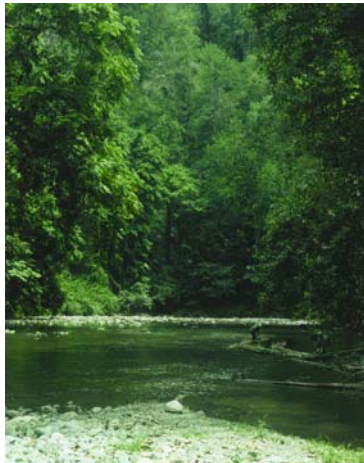




**Establishment and Management  
of Nantu National Park,  
Gorontalo Province,  
Sulawesi**



**FINAL REPORT**

**March 2008**

# ***Darwin Initiative for the Survival of Species***

## ***Final Report***

### **1. Darwin Project Information**

Project Reference No.	<b>13 -028</b>
Project title	<b>Establishment and management of Nantu National Park, Gorontalo Province, Sulawesi</b>
Country	<b>Indonesia</b>
UK Contractor	<b>University of Oxford – Wildlife Conservation Research Unit</b>
Partner Organisation (s)	<b>Yayasan Adudu Nantu Internasional (YANI), Gorontalo University, Bupati and local government in Gorontalo district and province.</b>
Darwin Grant Value	<b>£196,143</b>
Start/End date	<b>29<sup>th</sup> November 2004 to 29<sup>th</sup> November 2007</b>
Project website	<b><a href="http://earth-info-net-babirusa.blogspot.com">http://earth-info-net-babirusa.blogspot.com</a> <a href="http://www.youtube.com/nantuproject">http://www.youtube.com/nantuproject</a> <a href="http://www.babirusa.info">http://www.babirusa.info</a></b>
Author(s), date	<b>Lynn Clayton, Idrus Labantu. 10<sup>th</sup> March 2008</b>

### **2. Project Background/Rationale**

**Location:** This project is located in Sulawesi, Indonesia at the Nantu Forest, Gorontalo Province (0°46'N 120°16'E, figure 1). Sulawesi (227,000 km<sup>2</sup>) is a global hotspot for biodiversity, lying at the centre of the Wallacean bio-geographic region: 62% of its mammals and 34% of its bird species are endemic. Nantu is one of Sulawesi's few remaining intact forest ecosystems. It is accessible only by longboat, a journey of at least half a day upriver over rapids from the nearest road. This forest was gazetted as the Nantu Nature Reserve (31,215 hectares) in 1999 and expanded to 52,000 hectares by the Gorontalo district government in 2004. The Nantu Forest Nature Reserve lies in the upper reaches of northern Sulawesi's largest river, the Paguyaman (99.9 km); more than 25,000 people living downstream in the lower Paguyaman watershed are dependent on this river for their only water supply.

**Circumstances:** Indonesia is one of the most megadiverse countries in the world yet its forests are being destroyed at an estimated rate of two million hectares per year (World Bank, 2001). It is the third largest emitter of greenhouse gases in the world, due to its emissions from forest burning and peatland degradation. Its annual land-use change and forestry emissions alone are estimated at about 2,563 million tons of carbon dioxide equivalent (MtCO<sub>2</sub>e) out of total yearly emissions of around 451 MtCO<sub>2</sub>e (PEACE, 2007).

Indonesia is currently in a governance transition: attitudes are gradually changing with

democratization and decentralization of government providing new opportunities for improved forest management. Gorontalo is a new Indonesian province, created in 2000. The Nantu Forest in Gorontalo Province, Sulawesi, is excellently placed to become a global case study of sound forest management for Indonesia. It has been the site of pioneering forest protection methods, funded by the Darwin Initiative, since 1997 and as a consequence of these it is one of Indonesia's few remaining pristine forest ecosystems. It is the last global stronghold on earth of the endangered babirusa pig (whose total wild population numbers approximately 5000) and is of international importance for Sulawesi's other endemic, endangered species (below). A unique feature of the Nantu Forest is a large natural salt-lick where babirusa (congregations of up to forty individuals), a rare endemic dwarf buffalo called the anoa, groups of locally endemic macaques and a diversity of endemic birdlife can be observed.

## Sulawesi's unique biodiversity

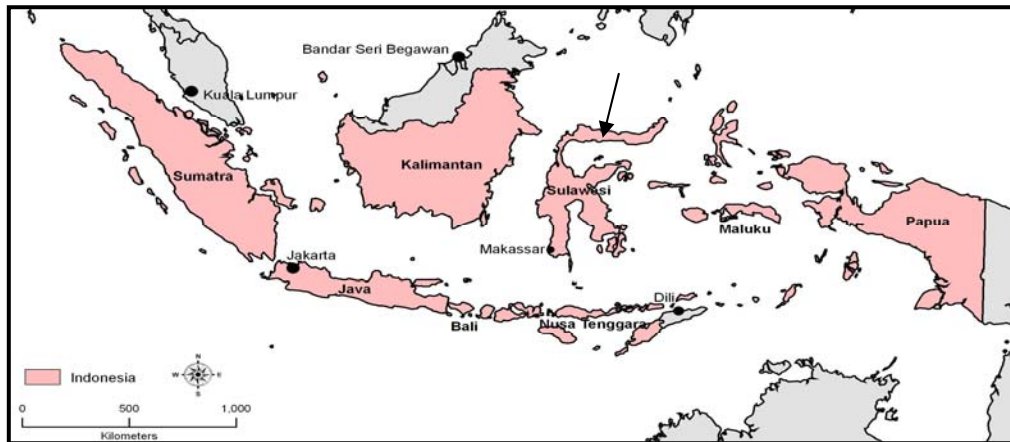
62% of mammals are endemic. Sulawesi has 328 species of birds.



**Problem:** This project aims to fulfil the overwhelming need for sound forest management in Indonesia's provinces at a time of rampant destruction within most of Indonesia's protected areas by establishing the Nantu Forest as a case study of sound forest management and environmental governance.

**Need for Project:** The need for this project was identified by the Bupati (head of district) of Gorontalo, local government and other key stakeholders in Gorontalo province (local universities, police/military and local communities). Local partners had a proven record of commitment to project activities, having previously worked together on a wide range of activities at Nantu. This project was also recommended by an independent mid-term review of a previous Darwin project at Nantu (162/09/012) by ECTF.

**Figure 1:** Location of Nantu Forest (arrow), Gorontalo Province, Sulawesi.



### 3. Project Summary

The **purpose** of this project was to establish the Nantu National Park as a beacon of sound rain forest management and sustainable development for Indonesia.

The **objectives/outputs** were:

1. **To establish a functioning and protected rain forest national park** of 52,000 hectares.
2. **Short, medium and long-term park management plans** developed using participatory processes.
3. **Enhanced sustainable livelihood options** for local communities around the Nantu Forest.
4. **Establishment of strengthened local organizations**, trained local individuals, a management council and a self-sufficient NGO equipped to manage the Nantu Forest beyond the lifetime of donor assistance.
5. **Participatory research programmes** orientated to alternative livelihoods and to Sulawesi's endangered biodiversity.
6. **A local stakeholder forum** to ensure full dialogue with all stakeholder groups.
7. **Extensive dissemination** of lessons learned.

Appendix V contains the project's logical framework.

The only modification to the original objectives was that gazetting of the Nantu Nature Reserve as a National Park was not prioritized. More local management approaches appropriate to Indonesia's programme of regional autonomy were instead developed.

The project is best described by **Articles 8, 12 and 13** of the Convention on Biological Diversity. The project also assisted Indonesia to meet its commitments under the UK-Government of Indonesia Memorandum of Understanding on Forest Law Enforcement and Illegal Logging.

The project **was extremely successful in meeting its objectives**. It established the Nantu Forest as a functioning and protected rain forest reserve (objective 1), provided livelihood assistance to communities living around the reserve (objective 3), developed local capacity to manage the Nantu Reserve and empowered local stakeholders through training on biodiversity and climate change (objective 4), supported research on issues critical to Sulawesi's endangered biodiversity (objective 5), established a stakeholder



forum (objective 6) and implemented wide dissemination of lessons learned (objective 7). Objective 2 (preparation of short, medium and long-term management plans) was not achieved, owing to financial constraints.

