



Darwin Initiative for the Survival of Species

Annual Report

Conservation of the Paguyaman Forest

In North Sulawesi, Indonesia

April 2002 – March 2003



1. Darwin Project Information

Project title	<i>Conservation of the Paguyaman Forest in North Sulawesi, Indonesia</i>
Country(ies)	<i>Indonesia</i>
Contractor	<i>Imperial College London</i>
Project Reference No.	<i>162/09/012</i>
Grant Value	<i>189,960</i>
Start/Finishing dates	<i>Original: April 2000 – March 2003. Revised: October 2000 – September 2003</i>
Reporting period	<i>April 2002 – March 2003</i>

2. Project Background

The **Paguyaman Forest** in **Gorontalo Province, Northern Sulawesi**, is a site of international importance for Sulawesi's endemic, endangered wildlife. This 31,000 hectare rain forest was formally gazetted as a protected area by the Indonesian government in 1999 and is one of the last strongholds of the babirusa pig in the world. At the start of this project the Paguyaman Forest was gravely threatened by slash-and-burn clearance, illegal logging and poaching of the babirusa; the project aimed to tackle these problems.

Gorontalo is a new Indonesian province, created in February 2000. This new status has resulted in a new dynamism in Gorontalo, which was formerly part of North Sulawesi province. Strong support for this project is provided by the **Bupati (Regent)** of Gorontalo, a key decision-maker under Indonesia's policy of decentralization. The Bupati is currently leading an initiative to upgrade the Paguyaman Forest to National Park status. This project is taking innovative approaches to forest protection and conservation activities, including pioneering use of special army forces to assist in forest protection, income-generating activities to establish sustainable livelihoods around the reserve, community participation in reserve management and public education and training programmes.

3. Project Objectives

The **purpose** of this project is to establish a functioning nature reserve at the Paguyaman Forest.

The **project objectives** are:

- 1) to establish a **functioning 31,000 hectare rain forest nature reserve**, including reserve infrastructure, protection activities and mobile anti-poaching unit.
- 2) To establish a **Darwin training centre** at this site and conduct training courses here at all levels (from local schools to post-graduate students) and for all sectors of society.

- 3) To produce and implement **management plans** for the future protection and development of the reserve.
- 4) To conduct **internationally-recognised research** on a wide range of endemic, endangered and economically important wildlife and plant species within the reserve, with a focus on sustainable uses of rain forest products and the needs of local people.
- 5) To establish strictly controlled eco-tourism activities and other **innovative income-generating activities** at the reserve and ensure that these are structured to benefit local communities.
- 6) To conduct **public education campaigns** to increase local and regional understanding of, support for and participation in nature conservation.
- 7) To found a **conservation NGO**, based at the reserve, to support and publicise the work of the project and to carry it forward at the end of the Darwin project.

The project end date has been extended to September 2003 with the approval of the Darwin Secretariat.

4. Progress

This project builds on extensive foundation work carried out at Paguyaman over the last twelve years, resulting in the formal gazetting of the Paguyaman Forest Reserve in 1999. Project preparatory activities were carried out between June to October 2000; this project began in October 2000. Key project activities (Oct. 2000 – March 2002) were innovative forest protection activities, extensive public education work, income-generating activities for local communities and anti-poaching operations against illegal wildlife traders.

The key milestones itemized in the project implementation timetable were as follows:

April: MSc student commences research work for their dissertation. Mr. Iswan Dunggio began studying for an MSc in Conservation at Bogor Agricultural University in September 2002 supported by the Darwin Initiative. Iswan is a junior lecturer at Gorontalo University.

July: Preparation of management plans for the reserve. As a result of this Darwin Project the Paguyaman Forest is being proposed for upgrading to a National Park of 52,000 hectares. An academic document supporting this upgrade has been prepared by Yayasan Adudu-Nantu International (YANI), the NGO founded by this project (April 2003) and submitted to the Minister of Forestry. This document represents the first phase of the reserve's management plan.

