

322

oppdragsmelding

Planning of a research project
on rainforest eagles.
Report from a trip to Indonesia

Nils Røv
Jan Ove Gjershaug



NINA

NORSK INSTITUTT FOR NATURFORSKNING

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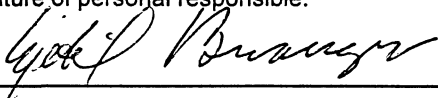
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Abstract

Røv, N. & Gjershaug, J.O. 1994. Planning of a research project on rainforest eagles. Report from a trip to Indonesia. - NINA Oppdragsmelding 322: 1-11.

This report describes a 3 week trip to Indonesia in August-September 1994. Contacts were made with the Indonesian Ministry of State for Environment, as well as with potential cooperative partners within the Directorate General of Forest Protection and Nature Conservation (PHPA), and the Indonesian Programme Office of the Worldwide Fund for Nature (WWF) and BirdLife International. Two potential study areas for the two eagle species were visited and potential field assistants/guides contacted.

Key word: Environmental cooperation Norway - Indonesia - *Aquila gurneyi* - *Harpyopsis novaeguineae* - Gurney's Eagle - New Guinea Harpy Eagle.

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Denne rapporten beskriver en 3 ukers tur til Indonesia i august-september 1994. Det ble tatt kontakt med det indonesiske miljøverndepartementet og mulige samarbeidspartnere som naturverndirektoratet (PHPA), WWF og Birdlife International. To potensielle studieområder for de to ørneartene ble besøkt, og potensielle feltassistenter/guides ble kontaktet.

Emneord: Miljøvernssamarbeid Norge - Indonesia - *Aquila gurneyi* - *Harpyopsis novaeguineae*

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1 Introduction

In connection with the Environmental Co-operation between the Republic of Indonesia and the Kingdom of Norway, a project proposal on a study of conservation biology of rain forest eagles in Eastern Indonesia has been developed by the Norwegian Institute for Nature Research (NINA) in close co-operation with the Directorate for Nature Management (DN) in Norway (see Appendix 1). The implementation of the project will not start before the approval of the 1995 budget, probably in March 1995. The project has not yet secured financing under the Environmental Co-operation. However, NINA was encouraged by the Norwegian Ministry of Environment to establish informal contacts with relevant experts and institutions in Indonesia, and to inform the Ministry early in 1995 if the institute still consider the project to be of current interest. Accordingly NINA decided to prepare a more detailed project proposal.

A fund for strategic planning was allocated from the NINA budget for 1994. On that basis the authors were granted financial support from the institute to make a three week visit to Indonesia during August-September 1994. The visit was planned in co-operation with DN which informed the Indonesian Ministry of State for Environment about the trip.

The aims of the journey were:

- * To make informal contacts with the Ministry of State for Environment and other agencies, organisations or experts in Indonesia.
- * To visit possible study areas in Halmahera and Irian Jaya and if possible to localise established pairs of eagles.
- * To contact English speaking persons skilled in Indonesian, and local languages, who might serve as guides and contact persons vs. the local people in the study areas.
- * To contact local people with special knowledge of the study areas and their fauna and who might be engaged as field assistants.
- * To obtain relevant knowledge about the country. This is considered to be of importance for the preparation of more detailed plans, including estimating the budget, cost sharing, time schedules, etc.