**In addition** project actions assisted Indonesia in reducing its emissions from deforestation by preventing destruction of a carbon stock estimated at more than 6 million tons. The project implemented hands-on field training for local stakeholders on carbon stock measuring at Nantu, bringing the climate change message to the forest edge where it is scarcely heard. It also facilitated a meeting between the Governor of Gorontalo Province and the head of the World Bank for Indonesia, in order to emphasize the importance of forests in the battle against climate change at senior Provincial Government level.

#### 4. Scientific, Training, and Technical Assessment

##### Training and capacity building:

##### *Local stakeholders:*

A **three-day field workshop** was held at the Darwin Nantu field training centre on "Climate Change and Carbon Stock Measurement" (17<sup>th</sup>-19<sup>th</sup> July 07). This was attended by thirty local stakeholders representing provincial government departments,



**Figure 2:** Training activities at Nantu Field Station: i) field station, ii) training on biodiversity for local stakeholders, iii) participants of Climate Change training, iv) measurement of carbon stock at Nantu by Climate Change workshop participants.

universities, police forces, NGOs and local community (Figure 2). Training was provided by a four-person World Agroforestry Centre/Brawijaya University team (Professor

Kurniatun Hairiah, Dr. Meine van Noordwijk, Betha Lusiana and Subekti Rahayu). The purpose of this field training was to bring the issues of global warming and the importance of forests in this to people living at and near the forest edge. Training in carbon stock measurement was carried out and considerable enthusiasm for this topic was generated. The carbon stock in two sample plots was measured and found to be approximately 400 tons of carbon per hectare in plot 1 and 200 tons/ha in plot 2. The Nantu Forest and photographs of this workshop were featured in a field manual produced by the World Agroforestry Centre on Carbon Stock measuring (copies of which were later distributed to all participants, copy sent to DI). The Darwin project also facilitated coverage of this event by a team from Metro TV Jakarta, one of Indonesia's top national television stations, hence communicating this knowledge to many more Indonesians throughout the archipelago.

A **three-day residential awareness** and training event was held at the Darwin training centre, Nantu (9-11<sup>th</sup> June 2006). It was attended by 45 local participants (including villagers, local parliament members, provincial police, village heads, transmigrants, village teachers and Gorontalo University undergraduates). Material presented included the Islamic basis for Conservation (Idrus Labantu), Forest Law Enforcement (Police Captain Mohammed Harun), Chronology of the Nantu Forest Reserve (Rachmad Biki, Gorontalo Wildlife Dept) and Wildlife of the Nantu Forest and its Eco-tourism Value (Lynn Clayton). Participants visited the Adudu salt-lick to observe babirusa and other wildlife and a selection of films on the Nantu Reserve were shown in evening sessions. Small group discussions were co-ordinated by Salim Umar (graduate of Gorontalo State University) and resulted in recommendations of boundary marking and participatory management. Reports and copies of national television documentaries on Nantu on CD were widely distributed to key participants.

One **seminar** on "The Role of Islam in Conservation" was organized by this project at Gorontalo State University (30-31<sup>st</sup> July 2005). Four key speakers from West Java (Dr. Arie Budiman, Indonesian Institute of Sciences, Dr. Thontowi (Garut Islamic Boarding School), Mrs. Ani Kartikasari and Mr. Kafil Yamin (Alliance of Religions and Conservation) and forty invited Islamic religious leaders, academics, local government and NGO representatives from throughout Gorontalo Province participated. Religious leaders from all settlements bordering the Nantu Forest attended. Key outputs were the provision of semi-formal training for local Islamic leaders on their role in Conservation and development, and the formation of a task-force to promote this relatively new subject in Gorontalo province, 90% of whose population are Muslim. All participants were equipped with two recent key books on this subject "Wildlife Conservation according to Islam" by Fachruddin Mangunjaya and "Islamic Laws and Obligations on Environment" (Indonesian Forest and Media Campaign). The four invited speakers from West Java also made a field visit to the Nantu Forest (1<sup>st</sup>-2<sup>nd</sup> Aug, 2005). The impact of this event was that key religious figures from throughout Gorontalo Province were empowered to preach the importance of Conservation in their town/village mosques.

A **three-day residential workshop** was held at the Darwin field station (6<sup>th</sup> – 8<sup>th</sup> April 06) for forty local villagers. All settlements bordering the Nantu Forest were represented, as well as key local community figures (school-teachers, village heads and religious leaders) and representatives of transmigration settlers. Material was presented on biodiversity and importance of the Nantu Forest (Irwan Bempah, Gorontalo University and Lynn Clayton), Islamic teachings on conservation (Haji Idrus Labantu, YANI and Gorontalo district government) and forest law enforcement (Captain Mohammad Harun, Gorontalo Police Department). Informal discussion sessions were held on implementation of the Bupati's MoU for Nantu Forest protection. Practical fieldwork was

a key part of this workshop (babirusa viewing at the Adudu salt-lick and birdwatching). A training needs assessment was conducted during this workshop, with questionnaires circulated to all delegates. Participants identified development of agricultural skills, English language for visitor guiding, improved health education and continued education on the importance of retaining forest as key training needs. An evening programme included conservation film shows and informal discussions. The consequence of this event was an increased understanding of biodiversity conservation amongst the reserve immediate neighbours.

A **focus group discussion** was held at Mohiyolo village, facilitated by project partners from Gorontalo University forestry faculty (Irwan Bempah, Iswan Dunggio, Samad Hiola, 10<sup>th</sup> Dec. 2004). Thirty local village stakeholders identified illegal logging, rattan collection, transportation for local people, the need for environmental education and reserve boundary marking as their five key concerns related to the Nantu Reserve. These stakeholders identified i) severe penalties for illegal loggers, ii) clearer regulations and alternative income-generating activities for rattan collectors, iii) improvement of the track linking Mohiyolo to Pangahu village, credit facilities for village industry and assistance with agricultural equipment, iv) provision of a full-time teacher and improved school facilities and v) clearer boundary posts and information boards denoting the Nantu Reserve boundary as the solutions to these concerns.

### ***Schools programme:***

This programme had an extremely positive impact on children, teachers and parents and united village concern for protecting the Nantu Reserve. A Nantu Forest primary school-children's **colouring and poetry reading competition** was held in Gorontalo by YANI and the Gorontaloese local government to coincide with National Environment Day (6<sup>th</sup> June 05) in which fifty children from schools throughout Gorontalo district participated, including six representatives from Pangahu primary school. This highly popular event was repeated, at local request, in 2007 when fifty children and their parents attended, held at the Grand Tower, Limboto (2<sup>nd</sup> June 07) and awards were presented to the winners at the National Environment Day ceremony in Gorontalo (17<sup>th</sup> June 07).

Twelve local children, four teachers and two parents' representatives from Mohiyolo and Pangahu primary schools made a two-day **study visit** to the Nantu Forest (11-12<sup>th</sup> Dec 05), led by Indonesian biologist Ani Kartikasari; activities including teaching on the importance of forest conservation, observing wildlife, drawing and learning conservation songs. This visit was featured on local television (TVRI) and one article appeared in the local newspaper.

**Nantu scholarships** were established for two children from Pangahu village (on the boundary of the Nantu Forest) to attend secondary school in Gorontalo city. The children achieved high grades at Pangahu primary school but their families who would not otherwise be able to afford secondary schooling. Rofika Lihawa and Tonis Gole began secondary school in July 2005 and are progressing outstanding well. Darwin Initiative assistance to these children has had a very positive impact on attitudes towards the Nantu Reserve in their home village of Pangahu.

A **children's conservation library** has been established at Pangahu primary school with the provision of 40 books on wildlife and conservation topics (July 05); 80 children's books on wildlife, English language and general topics were also donated to the Gorontaloese city library. One thousand five hundred copies of "The Special Place in the Forest", the colour story book about the Nantu Forest, were distributed to local

children and libraries. The impact of this programme was increased local ownership and understanding of the Nantu Forest amongst local children and their parents.

**Thirty desks and benches** (each seating three pupils) were provided to Pangahu village primary school by this project (Dec. 04). Australian volunteer teaching Llyn Davies taught **English language and Environmental Education** at Pangahu school each Saturday (a school day) (April – Dec 04). Teaching methods included dramas, singing and English translation of the Darwin children's book "The Special Place in the Forest". Pangahu school-children achieved top grades in district English language tests. Materials (posters, folders, VCDs, stickers, 120 children's tee-shirts printed with the endemic Red-knobbed hornbill) and transport were provided by Darwin project staff.