August: Survey work for possible corridor to Panua reserve started. This has not yet been carried out. The Paguyaman Reserve is being proposed for upgrading to National Park status by inclusion of areas other than Panua nature reserve, hence this survey is now of lesser priority.

September: Five public awareness campaigns started and completed. These have been completed. Materials included twenty-two articles by project staff published in local Gorontalo Post and Manado Post newspapers, seven articles on project activities published in Indonesian Conservation Newsletter (a weekly internet communication with extensive Indonesian and international readership) and four street banners with conservation message displayed in strategic locations

in Gorontalo. YANI secretary Mr. Idrus Labantu conducted two-day awareness campaign at Moliulu settlement on the boundary of the Paguyaman Reserve on 16-17th August, Indonesia's independence day, to district scouts/guides camped there and local communities. Events included film and video shows, cooking competition and colouring competition. **Schools:** An illustrated children's story book, "The Special Place in the Forest" about the babirusa at the Paguyaman Forest, was prepared in the Indonesian language (5000 copies) and is now being distributed to local school-children. One hundred and sixty packs containing the Paguyaman Forest colouring book, colouring pens, exercise books featuring a conservation message and pencils were distributed to Pangahu primary school, Paguyaman (July). Project staff participated in a National Children's Day event in Gorontalo attended by 500 children and their teachers, and presented colouring books and pens there (26th July). **Other:** An illustrated presentation on the project was given to the Governor of Gorontalo Province by project staff (25th July). Project information displays also formed part of a science exhibition in Gorontalo visited by Indonesian President Megawati Sukarnoputri (June). Project literature and conservation documents have also been widely distributed via the YANI secretariat.

Research, monitoring and training programmes continue: These have continued and are described in detail below (see research, training and technical work).

NGO constituted: The establishment of a local NGO, Yayasan Adudu Nantu Internasional (YANI) was completed (July) and considerable progress has been made in establishing YANI as a respected local NGO. A YANI secretariat has been established in Limboto, Gorontalo (August) with desktop computer and email (adudu-nantu@telkom.net). Key personnel are *Director:* Mr. A.H. Mustari, Lecturer in Conservation, Bogor Agricultural University, *Secretary:* Mr. I. Labantu, Social Affairs Department, Gorontalo, *Advisor:* Mr. D. Sinaga, Ministry of Forestry, Jakarta and L. Clayton (Advisor). YANI personnel have built strong relationships with local institutions and government. Mr. A.H. Mustari visited Gorontalo (19th July – 3rd Aug.) and gave presentations at the training workshop, met with the Bupati and Rector of Gorontalo University and wrote numerous articles for local media. He also visited Gorontalo (19th – 28th Dec.) and prepared the first draft of the National Park academic proposal. Mr. D. Sinaga visited Gorontalo (26th March – 11th April); he liaised with all local stakeholders and prepared the final draft of the National Park proposal.

Reserve infrastructure: Construction of one Darwin training centre and one Darwin research station has been completed. These buildings have been constructed using traditional methods, utilising waste wood collected from degraded areas outside the reserve. A further seventy-five kilometres of the reserve boundary was marked by the Indonesian forestry department, with field support from project staff.

October/Dec: Conference organized and held: This milestone has not yet been achieved, due to the diversion of energy/time to other activities. It is likely that a series of more informal workshops/discussions will take the place of this conference during the duration of this phase of the project.

February: Sustainability assessment carried out by external assessors. An independent mid-term review of the project was carried out between 16-25th September by Dr. P. van Gardingen. This was of outstanding benefit to project

staff, and provided the opportunity to examine project sustainability, hence replacing the planned sustainability assessment. A full response to the recommendations made in the MTR is contained in Appendix 1.

March: Workshop, attended by all stakeholders and project participants to plan implementation of long-term management plan's recommendation. This milestone has slipped. It is now scheduled for June.