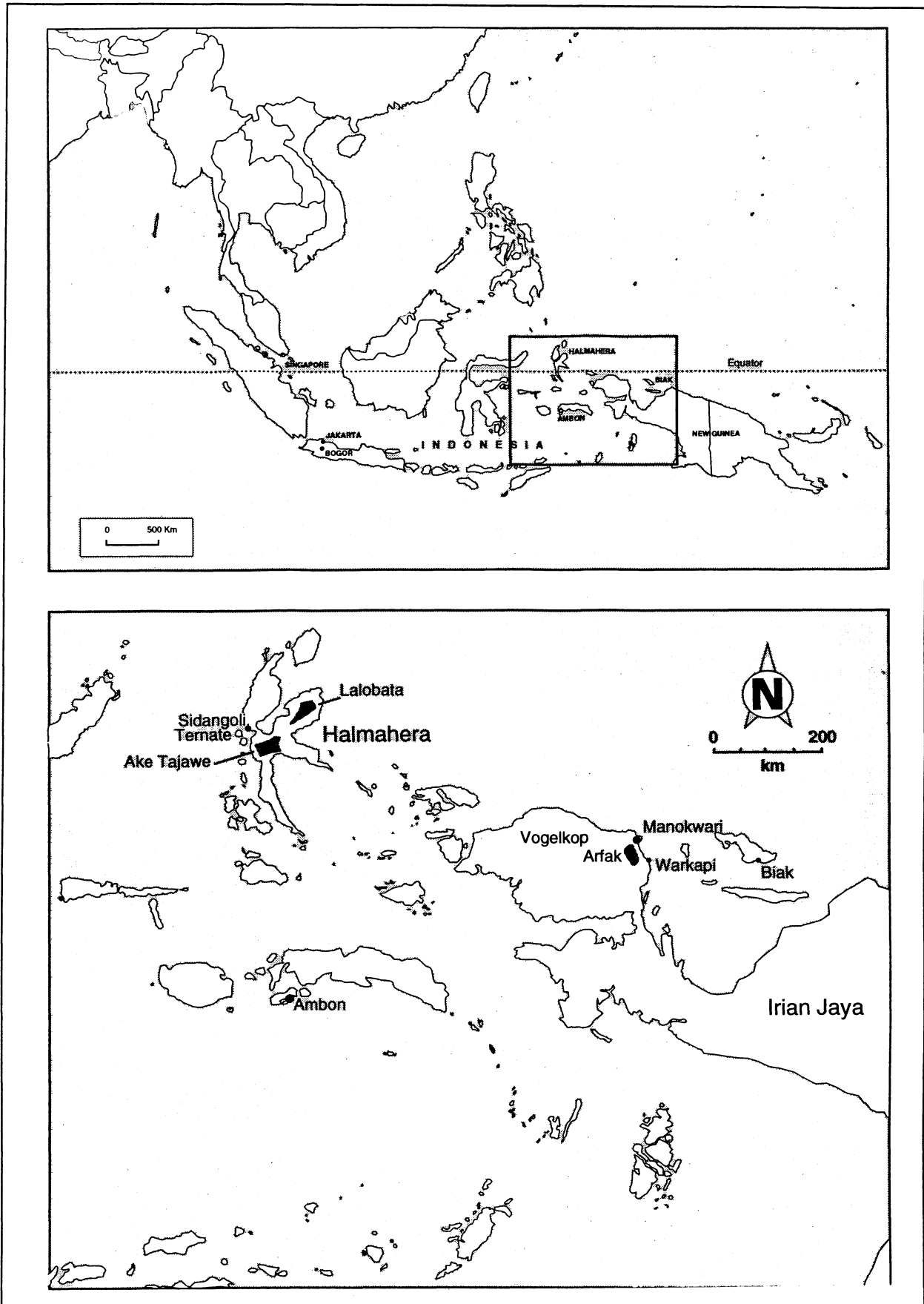


Figure 1. Map of Indonesia with potential study areas on Halmahera and Irian Jaya.

2 Time table

Participants:

Nils Røv (researcher NINA).

Jan Ove Gjershaug (chief technician NINA).