As a result of a presentation by LMC at Singapore Zoo (May 05) funds were obtained by Alain Compost for preparation of educational films on the babirusa. This project assisted with preparation of these films, which is ongoing.

***Biodiversity educational resources:***

These were widely distributed to local stakeholders, institutions and libraries throughout the project. They included a book of Islamic sermon materials on Conservation and the Environment by Dr. Arie Budiman, Indonesian Institute of Sciences, Forest Conservation books ("Dalam Sengketa/At Loggerheads? Agricultural Expansion, Poverty Reduction and Environment in the Tropical Forests" by Kenneth Chomitz, "Misteri Kekayaan Hayati Hutan Lambusango/Mysteries of Lambusango Forest's Rich Biodiversity" by Henry Ali Singer) and two hundred compact disc copies of Indonesian and international television documentaries about this project and biodiversity conservation topics.

***Support for Doctoral and Masters studies:***

This project funded PhD fieldwork by Mrs. Ani Kartikasari (Lincoln University, New Zealand) on Local Perceptions on Biodiversity in Gorontalo Province. This fieldwork was conducted in two phases, Aug - Dec. 05 and Nov-Dec. 07. Extensive logistical support was also provided by the project team in Gorontalo Province. The ongoing results of this work (summarized in Appendix VIII) were presented at the 10<sup>th</sup> Australasian Conference on Environmental Research, Macquarie University, Australia (06) and to the International Conference on Conservation, University of Waikato, Hamilton, New Zealand, the Centre for International Forestry, Bogor, and to local stakeholders in Gorontalo Province (07).

Mr. Rachmad Djaba was partly funded by this project to study for an MSc. in Environment and Conservation at Gorontalo State University (Sept. 06 – Sept 08). Mr. Djaba is a local environmental NGO co-ordinator in Gorontalo province.

***Bufferzone income-generating activities: cocoa planting:***

**Sixteen thousand five hundred cocoa tree seedlings** were grown from seed and handed over to local settlers for planting as a bufferzone crop on their land. This activity took place at the two villages immediately bordering the Nantu Reserve, Tangga and Pangahu. Village meetings were held at both settlements (Dec. 04), at which project staff consulted with settlers on alternative livelihood options and clarified that this assistance was linked to forest conservation. Cocoa was identified by consensus as the preferred option since it was considered well suited to local conditions, a small number of farmers had already established successful cocoa plots, and cocoa beans had a relatively high market price (Rp 60,000/kilo, about 4 pounds/kilo) harvestable within two years of planting. Farmers groups were formed at both villages (forty farmers at Tangga,



30 at Pangahu).

Seed was purchased from cocoa plantations in Central Sulawesi province by Darwin project staff (Dec. 04) and germinated in two nursery sites, one at Tangga village and the other at Pangahu. Three local staff were employed, one village representative at each nursery to learn and undertake daily seedling care and one experienced nurseryman to co-ordinate seedling growing at both sites and pass on technical guidance to farmers. Seedlings were transplanted into plastic growing bags after germination and ready for handing over to farmers at three months old.

A simple **ceremony and training day** was held at Tangga village (3<sup>rd</sup> April 05) and Pangahu village (18<sup>th</sup> April 05) at which cocoa plants were handed over to farmers. Nine thousand plants were handed over at Tangga (40 farmers each receiving 225 plants) and seven thousand five hundred at Pangahu (30 farmers each receiving 250 plants).

Monitoring of plant survival rates indicated that approximately 68% of plants at Tangga and 55% at Pangahu were surviving after two years.

#### **Training of special forces police and ex-hunters in forest law enforcement:**

Special police force personnel (144 persons) and ex-hunters (6 persons) received “on-the-job” training in 24-hour forest protection activities at Nantu.

#### **Research:**

Monitoring of the number of babirusa and other legally-protected wildlife, as well as all domestic and wild meats on sale in local markets was carried out every week throughout the project.

*Methodology:* A local woman who regularly shops in local markets was employed as a market monitor. She visited Langowan market three times each month at 07.00 am and counted the numbers of products on sale there, as well as checking their price. Her efforts were concentrated at Langowan market, although on one Saturday each month she visited Tomohon market. Previous studies had shown Langowan to be by far the most important local market for wildlife, and Tomohon to be of secondary importance. Saturday was chosen because it is the busiest market day, and the one with most wildlife products on sale; occasional visits to the markets on other days confirmed this to be the case.

*Staff:* Henny Pangemanan was employed to carry out the survey work. She is well qualified to collect consistent information, having collected this data weekly over the last ten years.

*Research findings:* Data for the numbers of babirusa only sold during the project period and previous years at Langowan market are shown below. This data forms part of a long-term study of the trade in Sulawesi’s protected wildlife. This data is currently being analysed and prepared for publication in collaboration with Dr. E.J. Milner-Gulland (Imperial College, University of London); at least one publication will result from this work.

Year	Total number of babirusa observed in market	Number of weekly surveys	Average number of babirusa sold per week
1998	237	28	8.5
1999	481	40	12.0
2000	292	36	8.1
2001	292	33	8.8
2002 *	284	40	7.1
2003	55	35	1.6
2004	32	38	0.8
2005	55	38	1.4
2006	73	38	1.9
2007	62	27	2.3
<b>Total</b>	<b>1863</b>	<b>353</b>	<b>6.2</b>

From the above data it can be seen that the successful prosecution brought against an illegal babirusa trader in August 2002 during Darwin project 162/09/012 has had a sustained long-term deterrent effect on numbers of babirusa traded.

Research on local perceptions about biodiversity in Gorontalo Province was also conducted. This has been peer reviewed and published as "Seeing the Forest as More than its trees: local stakeholders' perceptions of natural forest benefits in Gorontalo, Indonesia (appendix VIII).

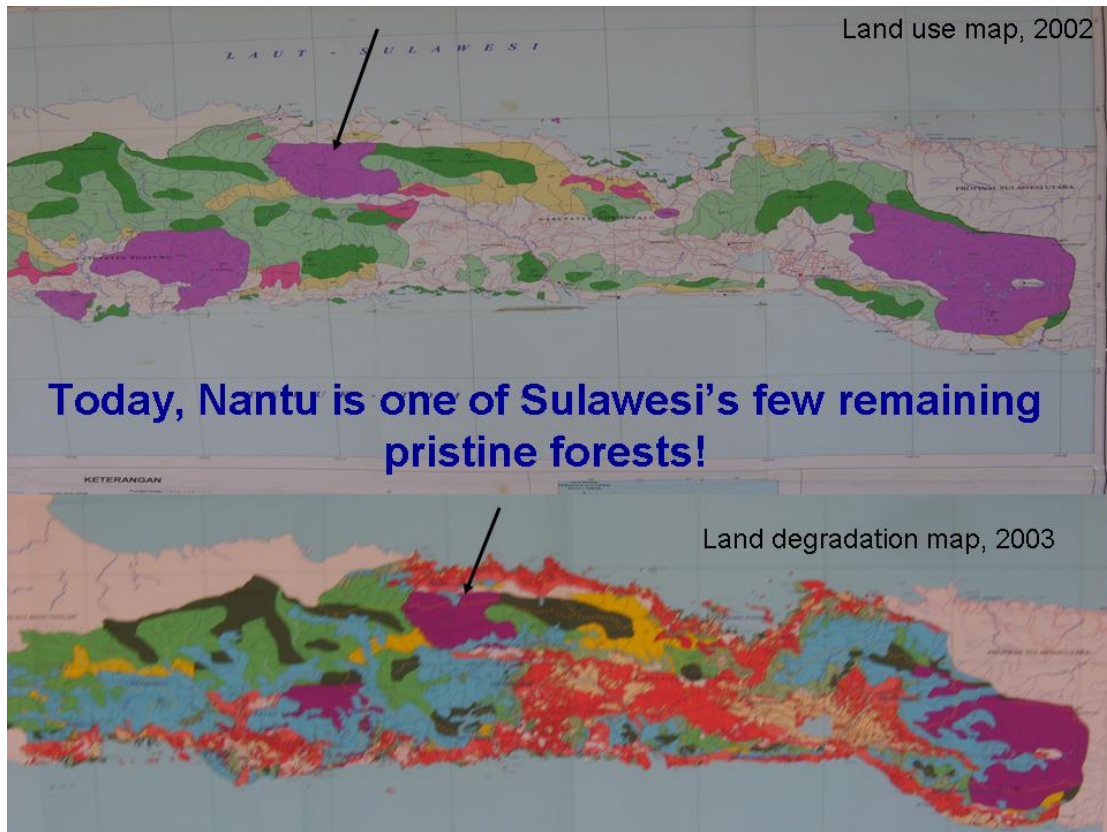
## 5. Project Impacts

The evidence that project achievements have led to the accomplishment of the project purpose is as follows:

### ***Forest protection and law enforcement:***

The Darwin project's Nantu Protection Unit (NPU) was directly responsible for reducing the rate of global forest loss and for preventing extinction of Sulawesi's endemic wildlife. This unit, a collaboration between the Darwin Initiative and the Indonesian Police Force (POLRI) was operational throughout the project, conducting daily patrols to protect the Nantu Forest from illegal logging, burning and wildlife poaching. The impact of the Unit's activities is shown in Figure 3 (below).