Additional milestones achieved:

Upgrading of Paguyaman Reserve to National Park: This initiative is being spearheaded by the Bupati of Gorontalo, working together with YANI and Gorontalo University. It resulted from the visit by the Bupati to the Paguyaman Forest in July 2002. An academic document supporting the establishment of a 52,000 hectare Park has been prepared by a team from Gorontalo government, Gorontalo University and YANI; as a result of this informal agreement for this Park has been given by the Minister of Forestry, and a presentation to key Ministry personnel is planned (June). Project staff are working closely with national forestry department staff to achieve the formal creation of the Nantu (Paguyaman) National Park by August 2003. This would coincide with celebrations to mark the conclusion of various development projects in Gorontalo, attended by several ministers, and also birthday celebrations of the Bupati; the Minister of Forestry has been invited to Gorontalo for this declaration and to give a lecture at Gorontalo University in August.

One international television feature: Project staff worked with BBC television filming babirusa at Paguyaman for the David Attenborough series "The Life of Mammals" (30th July – 14th August). An article on this project was published in BBC Wildlife Magazine (Jan. 2003), coinciding with this film. The support of the Darwin Initiative was fully acknowledged in this article.

Wildlife law enforcement: The first ever successful prosecution against a babirusa trader to take place in Sulawesi was completed as a result of this project (August). Project staff acted as witnesses to this case and liaised with judges and senior police. The offender received a four-month jail sentence; he had been detained by a project mobile anti-poaching patrol in March 2002. A second prosecution is still in progress. Copies of Indonesian wildlife laws continued to be distributed to local police and villagers.

Forest protection activities: Forest protection activities at Paguyaman have continued throughout this period. Six special forces soldiers have been deployed continuously at the project base camp on twenty-four hour patrol (April – Oct. 2002), supported by five project assistants. The number of special forces personnel was reduced to four persons (Dec. 2002 – March 2003) each month, given the improved situation. These personnel are active against illegal logging within the reserve; two illegal chainsaws were detained by them (Sept.). A court case against one of these chainsaw owners is nearing completion, with support from project staff.

One scientific paper published: The trade in babirusas and wild pigs in North Sulawesi, Indonesia. *Ecological Economics* 42 (2002) 165-183.

CIFOR conference: Mr. Idrus Labantu attended a conference on Social Forestry at CIFOR, Bogor (11-13th Sept), together with the Bupati of Gorontalo.

Research, training and technical work:

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 has continued weekly throughout this period. Numbers of babirusa on sale have declined to 3-5 individuals per week at the key wildlife market, Langowan. This is the result of project law enforcement efforts, particularly the court case against the trader detained by the project anti-poaching patrol, and by increased patrols by the Indonesian wildlife department, applying methodology pioneered by this project. Biodiversity monitoring transects (5 km) have been established at the Paguyaman Forest by project counterpart Mr. A. H. Mustari and training given to project assistants in line-transect monitoring methods. These transects have been surveyed on a weekly basis. Monitoring of survival and growth rates of teak trees handed over to local settlers as part of project income-generating activities is continuing. **Training:** Six project assistants and a total of seventy-two special forces personnel have been trained in protected area protection and management. A three-day training workshop was held at the newly constructed Darwin training centre (19th-21st July), attended by 30 local villagers representing settlements all around the reserve. Topics discussed included the importance of the Paguyaman Forest's wildlife (presented by Mr. A. H. Mustari), conservation based on the Islamic religion (Mr. I. Labantu), the potential of ecotourism (L. Clayton), law enforcement (Police Captain P. Sampelan) and agroforestry (Mr. Nasadi). Simple training in tree propagation methods was given; practical fieldwork (birdwatching, wildlife viewing, plant identification etc) was carried out and evening film shows with a conservation message screened. This event had a strong catalytic effect, participants subsequently passing on information gained to others and becoming active in reserve protection activities.

There have not been any significant difficulties encountered during the year.

The design of the project has remained as previously envisaged.

The timetable (workplan) for the next reporting period is as follows:

June: Mr. A.H.Mustari and Mr. D. Sinaga visit Gorontalo/Paguyaman (12th – 25th June). Indonesian national television Metro TV visit Paguyaman (13th – 21st June). Biodiversity survey of Paguyaman (weeks 2-3). Planned presentation at Ministry of Forestry and discussions with other possible project partners, Jakarta.