- Monday August 29 1994; Left Trondheim for Oslo.
- Tuesday Aug. 30; Left Oslo for Jakarta.
- Wednesday Aug. 31; Arrived Jakarta.
- Thursday September 1; Visit to Jakarta Zoo, looking for eagles in captivity. Phone to Mr. Tonny Soehartono at PHPA.
- Friday Sep. 2; Meeting with WWF Indonesia Programme Office, Jakarta.
- Friday Sep. 2; Meeting with BirdLife International, Indonesia Programme Office, Bogor.
- Saturday Sep. 3; Informal meeting with Assistant Minister and staff members from the Ministry of State for Environment in Jakarta.
- Saturday Sep. 3; Left Jakarta for Mt. Gede-Pangrango National Park near Bogor.
- Sunday Sep. 4; Visit to Mt. Gede-Pangrango National Park, one of BirdLife's study areas for Javan Hawk Eagle.
- Monday Sep. 5; Left Jakarta for Ambon, where we met staff members from BirdLife's Moluccan Office.
- Tuesday Sep. 6; Left Ambon for Ternate.
- Wednesday Sep. 7; Arrived Halmahera, visit to study area for Gurney's Eagle.
- Thursday Sep. 8; Left Halmahera for Ternate.
- Friday Sep. 9; Left Ternate for Biak.
- Saturday Sep. 10; Arrived Manokwari in Irian Jaya. Meeting with WWF Irian Jaya office.
- Sunday Sep. 11; Visit to Warkapi to find guides for the Arfak expedition.
- Monday Sep. 12 to Thursday Sep. 15; Expedition from Warkapi to Arfak mountains (potential study area for New Guinea Harpy Eagle).
- Thursday Sep. 15; Left Warkapi for Manokwari.
- Friday Sep. 16; Left Manokwari for Biak.
- Saturday Sep. 17; Left Biak for Jakarta.
- Sunday Sep. 18; Left Jakarta for Trondheim.
- Monday Sep. 19; Arrived Trondheim.

3 Contacts in Jakarta and Bogor

Directorate General of Forest Protection and Nature Conservation (PHPA) under Ministry of Forestry

We have been in contact with Mr. Tonny Soehartono, Sub-Director of Species Conservation, before our trip. Unfortunately it was not possible to meet Mr. Soehartono during our stay in Jakarta, but we had a fruitful conversation with him over the telephone on September 1. He was informed about the project plans and our visit to Indonesia. We promised to keep him informed about the project

PHPA has co-operative programmes on bird conservation with BirdLife International on Halmahera and with WWF in the Arfak area in Irian Jaya. Our project will be of particular relevance to the PHPA programme on status assessments and management oriented surveys on endemic and/or threatened birds and their habitats.

World Wide Fund For Nature (WWF) Indonesia Programme.

On September 2 we had a meeting in Jakarta with Dr. Russell Betts, WWF's representative in Indonesia. We discussed the possibility for co-operation in the Arfak area in Irian Jaya, where WWF has been working for many years in co-operation with PHPA. Their local knowledge will be of great help for our project, and we will contribute with information on the local fauna from the area. Dr. Betts and his staff were very willing to help, and we were given access to their published and unpublished reports from Irian Jaya. We obtained copies of some reports and maps from the Arfak area. They also made contact with their Manokwari office to inform them about our visit to Irian Jaya.

BirdLife International Indonesia Programme

On September 2 we also visited the BirdLife Indonesia Programme office in Bogor. We met Dr Paul Jepson, leader of the Indonesia Programme, and had a fruitful discussion on the possibility for co-operation on Halmahera, where BirdLife in co-operation with PHPA has started field work this year. Dr. Jepson wrote a letter to their project assistant Demianus Bagali who is living on Halmahera in the area that has been chosen as a potential study area for Gurney's Eagle. Dr. Jepson also contacted their Moluccan office in Ambon, and they met us when we later arrived in Ambon. We also met Mr. Vincent Nijman, a student from University of Amsterdam, who has been studying the Javan Hawk Eagle for seven months. He informed us about his study and showed us photos from the study areas. The field methods are of relevance for our planned study of the New Guinea Harpy Eagle. He recommended a visit to one of his study areas, the Mt. Gede-Pangrango National Park.

Ministry of State for Environment

On September 3 we had an informal lunch meeting with Assistant Minister Aca Sugandhy, his wife and seven of his staff from the Ministry. The project plans were discussed. We pointed out why we consider eagles to be important as "flagship" species in the conservation of biodiversity. Moreover, that they are probably key species in the rain forest ecosystem as they are the only large predators in Eastern Indonesian forests. We also mentioned that Norwegian TV-producers have shown interest in the project, and that a TV programme could probably be produced as co-production between Indonesian and Norwegian producers. Mr. Sugandhy was positive to this idea and recommended that this aspect should be incorporated in the project plans.

We were very pleased with the meeting and the excellent reception we got. We informed Mr. Sugandhy that a more detailed project plan will be worked out on the basis of the visit to Indonesia, and that the revised plan proposal will be sent him for comments.