Without this activity the Adudu salt-lick and much of the Nantu Nature Reserve would have been destroyed. Four special forces police were deployed continuously at the project base camp (Nov. 04 – Nov. 07) on 24-hour patrol, working alongside three local field assistants. Staff rotated at monthly intervals.



**Figure 3: Upper map** shows formal land use categories in Gorontalo Province (2002). Formally protected areas are shown in purple and Nantu Forest Reserve is marked with arrow. From right to left the three purple areas shown are i) Bogani-Nani Wartabone National Park ii) Nantu Forest Reserve iii) Panua Nature Reserve.

**Lower map** shows actual state of land degradation in Gorontalo Province (2003). Pale blue indicates degraded land and purple indicates intact forest. Of the three legally protected areas only Nantu remains largely intact. This is the result of Darwin project activities. 2003 is the most recent map available; even further degradation in Panua Nature Reserve and Bogani-Nani Wartabone National Park has since taken place.

During this project the NPU handled 10 cases of illegal logging and 6 of illegal rattan collecting. One prosecution against illegal rattan collecting within the reserve was completed by the local authorities (05). They removed three hundred string leg-snares set by poachers to catch babirusa, Sulawesi wild pig and anoa. Their presence was a very significant deterrent to loggers and poachers and represents one of a very few effective forest law enforcement operations in Indonesia. The unit operated in remote conditions and difficult terrain.

The unit's activities also **directly reduced Indonesia's carbon dioxide emissions**. The unit prevented the destruction of at least 6 million tons of carbon within the Nantu Forest. In comparison at least 6 million tons of carbon was lost through burning of forest just outside the Nantu Reserve, in other parts of the Paguyaman watershed (Figure 4).

1989-2007

6 M tons of carbon saved in Nantu  
(30,000 ha of primary forest at 200 tons/ha carbon stock)

6 M tons of carbon lost (Est. loss of 30,000 ha  
forest due to human activities in Paguyaman watershe



**Figure 4:** Impact of Darwin project on reducing CO<sup>2</sup> emissions from deforestation.

***Sustainable livelihoods assistance:***

16,500 cocoa seedlings were supplied to settlers immediately outside the Nantu Reserve, in response to local request (April 2005). This attention to the needs of settlers generated increased local support for the reserve.

***Reserve infrastructure:***

The boundary of the Nantu Reserve remained intact and free from major incursions by slash-and-burn clearers. This is highly unusual compared to other Indonesian protected areas. This was the result of activities by the project and its partners to mark and publicise the reserve boundary, particularly the most gravely threatened southern boundary which is the main front of interaction with settlers. The entire southern boundary of the reserve (20 km) was surveyed by the project team and partners (Gorontalo University undergraduates, local wildlife department staff) to check the condition of wooden marker posts placed by the government mapping department in 2000 (June 06). A joint team comprising project staff, partners and government mapping department personnel reconfirmed the position of all markers along the most threatened 8 km of this boundary (Dec 06). Two thousand five hundred calendars publicising the reserve boundary were prepared and distributed to local settlers living along the reserve boundary (Jan 07, copies sent to DI) and twenty large framed posters (1m x 70 cm) of the reserve boundary were distributed to key village, transmigration, police and government offices. The Bupati of Gorontalo further publicised the reserve's boundary to villagers during a visit to Pangahu (Sept 06).



### **Capacity building and community empowerment for conservation:**

Project capacity building and community empowerment have had a strong impact towards accomplishing the project purpose. Enthusiastic local partners were fully involved in all project activities, hence gaining experience and capability which has strengthened these institutions. The provision of knowledge through field training workshops was warmly welcomed by both local government departments and villagers alike.

### **Dissemination:**

**Project dissemination achievements** have resulted in Nantu being widely known as a case study of good practice. Positive feedback to project dissemination activities provided evidence of success. Methods used included a presentation at the UNFCCC climate conference (Indonesian Ministry of Forestry Conservation side-event) to 400 national and international delegates (Dec. 07), a poster on this project at the UNFCCC conference (displayed at both Ministry of Forestry and the World Agroforestry Centre booths), national “Metro TV” documentary (2 episodes) on the Nantu project (Aug.07) (about which many viewers phoned in to express their support), a feature in Indonesia’s main English-speaking newspaper, the Jakarta Post’s “Weekender” magazine (May 07) and a wide variety of presentations to national and international stakeholders (CIFOR, World Bank, international companies in Jakarta, Ministry of Forestry, Indonesian Institute of Sciences). World Bank and CIFOR colleagues spontaneously



disseminated project successes by email to the international scientific and development community, following presentations to them. In these emails this project was described as “a rare gem” (Dr. Patricia Shanley, CIFOR) and **“much more than a conservation project this project should be considered as a case study and success story on all the following issues: Decentralised forest governance, community based natural resource management, forest law enforcement, community empowerment and carbon storage”** (Dr. Tim Brown, World Bank Jakarta Senior Natural Resources Adviser) and “one of the few conservation projects in Indonesia that is actually working” (Dr. Tony Whitten, World Bank Senior Biodiversity Specialist). Mrs. Ani Kartikasari received a commendation for presentation of her research findings in Gorontalo Province at the International Conference on Conservation, University of Waikato, Hamilton, New Zealand (July 07). A basic project website was also established at [www.babirusa.info](http://www.babirusa.info) and video of the babirusa at the Adudu salt-lick placed at [www.youtube.com/nantu](http://www.youtube.com/nantu) project

The project has been **successful in achieving its purpose**. It has assisted the Government of Indonesia to implement its CBD (particularly articles 8, 12 and 13) and FLEG commitments by protecting 52,000 hectares of rain forest from certain destruction. It has **prevented extinction** of the endangered babirusa pig through active protection of its last global stronghold, and brought about a cessation of illegal babirusa poaching at Nantu. It has contributed to preventing the extinction of Sulawesi extraordinary, endemic Wallacean fauna and flora, including the anoa (a rare dwarf buffalo), Heck’s macaque (a species of macaque endemic to the Gorontalo area), more than 90 species of birds and thousands of other rain forest species, many unknown to science. It has prevented destruction of the unique Adudu salt-lick, where congregations of babirusa and



Sulawesi's other wildlife can be directly observed, and established the Darwin field station as a local centre for biodiversity training. It has **empowered local communities for livelihoods and conservation** and has established a case study of high impact, low cost forest management, considered by both World Bank and CIFOR scientists as a successful case study with impact beyond Indonesia.



**Figure 5:** This project has directly reduced global forest loss by protecting the 52,000 hectare Nantu Forest (with its stands of natural mature *Eucalyptus deglupta* seen left).

The training and capacity building elements of this project have **improved local capacity** to conserve Indonesia's biodiversity work in the following ways:

***Assistance to MSc and PhD students:***

This project provided support towards the fees of Mr. Rachmad Djaba to study for an MSc degree at Gorontalo State University (completion date Autumn 2008). Mr. Djaba is a local environmental activist and director of the Gorontaloese NGO "Lembaga Inovasi Bangun Daerah" (Institute for Innovative Local Development). This assistance will empower him in this role and strengthen civil society environmental groups such as LIBD in Gorontalo Province. This project also supported the fieldwork component of PhD research by Mrs. Ani Kartikasari (University of Lincoln, New Zealand). Ani is an experienced national-level environmentalist in Indonesia and it is expected she will return to Java after completing her thesis, to be active in national conservation issues.