July: Liaison with national government forestry officials regarding creation of Nantu National Park.

August: Planned formal gazetting of National Park, Gorontalo, by Minister of Forestry.

September: Transition to planned Phase II of project.

5. Partnerships

Close collaboration has continued between project staff and host country partners over the last year. These collaborations have been extremely fruitful and have not involved any problems.

The project has formed new collaborations with two USAID-funded projects in Indonesia, the Bunaken Marine Park Conservation Program and the Sungai Wain Forest Conservation Project in East Kalimantan. All links described in previous Annual Reports have also been maintained.

6. Impact and Sustainability

The project has a good profile within Indonesia. Project work has been promoted locally through a wide range of media, including local radio, local and national television and the weekly Indonesian internet conservation newsletter. Meetings were held by project staff with the Assistant to the Minister of Forestry, Secretary General for the Ministry of Forestry and Director General for Conservation in Jakarta (April), in order to update these officials on project progress and activities by YANI. A progress update was given to the British Ambassador and First Secretary, British Embassy (Political and Economic) in Jakarta in April. The project has an excellent profile at provincial level.

There is substantial evidence for increasing interest and capacity for biodiversity conservation resulting from this project. This includes the active commitment to reserve conservation now shown by the Bupati, local government and Gorontalo University. Close working partnerships between project staff and these institutions have significantly strengthened their capacity to achieve conservation: tangible evidence of this is the National Park academic document produced by these authors and the presentation prepared for the Ministry of Forestry, Jakarta by this team. Attitudes towards conservation in Gorontalo are now significantly more positive than at the beginning of this project, as a result of project public awareness campaigns. Capacity for biodiversity conservation has also been increased by the pioneering use of special forces personnel for forest protection; this is the first time such forces have been employed for conservation anywhere in Indonesia and is directly responsible for the Paguyaman forest being maintained in a pristine condition, extremely rare in Indonesia.

A two-year post project exit phase is planned for this project. The NGO YANI established by the project has made substantial progress but requires additional time to ensure long-term sustainability of project outcomes.

7. **Post-Project Follow up Activities** (max 300 words)

This project has already been invited to apply for post-project funding. We are very keen to apply for this and are currently preparing the application for a two-year period. A grant of 85,000 pounds has already been awarded from the Foreign and Commonwealth Office's Environment Project Fund towards the next phase of this project.

8. **Outputs, Outcomes and Dissemination**

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

Code No.	Quantity	Description
2	1	One masters student (Iswan Dunggio, junior lecturer Gorontalo University) studying for MSc degree in Conservation at Bogor Agricultural University (Sept. 2002 – Aug. 2004).
3	1	Idrus Labantu (YANI secretary) attended three-week training course in Environmental Impact Assessment (“AMDAL”) at Gorontalo teacher training college.
5	6	Six project assistants each received 40 weeks training

		in reserve protection/management and biodiversity monitoring.
6a	102	Thirty villagers received three days training in wildlife conservation, eco-tourism, law enforcement and agroforestry (July 2002); seventy-two special army forces personnel received four weeks training in forest protection (April 2002 – March 2003).
6b		301 weeks.
7	Five types	i) Illustrated children’s story book about the babirusa and the Paguyaman Forest in the Indonesian language produced and distributed to children in villages around the Paguyaman reserve (5000 copies); ii) simple calender promoting conservation of Paguyaman distributed throughout Gorontalo district (2000 copies); iii) seven types of stickers produced and distributed (1000 of each design); iv) copies of Indonesian wildlife laws distributed to local stakeholders (1000 copies of each of 3 books); v) four banners with conservation message displayed in Gorontalo city.
8	48	Lynn Clayton in Indonesia for 48 weeks.
9	1	One academic document proposing upgrade of Paguyaman Forest Reserve to National Park status prepared, submitted to Indonesian Minister of Forestry (April, 2003).
11a	1	<i>The trade in babirusas and wild pigs in North Sulawesi, Indonesia.</i> Ecological Economics 42 (2002) 165-183.
15a	8	Seven articles on project in Indonesian Conservation Newsletter, a weekly internet communication with extensive Indonesian and international readership; one article in Time Magazine: <i>Tinggal Lima Ribu, Masih Terus Diburu.</i> Tempo, pp. 46-7. April 2003.
15b	23	Twenty-two articles on project in local newspaper “Hariang Gorontalo Post”; one article in “Manado Post” newspaper.
15c	1	One article in BBC Wildlife Magazine: <i>Babirusa: Tusk Master</i> , Jan. 2003, pp. 52-57.
18b	1	Babirusa at Paguyaman Forest filmed and featured in BBC television’s “ <i>The Life of Mammals</i> ” series (programme 6, “The Opportunists”) by Sir David Attenborough.
19c	10	Ten local radio interviews/features/interactive discussions on project in Gorontalo (on Poliyama local radio and Radio Republic Indonesia).
20	5000	Five thousand pounds.
21	2	One permanent Darwin training centre; one permanent

