently develop these.</p> <p>Awareness campaign launch well co-ordinated and local media are engaged and provide project coverage/promotion to the public.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Activities</b> (details in work plan)</p> <ul style="list-style-type: none"> <li>1.1. Establish and support an operational governance mechanism for forest management</li> <li>2.1. Community training workshops to raise awareness, involve stakeholders and build a locally managed conservation dynamic</li> <li>2.2. Facilitate training and participatory mapping of traditional land-use and natural resource management system</li> <li>2.3. Train and support local forest and biodiversity monitoring</li> <li>2.4. Drafting and signing of local conservation management agreements</li> <li>3.1. Establish Darwin Field Schools with community managed tree nurseries</li> <li>3.2. Support reforestation and rehabilitation on degraded land</li> <li>3.3. Research into forest ecosystem services</li> <li>4.1. Formalise a religion and environmental conservation curriculum and train religious, traditional and village leaders</li> <li>4.2. Develop and formalize school and university curriculum on a religion and environmental conservation</li> <li>4.3. Deliver outreach in urban and rural communities, and support delivery of local environmental projects</li> <li>4.4. Monitor and evaluate changes in attitudes and behaviour towards conservation of different target groups</li> <li>4.5. Exposure of Darwin Initiative regionally and nationally and internationally</li> </ul>			
<p>Monitoring activities:</p> <p>Training and workshop reports from trainers and trainee/participant feedback will be used to monitor the delivery and effectiveness of Activities 1.1, 2.1-2.4, 3.1 and 4.1-4.2. Forest cover and biodiversity survey data will be collected and analysed to measure trends. Project impact on changing attitudes, knowledge and behaviour will be rigorously addressed through Activity 4.4. The Project Officer will compile all publications and press releases to monitor exposure of Darwin identity (4.5).</p>			

## Annex 3 Project contribution to Articles under the CBD

### Project Contribution to Articles under the Convention on Biological Diversity

Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use	0	Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	0	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation	25	Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation	0	Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity	25	Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures	10	Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
12. Research and Training	0	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness	30	Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts	0	Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources	0	Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair and equitable way of results and benefits.

<b>Article No./Title</b>	<b>Project %</b>	<b>Article Description</b>
16. Access to and Transfer of Technology	0	Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information	10	Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
19. Bio-safety Protocol	0	Countries shall take legislative, administrative or policy measures to provide for the effective participation in biotechnological research activities and to ensure all practicable measures to promote and advance priority access on a fair and equitable basis, especially where they provide the genetic resources for such research.
Other Contribution	0	Smaller contributions (eg of 5%) or less should be summed and included here.
Total %	100%	Check % = total 100

## Annex 4 Standard Measures

Code	Description	Totals (plus additional detail as required)
<b>Training Measures</b>		
2	Number of Masters qualifications obtained	2 (September 2012)
3	Number of other qualifications obtained	1
4b	Number of training weeks provided to undergraduate students	5
4c	Number of postgraduate students receiving training (not 1-3 above)	4
4d	Number of training weeks for postgraduate students	5
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification( ie not categories 1-4 above)	304
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	635
6b	Number of training weeks not leading to formal qualification	6
7	Number of types of training materials produced for use by host country(s)	5
<b>Research Measures</b>		
8	Number of weeks spent by UK project staff on project work in host country(s)	15
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	1
10	Number of formal documents produced to assist work related to species identification, classification and recording.	2
11a	Number of papers published or accepted for publication in peer reviewed journals	2 –and others are currently in preparation dealing with the quantitative results from the project (These will be passed to DI when published)
11b	Number of papers published or accepted for publication elsewhere	2
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	1
<b>Dissemination Measures</b>		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	2

<b>Code</b>	<b>Description</b>	<b>Totals (plus additional detail as required)</b>
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	8
15a	Number of national press releases or publicity articles in host country(s)	1
15b	Number of local press releases or publicity articles in host country(s)	4
15c	Number of national press releases or publicity articles in UK	1
16a	Number of issues of newsletters produced in the host country(s)	2
16b	Estimated circulation of each newsletter in the host country(s)	Tropika (1): 1,500 Hard Copies (HCs) / 9,367 hits Tropika (2): 1,500 HCs >11,000 hits
16c	Estimated circulation of each newsletter in the UK	IFEES (2): HCs:3,000 & >300,000 downloads FFI: Website: >1,000 hits, 4,400 newsletter subscribers 19,500 HCs /450,000 hits, University of Kent newsletter (1)- circulation unknown, DI newsletter (1).
17a	Number of dissemination networks established	1
18c	Number of local TV programme/features in host country	1
19a	Number of national radio interviews/features in host country(s)	1
<b>Physical Measures</b>		
20	Estimated value (£s) of physical assets handed over to host country(s)	£7,690
21	Number of permanent educational/training/research facilities or organisation established	2
22	Number of permanent field plots established	2
23	Value of additional resources raised for project	PY1 (£37,950), PY2 (£11,867), PY3 (£2,012)
Other Measures used by the project and not currently including in DI standard measures		
	N/A	