***Training for local stakeholders in Biodiversity Conservation, Agro-Forestry, Islamic basis for Conservation, Climate Change, English language:***

This project's field training has equipped local stakeholders with a wide range of knowledge about their own biological resources. Participants were enthusiastic in sharing materials and lessons learned in their respective institutions (police, provincial government offices, University campuses, mosques, local villages, transmigration settlement and schools) hence ensuring wide dissemination of information. There is an

overwhelming need for quality information of this kind in Gorontalo Province, where it is otherwise scarce.

***Strengthened capacity of local partners, special forces police and ex-hunters to implement biodiversity conservation activities:***

The strengthened capacity of local partners, stakeholder forum participants and the NGO YANI will be of major value for future conservation work in Gorontalo Province. “On-the-job” training for special police forces personnel in 24-hour forest protection activities at Nantu has improved the capacity of these officials to uphold the law. Six ex-hunters were also employed by this project as field assistants; this had a major impact on the perceptions of other hunters in their home villages, raising awareness of the importance of conservation among them.

***Field visits:***

Field visits to the project site by a wide range of government personnel, local stakeholders (judges, police, parliament members, teachers and children) had a profound effect in generating understanding of the importance of biodiversity conservation, which will be applied by these persons in their various positions in society and also to their family members.

**Close collaboration** has been developed between the UK and Indonesian partners. This has a very strong impact not only for biodiversity conservation but also for strengthening ties between Muslim and Christian participants. The project has catalysed improved links between a variety of diverse institutions, linking key international and national scientists with Gorontaloese villagers. The difficulty of access to the Nantu field station, involving extensive pushing of longboats over rapids also facilitated good relationships between colleagues from diverse backgrounds.

**Beneficiaries** of the project include the 25,000 villagers living downstream from the Nantu Forest, whose only water-supply has been secured by protection of the Nantu Forest. Seventy small farmers and their families also benefited from the provision of livelihood assistance (cocoa trees) from this project. At Pangahu pupils benefited from provision of 30 school desks and benches, village ecology library and 2 clinics facilitated by this project implemented by members of Sam Ratulangi University Manado medical faculty. Pangahu villagers benefited from legal advocacy facilitated by this project (year 1) through assistance by a senior Gorontaloese lawyer to resolve village conflicts. Two Pangahu students benefited by full secondary school scholarships to a quality school in Gorontalo city. More than 700 local people were involved directly in project activities, benefiting from training, educational and other activities. Project forest protection activities have had a negative impact on those deriving income from illegal logging, poaching and land clearance.

## **6. Project Outputs**

All **project outputs** are quantified in Appendix II.

**Most agreed outputs** were achieved. The main output not achieved was the preparation of short, medium and long-term participatory reserve management plans. The reason for this was financial difficulties in year 3 which meant that additional time and energy had to be spent on fund-raising. The Café Nantu resource centre was also not established; instead project materials and resources were disseminated via the existing H.B. Yasin library in Gorontalo, hence utilising already existing facilities.

**Four additional outputs** are listed in Appendix II.

Information relating to project outputs and outcomes has been **disseminated** in the following ways:

**1. A presentation of project achievements** was given to four hundred key national and international stakeholders at United Nations Framework Convention on Climate Change (UNFCCC) conference in Bali (Dec. 07), at Indonesian Ministry of Forestry's Conservation session. Poster of project achievements displayed during "Forest Day" at UNFCCC conference.

**2. One Indonesian national television documentary** (2 episodes) has been screened on "Metro TV" and one French documentary has been filmed and is awaiting screening (TF1, "Ushuaia Nature" series). Copies of project television documentaries have been widely distributed to local, national and international stakeholders on VCD and DVD tape.

**3. Copies of climate change workshop training presentations** have been distributed on CD to each participant for use in their own institutions. Copies of other project resources (books, reports etc) have been distributed to project partners and placed in libraries in Gorontalo.

**4. Extensive presentations** have been conducted at local, national and international level to disseminate project outcomes. Target audiences included Gorontalo provincial government, Indonesian Institute of Sciences seminar, British Chamber of Commerce Jakarta, World Bank, CIFOR, European Union FLEG programme Jakarta, Singapore Zoo and University of Waikato New Zealand.

**5. A project website** has been established at [www.babirusa.info](http://www.babirusa.info) and video materials placed on youtube.

**6. Two scientific publications** on project work have been published and several more are in preparation. Copies of these have been distributed to local partners.

It is expected that project outcomes will continue to be disseminated after project completion by project partners; funding is currently being sought to support this.

## 7. Project Expenditure

<i>Item</i>	<i>Budget</i>	<i>Expenditure</i>
Rents, rates, heating, lighting, cleaning		
Post, stationery, telephone		
Travel, subsistence		
Printing		
Conferences, seminars		
Capital items		
Other (includes schools programme and studentships, field supplies, visas, fees for MSc student, research projects etc)		
Salaries		
<b>Total</b>		

There were **no changes** to the budget. Categories where expenditure varied + 10% of the budget were post, travel and conferences. Categories where expenditure varied minus 10% of the budget were rents, printing and capital items. Expenditure on conferences was slightly more than budgeted due to additional events, particularly the seminar on Islam and Conservation, which involved four trainers from West Java. Expenditure on travel and post was higher than expected due to price rises, particularly in the cost of petrol, after the start of this project. Expenditure on rents, printing and capital items was slightly less than anticipated.

## 8. Project Operation and Partnerships

**Ten local partners** worked on project activities. This project is unusual in Indonesia in representing a “bottom-up” approach, with local provincial stakeholders at the forefront of activities. Main partners and their roles were:

Partner	Role in Darwin project implementation	Role in biodiversity issues	CBD article
<b>PEMDA</b> - Gorontalo provincial and district government (led by Governor and Bupati)	Implemented training workshop, co-ordinator of stakeholder forum, implement public awareness activities, active in all project activities.	Increased role under regional autonomy.	8,12,13
<b>POLRI</b> (Indonesian Police Forces – Brimob)	Combating illegal logging. Biodiversity protection patrols. Forest law enforcement.	Prosecuting agency for illegal logging and biodiversity offences.	8
<b>UG</b> (Gorontalo University)	UG graduate research staff is counterpart to Ani Kartikasari. Undergraduates implement Nantu participatory management activities, primary schools awareness, active in training workshops.	Local centre for teaching and research in environmental issues. Campaigning voice through its Student Executive Body (BEM).	8, 12,13
<b>YANI</b>	All project activities		8,12,13
<b>SBKSDA</b> (Indonesian Wildlife Department, Gorontalo – currently a sub-department of North Sulawesi Wildlife Department, Manado)	Protected area management (including boundary marking, public awareness to local settlements around reserve)	Government department with formal responsibility for managing Nature Reserves.	8, 13

These main partnerships were as expected at the project's outset. Project partners were fully involved in project planning. Local government involvement included both key provincial and district government offices (Forestry, Social Affairs, Agriculture) and also village-level government representatives, namely village heads and heads of sub-districts ("kecamatan").

**Other project partners** were: the Ministry of Forestry, Jakarta, the Centre for Research in Biology of the Indonesian Institute of Sciences, Bogor Agricultural University, Sam Ratulangi University, Manado and Brawijaya University, Malang, East Java.

Good collaboration existed with the Operation Wallacea's Lambusango Forest Conservation Project (PKHL), ICRAF's Alternatives to Slash-and-Burn programme, with Conservation International/World Bank's Religions and Conservation Programme and with Birdlife Indonesia. This included provision of their publications ("The Riches of Lambusango Forest" 30 copies, "Nationalism in Conservation" 20 copies and "Carbon Stock Measuring" 30 copies which were distributed to local stakeholders and libraries in Gorontalo Province.

Regular consultation took place with key persons within the Ministry of Forestry responsible for Indonesia's conservation strategy.

**Three international partners** participated or advised on project activities. These were: The World Bank, the World Agro-forestry Centre (ICRAF) and the Centre for International Forestry Research (CIFOR).

The strong partnerships developed between Gorontaloese local government, Gorontalo University and YANI have continued after the end of this project. Both local government and academic institutions are increasingly engaged in biodiversity/ environmental issues, as a result of project activities, recent major flooding in Gorontalo Province and increased national government priority to stopping illegal logging. Community participation is good but funding is needed to support their activities. Private sector companies with corporate social responsibility programmes could play a major role in supporting village-level environmental education activities.