		Darwin research centre.
23	165,000	Eighty-thousand pounds awarded to LMC from Foreign and Commonwealth Office Environment Project Fund (for period Oct. 2001 – Sept. 2003). Eighty-five thousand pounds awarded to LMC from Foreign Office Environment Project Fund (for period October 2003 – Sept. 2005).

Most agreed outputs and many additional ones have been achieved. The planned conference has not yet been carried out, due to the diversion of time and energy to the National Park proposal. This will be rescheduled for the proposed Phase II of this project. Some training outputs have been revised: for example visitor guiding courses are not yet appropriate and local stakeholders identified a need to be provided with English training to facilitate visitor guiding. A weekly English language and Environment Education class taught by a Gorontaloese teacher fluent in English has therefore been organized by project staff at Pangahu school, Paguyaman (May 2003 onwards).

Table 2: Publications

Type * (e.g. journal paper, book, manual, CD)	Detail (e.g. title, authors, journal, year, pages)	Publishers (name, city)	Available from (e.g. contact address, email address, website)	Cost £
Journal *	<i>The trade in babirusas and wild pigs in North Sulawesi.</i> E.J. Milner-Gulland and L.M. Clayton. Ecological Economics 42 (2002) 165-183	Elsevier	www.elsevier.com/locate/ecocon	-
Magazine *	<i>Babirusa: Tusk master.</i> L.M. Clayton. BBC Wildlife Magazine 21 (1), 52-57.	BBC Magazines, London	BBC Wildlife, P.O. Box 279, Sittingbourne, Kent ME9 8DF. wildlife@galleon.co.uk	
Children's Book *	<i>Tempat Istimewa di Dalam Hutan (The Special Place in the Forest)</i> , M. Colbeck and L. Clayton. 2003.	YANI	P.O. Box 1346, Manado 95011, Sulut, Indonesia. dr_lynn@manado.wasantara.net.id	

Report *	<i>Suatu Tinjauan Ekologis Tentang Kemungkinan Pengelolaan Suaka Margasatwa Nantu, Hutan Lindung Boliyohuto dan Hutan Produksi Terbatas Boliyohuto Sebagai Taman Nasional Nantu- Boliyohuto Di Kabupaten Gorontalo Provinsi Gorontalo. Hi. A.H. Pakaya et al. 2003.</i>	YANI	P.O. Box 1346, Manado 95011, Sulut, Indonesia. dr_lynn@manado. wasantara.net.id
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The scientific paper has been translated into the Indonesian language and distributed to the libraries of national and local research institutions. Five thousand copies of the children's book are being distributed to local children; copies of this book have also been disseminated to appropriate government institutions and other colleagues. The academic document proposing the National Park has been distributed to appropriate key senior decision makers at the Ministry of Forestry, Jakarta. A project website is planned on which these publications could be made readily available for future access.

Project Expenditure

Table 3: Project expenditure during the reporting period

Item	Budget	Expenditure
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10. Monitoring, Evaluation and Lessons

The key method of project monitoring/evaluation this year was the independent mid-term review conducted in September 2002, which provided a detailed assessment of project achievements

11. Author / Date Lynn Clayton. 30th May 2003.