## Annex 5 Publications

Type * (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Radio documentary	The Climate Connection: Lost in Translation, BBC World Service	BBC World Service, UK <u>and</u> Indonesia	UK: Julian Siddle Indonesia: Dewi Safriti	0
Newsletter article	Beliefs and Biodiversity, Rediscovering religion and conservation in Sumatra, J.E. McKay, Issue 11, November '10	Ravenswood Media, USA	David McGowan	0
Newsletter article	Same as above. <b>**Please note**</b> the above article was picked up and also published through Yale University's Forum on Religion and the Environment (FORE).	FORE News, California Institute of Integral Studies Forum on Religion and Ecology at Yale, USA	<a href="http://fore.research.yale.edu/news/item/beliefs-and-biodiversity-rediscovering-religion-and-conservation-in-sumatra/">http://fore.research.yale.edu/news/item/beliefs-and-biodiversity-rediscovering-religion-and-conservation-in-sumatra/</a>	0
Featured web story/ newsletter article	Notes from the Field: Integrating religion within conservation: Islamic beliefs and Sumatran forest management, J.E.McKay, November 2010	FFI, Cambridge, UK	<a href="http://www.fauna-flora.org/integrating-religion-within-conservation-islamic-beliefs-and-sumatran-forest-management/">http://www.fauna-flora.org/integrating-religion-within-conservation-islamic-beliefs-and-sumatran-forest-management/</a> ; <a href="mailto:Jeanne.e.mckay@gmail.com">Jeanne.e.mckay@gmail.com</a>	0
Newsletter article	Creating Environmental Awareness, J.E.Mckay, Issue No.07, April 2010	Ecolslam, UK	<a href="http://www.ifees.org.uk/">http://www.ifees.org.uk/</a> ;	0
Magazine article	Melestarikan Hutan, Bersama Agama dan Masyarakat Adat Vol 14, no 3&4, Jul-Dec, 2010	Tropika, CI-Indonesia, Jakarta	<a href="http://www.conservation.or.id">www.conservation.or.id</a> ;	0
Online newspaper article	Conservationists Explore Relationship Between Religion and the Environment, December 16, 2010	Science Daily, UK	<a href="http://www.sciencedaily.com/releases/2010/12/101216111701.htm">http://www.sciencedaily.com/releases/2010/12/101216111701.htm</a>	0
Printed newspaper article	Masjid Hijau (Green Mosque), July 2011*	Republika Newspaper, Indonesia		0
Newsletter article	Climate Change Report Wins Award, October, 2011	University of Kent School of Antropology and Conservation newlsetter	<a href="http://www.kent.ac.uk/sac/news/newsletter_2011_2012/Issue3.pdf">www.kent.ac.uk/sac/news/newsletter_2011_2012/Issue3.pdf</a>	0
Newsletter article	Supporting Conservation Efforts Through a Faith-based Approach, Oct, 2011	Darwin Initiative, UK		0

Magazine article	The Lure of Tropical Kalimantan. Mangunjaya, F., 2011*	Asian Geographic, Singapore	<a href="mailto:fachruddin.mangunjaya@gmail.com">fachruddin.mangunjaya@gmail.com</a> ; <a href="http://webcache.googleusercontent.com/search?q=cache:Uzc0KYMxTVEJ:digital.smoov.me/i/36188/121+&amp;cd=1&amp;hl=id&amp;ct=clnk&amp;gl=id&amp;client=firefox-beta">webcache.googleusercontent.com/search?q=cache:Uzc0KYMxTVEJ:digital.smoov.me/i/36188/121+&amp;cd=1&amp;hl=id&amp;ct=clnk&amp;gl=id&amp;client=firefox-beta</a>	0
Journal Article	Bhagwat S A, Dudley N, Harrop S R (2011) <i>Religious following in Biodiversity Hotspots: challenges and opportunities for conservation and development</i>	Conservation Letter 4 (3) 324-240, UK		0
Book Chapter	Gosler A, Bhagwat S, Harrop S R, Bonta M and Tidemann S (2012) <i>Leadership and Listening: Inspiration for Conservation Mission and Advocacy in Topics of Conservation Biology 2</i>	Wiley, Blackwell (in press)		0
Journal Article	Reviving an Islamic Approach for Environmental Conservation in Indonesia. Mangunjaya, F.M. & J. McKay, 2012.	World View Journal, USA (in press).	<a href="http://www.brill.nl/worldviews-global-religions-culture-and-ecology">http://www.brill.nl/worldviews-global-religions-culture-and-ecology</a>	0
Training manual	Biodiversity Training Manual	DI & UNAND		200
Pamphlet	Ramadan Conservation pamphlets	DI & CI		150
Training module	Ulama Training Module	DI, CI-Indonesia		835
Report	PRA Report	Qbar & DI		400
Report	Field School and Nursery Reports*	FFI & DI		750



## Annex 6 Darwin Contacts

<b>Ref No</b>	17-009
<b>Project Title</b>	Integrating religion within conservation: Islamic beliefs and Sumatran forest management
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