## **9. Monitoring and Evaluation, Lesson learning**

The project's **strategy for monitoring and evaluation** comprised annual monitoring meetings (June 05, Feb 06, July 07), attended by all project partners. The Nantu Protection Unit's daily log books, results of stakeholder forum meetings, comments by participants following project workshops, progress against project milestones and the situation in the Nantu reserve itself were reviewed during these meetings. Indicators of achievement were the fact that Nantu is widely known as one of Sulawesi's few remaining pristine protected areas. This is supported by satellite imagery on which forest clearance is clearly seen extending right up to but not inside the reserve boundary. Television crews, eco-tourists, school-children and local government guests to Nantu all successfully observed babirusa at the Adudu salt-lick and expressed great satisfaction with their Nantu experiences. Training and school's programmes have had a genuine impact in increasing local capacity: evidence for this includes an increased willingness by local people to supply information on illegal activities within the reserve, the enthusiastic responses from participants following attendance at training workshops and an increased pressure on provincial government to stop illegal logging by local students and activists.

**Problems encountered:** This project experienced **financial difficulties** in year 3. This was due to the late start of the project by eight months, due to being placed on a reserve list by the Darwin Initiative while awaiting availability of funding (proposed start date 1<sup>st</sup> April 2004, actual start date 29<sup>th</sup> November 2004). This meant that the project leader's



salary expired on March 31<sup>st</sup> 2007 (this was funded from Nov. 04 - Sept. 05 by the Foreign and Commonwealth Office, via the British Embassy Jakarta and Oct. 05 - March 06 by the Darwin Initiative).

Considerable time and energy in year 3 was therefore diverted towards fund-raising, in an attempt to overcome this problem. This did not result in obtaining of the amount needed and the project facilitator therefore worked full-time in a voluntary capacity between April and November 07.

A further problem was the location of a **transmigration** settlement on the immediate southern boundary of the Nantu Reserve (1 km from the Adudu salt-lick) by the government of Bolaemo district (2005). The Darwin team were active at both provincial and national level to request that this settlement be located at an alternative location. This resulted in the Minister of Forestry requesting to the Department of Transmigration that this settlement be relocated. In spite of this approximately 1000 hectares of secondary forest was burned (Figure 4b) and 200 families from East and Central Java were settled here. Many later returned to Java as conditions were not adequate for the area to be occupied and examples of poor governance were common.

A mid-term review of this project was carried out by ECTF in December 2006.

**Key lessons** to be drawn from the experience of this project are:

1. Forest law enforcement is a continuous, ongoing need. Forest conservation issues are often politicized by persons pursuing separate agendas. Some local NGO's claiming to support conservation may have alternative vested interests, including protecting family members involved in illegal activities. These NGO's activities may be sponsored by local timber barons and land speculators, pursuing their own business agendas.
- 2, Islamic teaching on the environment is an appropriate means of communicating conservation in Gorontalo (90% Muslim).
3. Local government decisions in adjacent districts (Boalemo district) can have profound impacts on project work. Project activities can at best mitigate the impacts of these decisions, e.g. transmigration, on project achievements.

## **10. Actions taken in response to annual report reviews**

Matters raised in the review of annual report 1 were discussed with collaborators and with ECTF reviewer Mr. Pat Hardcastle during his mid-term review of this project.

## **11. Darwin Identity**

The **Darwin Initiative logo and name has been extensively used** on all project publicity and training materials, including national television documentaries, scientific and popular articles, presentations at international conferences, calendars, project workshops and seminars, and in presentations at local and national level. The Darwin logo is also clearly displayed at the Darwin Nantu field station.

Darwin scholars Ani Kartikasari and Rachmad Djaba have clearly acknowledged Darwin Initiative support in their presentations and publications.

**The Darwin Initiative is widely known in Gorontalo Province** as a UK government small grants programme for biodiversity conservation, where funds are used directly at grass-roots level in the host province. A wide range of host country stakeholders, including small farmers, school-children, senior government officials and civil society in northern Sulawesi are familiar with the Darwin Initiative and its aims. Evidence for this includes frequent reference to the Darwin Initiative by a diverse range of local

stakeholders at all levels and sectors of society. The scarcity of Caucasians (2 in a population of 900,000 in Gorontalo Province) in this remote region ensures that the British government's involvement at Nantu is extremely well known. The number of viewers phoning in with positive feedback from national television screenings of documentaries on this project is an indication that people are aware of this Darwin project.

This project was widely recognised as a distinct project with a **clear identity**. The project's remote location meant that larger programmes were scarce.

## 12. Leverage

**The equivalent of £43,250** (£30,000 in cash and £13,250 in kind) was attracted to biodiversity work as a result of this project. This comprises £15,000 from the Whitley Trust to support the Nantu Protection Unit and £15,000 contributed by Singapore Zoo to Alain Compost for preparation of educational films (for children, decision-makers and general public) on the babirusa; this funding was agreed following a presentation by Lynn Clayton at Singapore Zoo.

**The equivalent of £12,250 was donated in-kind** from the following sources: Gorontalonese local government (staff time from the Gorontalonese Forestry, Social, Economic and Environment divisions) £1900; Indonesian special forces police (staff time): £8600; Regent (Bupati) of Gorontalo (provision of project house rent-free for 16 months): £1750.

Mr. Farquhar Stirling (Managing Director Asean, AC Nielsen Jakarta) contributed approximately twenty hours of his time to this project (**valued at £XXXX**).

The project team attended the United Nations Climate Change Conference and presented their work during the Indonesian Ministry of Forestry's Conservation side-event, which was attended by a wide diversity of international donor representatives. The project team comprised Mrs. Ani Kartikasari (presenter), Dr. Abdul Haris Mustari (YANI, Bogor Agricultural University) and Dr. Lynn Clayton. The team also published the project's work through discussions with donors and facilitated a meeting between the Governor of Gorontalo and the World Bank Indonesia Country Director during this Conference.

UK project staff facilitated introductions between host country partners and international donors in order to assist in securing funds for similar work in Gorontalo Province. The UNFCCC provided particular opportunities for this: Lynn Clayton facilitated a meeting between the Governor of Gorontalo and the World Bank's Head of Environment and Indonesia Country Director. One purpose of this meeting was that Nantu might be considered as one of the pilot project sites for Indonesia's national Reducing Emissions from Deforestation and Degradation (REDD) programme.

## 12. Sustainability and Legacy

The project achievement most likely to endure is the very significant advances in public awareness and attitudes to conservation, amongst a diverse range of local stakeholders including children, generated during this project.

Funds are being sought to continue and expand this work after the Darwin project has ended. £15,000 has already been secured from the Whitley Trust for the Nantu Protection Unit. Partners will definitely keep in touch due to the close working relationships which have been established.

The project's conclusions and outputs have been **widely disseminated**. Application of

this project's forest protection activities in other sites is dependent upon funding and approval from the Indonesian Ministry of Forestry, although a key local stakeholder, member of parliament and project partner, Mr. Kris Wartabone, suggested Darwin project methodologies should be applied in Bogani-Nani Wartabone National Park, Gorontalo.

Funds are being sought to develop the Nantu Forest as a demonstration forest/pilot example for avoided deforestation and as a learning site for climate change education and Reduced Emissions from Deforestation and Degradation (REDD) implementation. The Nantu/Paguyaman watershed is particularly appropriate to integrate these topics with poverty reduction as the Nantu Forest is located in the upper part of the watershed while some 25,000 villagers live in the lower (degraded) part of the Paguyaman River. Funds are being sought both from governments, international NGOs and carbon financiers.

### 13. Value for money

The project provided **excellent value for money**. Evidence for this is that the range and scope of project achievements, as presented at the Bali UN Climate Change Conference MoF side-event on Conservation, was more than comparable to those achieved by large international NGOs with much larger budgets, who also presented during this session. The favourable exchange rate of the pound to the Indonesian rupiah meant that every pound achieved a great deal for Indonesian biodiversity conservation. Ninety-nine percent of funding was spent at grass-roots level, which also meant the project achieved excellent value for money.

#### *References:*

PEACE, 2007. Executive Summary. Indonesia and Climate Change: Current Status and Policies.

World Bank, 2001. Indonesia: Environment and Natural Resource Management in a Time of Transition. 129 pp.



Adudu salt-lick, Nantu

## Appendix I: Project Contribution to Articles under the Convention on Biological Diversity (CBD)

<b>Project Contribution to Articles under the Convention on Biological Diversity</b>		
<b>Article No./Title</b>	<b>Project %</b>	<b>Article Description</b>
<b>6. General Measures for Conservation &amp; Sustainable Use</b>	2	Develop national strategies that integrate conservation and sustainable use.
<b>7. Identification and Monitoring</b>	5	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.
<b>8. In-situ Conservation</b>	35	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.
<b>9. Ex-situ Conservation</b>	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.
<b>10. Sustainable Use of Components of Biological Diversity</b>	5	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.
<b>11. Incentive Measures</b>	5	Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
<b>12. Research and Training</b>	20	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).
<b>13. Public Education and Awareness</b>	23	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.

<b>14. Impact Assessment and Minimizing Adverse Impacts</b>	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.
<b>15. Access to Genetic Resources</b>	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>16. Access to and Transfer of Technology</b>	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.
<b>17. Exchange of Information</b>	5	Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
<b>19. Bio-safety Protocol</b>	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.
<b>Total %</b>	<b>100</b>	



## 14. Appendix II Outputs

Code	Explanation	Detail (←expand box)
<b>Training Outputs</b>		
1a	Number of people to submit PhD thesis	1 (Mrs. Ani Kartikasari at Lincoln University, New Zealand, "Local Perceptions of Biodiversity in Gorontalo Province, Sulawesi", expected submission date Autumn 2008)
1b	Number of PhD qualifications obtained	0
2	Number of Masters qualifications obtained	1 (Mr. Rachmad Djaba at Gorontalo State University, MSc in Conservation, completion date Autumn 2008).
3	Number of other qualifications obtained	0
4a	Number of undergraduate students receiving training	4
4b	Number of training weeks provided to undergraduate students	6
4c	Number of postgraduate students receiving training (not 1-3 above)	3
4d	Number of training weeks for postgraduate students	30
5	Number of people receiving other forms of <b>long-term</b> (>1yr) training not leading to formal qualification( i.e not categories 1-4 above)	6 (local project field assistants in reserve protection and management)
6a	Number of people receiving other forms of <b>short-term</b> education/training (i.e not categories 1-5 above)	536
6b	Number of training weeks not leading to formal qualification	864
7	Number of types of training materials produced for use by host country(s)	4 (2 different VCDs on Indonesian biodiversity, 2 biodiversity libraries, 2500 poster calendars, 20 large framed posters on reserve boundary).
<b>Research Outputs</b>		
8	Number of weeks spent by UK project staff on project work in host country	140 by Lynn Clayton
11a	Number of papers published or accepted for publication in peer reviewed journals	1
11b	Number of papers published or accepted for publication elsewhere	1

<b>Dissemination Outputs</b>		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	4 (seminar on Islam and Conservation, year 2; training workshop on biodiversity conservation (2) year 3; training workshop on Climate Change, year 3)
14b	Number of conferences/seminars/ workshops <b>attended</b> at which findings from Darwin project work will be presented/ disseminated.	3 (UNFCCC, Bali, Dec 07, 10 <sup>th</sup> Australasian Conference on Environmental Research, Sydney (06), Waikato University New Zealand (07).
15a	Number of national press releases or publicity articles in host country(s)	4 (EU Indonesian Forest Programme newsletter-2 features, Jakarta Post "Weekender" magazine-1, "Tropis" magazine – 1).
15b	Number of local press releases or publicity articles in host country(s)	7 "Gorontalo Post" newspaper).
18a	Number of national TV programmes/features in host country(s)	New: 3 (TVRI), 2 (Metro TV). Repeated: 12.
18b	Number of national TV programme/features in the UK	0 (French TFI 1x Ushaia Nature documentary).
18c	Number of local TV programme/features in host country	2 (Gorontalo Go-TV)
19b	Number of national radio interviews/features in the UK	1
19c	Number of local radio interviews/features in host country (s)	10
<b>Physical Outputs</b>		
23	Value of additional resources raised for project	Total: £30,000 + £13,250 in kind). £15,000 from Whitley Trust for NPU and £15,000 (from Singapore Zoo for educational films with Alain Compost). In-kind: Mr. Farquhar Stirling (Managing Director AC Nielsen Jakarta), 20 hours: . House lent by Regent for 16 months rent-free: £ 1750. District government staff time and meeting rooms: £ 1900. Special forces personnel time: £ 8600.
New	Darwin Nantu Scholarships to 2 children from Pangahu village (3 years, junior high school	2
	Cases of illegal logging and illegal rattan collection handled by NPU	16
	Cocoa trees handed over to settlers as bufferzone income-generating crop	16,500
	Desks and benches provided to Pangahu village primary school	30

## 15. Appendix III: Publications

<b>Type *</b> (e.g. journals, manual, CDs)	<b>Detail</b> (title, author, year)	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. contact address, website)	<b>Cost £</b>
*Journal: International Journal of Environment and Decision Making	"Seeing the Forest as More than its Trees: Local Stakeholders Perceptions of Natural Forest Benefits in Gorontalo, Indonesia". Kartikasari, S.N. et al, 2007.	-	-	-
*Proceedings: Indonesian Ministry of Forestry Conservation Side-event at UNFCCC, Bali.	"Protecting Sulawesi's Endangered Biodiversity through REDD: a Case Study in Gorontalo Province, Indonesia". L. Clayton et al, 2007.	MoF, Jakarta	-	-
*Popular Article: Jakarta Post "Weekender" magazine	"Guardian of the Forest". Aubrey Belford. 2007	-	www.thejakartapost.com	-

## 16. Appendix IV: Darwin Contacts

<b>Project Title</b>	Establishment and Management of Nantu National Park, Gorontalo Province, Sulawesi
<b>Ref. No.</b>	13 - 028
<b>UK Leader Details</b>	
Name	Dr. Lynn Clayton
Role within Darwin Project	Project leader/facilitator
Address	P.O. Box 1346, Manado 95011, Sulawesi Utara, Indonesia
Phone	
Fax	
Email	
<b>Other UK Contact (if relevant)</b>	
Name	Professor David Macdonald
Role within Darwin Project	UK project administration
Address	Wildlife Conservation Research Unit, University of Oxford, Tubney House, Abingdon Road, Oxon.
Phone	
Fax	
Email	
<b>Partner 1</b>	
Name	Idrus Labantu MSc.
Organisation	YANI and Gorontaloese district government ("camat"/head of Angrek sub-district, North Gorontalo)
Role within Darwin Project	Main partner and YANI secretary
Address	Jl. Nila 5, Hutuo, Limboto, Propinsi Gorontalo, Sulawesi.
Fax	
Email	

## 17. Appendix V: Report of progress and achievements against Logical Framework.

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
<p>Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <p>The conservation of biological diversity,</p> <p>The sustainable use of its components, and</p> <p>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</p>		<p><b>Rate of global forest</b> biodiversity loss reduced.</p> <p><b>Last global stronghold</b> in world of endangered large mammal (babirusa) and other highly endangered endemic rain forest biodiversity actively protected from destruction.</p> <p><b>Avoided deforestation</b> implemented. Genuine change towards forest conservation <b>accountability</b> by Gorontaloese provincial government.</p>	-
<p><b>Purpose:</b> to establish the Nantu National Park as a beacon of sound rain forest management and sustainable development for Indonesia.</p>	<p>Functioning and protected 52,000 ha National Park.</p> <p>Enhanced alternative livelihoods for local communities.</p>	<p><b>Indonesia assisted</b> to implement CBD and FLEG commitments.</p> <p><b>Extinction of endangered</b> large mammal, the babirusa, prevented.</p> <p><b>Nantu Protection Unit</b> operational throughout.</p> <p><b>Community empowerment</b> for livelihoods and conservation: increased support for reserve and reduced economic dependence on forest through provision of agricultural assistance.</p>	-



	Project widely known as national and international case study.	<b>Extensive progress presentations</b> and dissemination have resulted in project becoming known as <b>success story/case study</b> on community based NRM, decentralized forest governance, forest law enforcement, community empowerment and carbon storage.	-
<b>Output 1.</b> A functioning and protected rain forest national park of 52,000 hectares.	Pristine ecosystem with no incursions; local communities fully participative in Park management; law enforcement unit operational.	<b>Nantu Forest remained pristine</b> and largely safe from incursions throughout this period due to Nantu Protection Unit being operational throughout, conducting forest law enforcement patrols. <b>Increased empowerment</b> of local communities in reserve protection.	
Activity 1.1 Nantu Protection Unit operational, boundary marking carried out.		<b>NPU patrolling reserve daily</b> and handled 16 cases of illegal logging and illegal rattan collecting. <b>20 km southern boundary re-checked, reserve boundary publicised</b> through distribution of calendars (2500) and posters (20). Special law enforcement operations against illegal loggers within Nantu Reserve (south-east corner - Limu) implemented (Nov 07).	
<b>Output 2.</b> Short, medium and long-term park management plans developed using participatory processes.	500 copies of short, medium and long-term plans produced and distributed by project partners.	Significant progress at ground level on participatory management; financial difficulties hamper preparation of plans.	
Activity 2.1. Build local support for participatory reserve management.		<b>Informal door-to-door discussions</b> on this topic with all households along southern and eastern reserve boundaries conducted (Aug. 06, March 07). Two village Nantu protection teams established on northern boundary (March 07). Villagers increasingly willing to provide information in confidence on illegal activities, despite high levels of intimidation from illegal logging "mafia".	
<b>Output 3.</b> Enhanced sustainable livelihood options for local communities around the Nantu National Park.	Programmes in agroforestry, animal husbandry, visitor guiding, English language and other needs carried out in three local villages.	<b>16,500 cocoa trees</b> grown from seed in two village nurseries (Tangga and Pangahu) and handed over to settlers for planting on their own land (05/06). <b>English language training</b> provided to teachers and school-children at	

		<p>Pangahu village (04).</p> <p><b>Women's activities</b> weekly at Mohiyolo and Pangahu villages (04/05) for 12 month period led by Mrs. T.Bokings (traditional Gorontaloese embroidery, hairdressing, handicrafts, basic health).</p> <p>Other activities limited by financial constraints.</p>
<p><b>Output 4.</b> Strengthened local organizations, trained local individuals and a self-sufficient NGO equipped to manage the Nantu National Park beyond the lifetime of donor assistance; Nantu Management Council established.</p>	<p>Demonstrated capability of these groups to manage reserve and increased knowledge about biodiversity conservation.</p>	<p><b>Good progress</b> made. <b>Increased capability</b> and knowledge by local stakeholders observable. <b>Improvement towards transparency</b> on forest governance issues (granting of logging permits and proper processing of illegal loggers by Gorontalo's provincial and district forestry offices) as a result both of project influence and current national government policy).</p> <p><b>Strong local NGO</b> (YANI) and individuals.</p>
<p>Activity 4.1. Training/capacity building activities</p>		<p><b>Three field training workshops organized and held at Darwin field station:</b></p> <p><b>i)</b> three-day workshop for 40 local stakeholders on conservation and reserve management, and training needs assessment (April 06).</p> <p><b>ii)</b> three-day workshop on conservation, 45 participants (June 06),</p> <p><b>iii)</b> Climate Change and Carbon stock measurement for 30 local stakeholders (July 07).</p> <p><b>One seminar</b> on Islam and Conservation organized and held at Gorontalo University (July 05). One focus group discussion implemented by local partners at Mohiyolo village, (Dec 04) 30 participants.</p> <p><b>Six local assistants and 144 special forces police personnel</b> trained in reserve protection and forest law enforcement.</p> <p><b>Local NGO members</b>, University students and Wildlife Department staff facilitated to implement awareness and management activities.</p> <p><b>One Gorontaloese graduate</b> assisted to study for MSc. degree in Environment at Gorontalo State University and one Javanese graduate assisted to study for PhD degree at Lincoln University, New Zealand (fieldwork in Gorontalo Province).</p> <p><b>Biodiversity educational resources</b> (books, Islamic sermon materials on Environment and conservation, CDs, children's story book) widely distributed to stakeholders in Gorontalo Province, where such resources</p>

		are scarce/non-existent. <b>Project partners active</b> in all project activities.
Activity 4.2. Public awareness conducted.		Darwin team and local partners conducted door-to-door awareness campaigns at Limu (March 07) and along the entire southern boundary of the Nantu Reserve (Aug. 06). Awareness materials distributed (see Activity 1.1). Extensive school's and scholarships programme (details in section 4).
Activity 4.3 Management council established.		This milestone was not implemented as Gorontalo Province is expected to acquire its own Wildlife Department in 2008, under whose management Nantu comes (i.e. no longer under North Sulawesi).
<b>Output 5.</b> The results of participatory research programmes orientated to alternative livelihoods and to Sulawesi's endangered biodiversity.	At least three local undergraduate theses produced and two papers published in scientific journals.	<b>One PhD thesis</b> in preparation on Local perceptions of Biodiversity amongst Stakeholders in Gorontalo Province (by Ani Kartikasari). <b>Two publications completed</b> (Appendix 7 and 8) and at least two more (on local perceptions and bushmeat trade) in preparation.
Activity 5.1. Social research on Local perceptions of Biodiversity in Gorontalo Province.		Fieldwork in Gorontalo Province completed (Aug-Dec 05 and Nov-Dec 06), thesis preparation ongoing and expected completion date Autumn 08.
Activity 5.2. Market monitoring of bushmeat trade in Sulawesi's endemic and legally-protected wildlife.		<b>Data collection conducted</b> weekly throughout period and data analysis is in progress.
<b>Output 6.</b> A local stakeholder forum to ensure full dialogue with all stakeholder groups.	Resolution of conflict issues through bi-monthly meetings attended by at least 30 persons from all local stakeholder groups.	<b>Stakeholder forum</b> (25 persons) met regularly and provided important mechanism for dialogue and conflict resolution.
Activity 6.1. Stakeholder forum meetings convened.		<b>Meetings held</b> (April, June, Oct 06, March, June 07) at Darwin field station. Forum comprises village heads, district and provincial government officials, local police, University and transmigration representatives, and Darwin/YANI team. Issues discussed included need for transparency by forestry and police processing illegal logging cases, Nantu community/police patrol operations, eco-tourism potential of Nantu and

		updates from key villages (Pangahu, Mohiyolo, Sari Tani/Tangga).
<b>Output 7.</b> Extensive dissemination of lessons learned.	3 national television features, at least 20 publicity articles, 20 local radio features. Café Nantu in operation. Workshops with wide range of local and national stakeholders.	<b>Good progress</b> made. Project increasingly promoted as case study and “rare gem”.
Activity 7.1. Presentations to local, national and international stakeholders		<b>Presentations made</b> to United Nations Climate Change Conference (Bali, Dec 07), CIFOR, World Bank, international companies in Jakarta, Singapore Zoo, Ministry of Forestry, Indonesian Institute of Sciences, Gorontalo provincial government and others. Website upgraded and video of Adudu salt-lick placed at <a href="http://www.youtube.com/nantuproject">www.youtube.com/nantuproject</a> . <b>Research findings disseminated</b> at 10 <sup>th</sup> Australasian Conference on Environmental Research, Australia (06), Waikato University New Zealand (07). Fourteen international eco-tourists facilitated to visit Nantu also disseminated project successes on return to their home countries.
Activity 7.2. Media coverage		<b>One national Indonesian “Metro” television documentary (2 episodes), three Indonesian national press features</b> (“Jakarta Post”, appendix 6, European Union newsletter 2), 7 articles in “Gorontalo Post” newspaper, numerous repeat screenings of earlier project documentaries on Indonesian national tv.

**Appendix 6.** “Guardian of the Forest” Jakarta Post “Weekender Magazine, May 07 (appended as separate file)

**Appendix 7:** “Protecting Sulawesi’s Endangered Biodiversity through REDD: a case study in Gorontalo Province, Indonesia. 2007. L. Clayton, A. Kartikasari, A. Mustari and A. Sarjono. In: Proceedings of Ministry of Forestry Side-event on Indonesian Conservation, Ministry of Forestry, Jakarta (appended as separate file).

**Appendix 8.** “Seeing the Forest as More than its Trees: Local Stakeholders’ Perceptions of Natural Forest Benefits in Gorontalo, Indonesia”. Kartikasari, S.N., Rixecker, S., Espiner (appended as separate file).