4 Visit to Potential Study Areas

Selection of study areas will be considered on basis of the following criteria

- presence of established eagle pair(s)
- accessibility
- presence of both primary and secondary forests, in order to study habitat preference and tolerance to human activity
- local knowledge about the area
- protection status
- local field assistants

4.1 Halmahera in the Moluccas

On September 7-8 we visited Tanah Putih, about 10 km inland from Sidangoli on Halmahera, where Demianus Bagali has his lodge. Mr. Bagali is engaged as a project assistant by BirdLife and has lived at Tanah Putih for five years; he has a very good knowledge of the local bird fauna. He is especially interested in birds of prey and knows Gurney's Eagle well. Behind the lodge there is a ridge with primary forest which has been afforded some protection. Elsewhere there are plenty of secondary logged forests. We observed one, probably two, pairs of Gurney's Eagle in the area during our short stay, and also a pair of Indian Black Eagle. These two species breed sympatrically only on Halmahera and nearby islands. This makes the study area of particular interest for recording possible interaction between those two species.

BirdLife has recently started field surveys in two large rain forest areas, proposed as nature reserves, on Halmahera, in co-operation with PHPA. These are Ake Tajawe which covers 100 000 ha, and Lalobata which covers 110 000 ha. The surveys will find out if these two areas are representative of the habitats and species on the island, and are large enough to support viable populations of birds and other wildlife. The density of certain indicator species of birds in each broad forest type will be estimated (Jepson 1994).

Our study of the Gurney's Eagle is supposed to give valuable information in this respect, as this species is probably the one that requires the largest areas to be protected in order to maintain viable populations. The study will provide data on the habitat requirements of the species.

Evaluation of the Tanah Putih area

- One or more territorial pairs of Gurney's Eagle are found near Tanah Putih, and areas with relatively large populations of the species are likely to be found within the proposed nature reserves on the island.

- The area is easily accessible from Sidangoli, the main city of Halmahera, and the lodge of Mr. Bagali would be perfect as a field station during a longer stay in the area.
- There are different types of secondary forests and logged areas near the study area. This will provide information of the habitat use of the eagle, and its tolerance to human activity.
- Demianus Bagali has a very good local knowledge about the area, and the surveys of BirdLife will give valuable information of two other primary rain forest areas on the island.
- Part of the primary rain forest in the potential study area has been afforded protection, and two large areas on the island are scheduled for protection as nature reserves in the near future.
- Demianus Bagali has shown great interest of the study and would be interested in participating.

Based on the above mentioned points, it seems reasonable to conclude that the rain forest areas inland from Sidangoli are suitable as a study area on Halmahera.

4.2 Irian Jaya

During September 10-16 we visited the Vogelkop area in Irian Jaya. We went to Manokwari via the international airport at Biak.

Irian Jaya is the easternmost province of Indonesia and the western half of New Guinea, the second largest island on earth. The topography is characterised by many isolated mountain ranges, separated by large tracts of lowland rain forest. As a consequence, the mountain biota shows a high degree of diversity and endemism. Manokwari is situated on the coastal lowland on the north-western side of the Arfak Mountains where a 70 km² nature reserve has recently been established. The reason for protection is to provide a management system that allows sustainable use of natural resources providing economic benefits for the rural poor. Furthermore the reserve is of importance for protecting a large number of endemics. The Arfak mountains are of special interest for biologists since they contain a large number of type localities (Craven & de Fretes 1987).

WWF has been running a conservation programme in Irian Jaya in close co-operation with PHPA. The programme illustrates the importance of involving local people in conservation projects. In the Arfak Mountains Nature Reserve, WWF has consulted "management committees" of elders from the local Hatam tribe, to decide on the boundaries and control access to the reserve.

In Manokwari we visited the local WWF office and got first hand information about the Arfak Mountains. All published

and unpublished written information were placed to our disposal, including two records of New Guinea Harpy Eagle from the Vogelkop area. After having obtained permission to go into the Nature Reserve from PHPA, we engaged an English-speaking guide Mr. Yoppi Mambrasar who could also speak the local language of the Hatam people. With the help of Mr. Yoppi Mambrasar we managed to hire three porters/guides in Warkapi, a village at the seaside in the foothills of the Arfak Mountains. The porters were of the Hatam tribe and had great knowledge of the mountains and were particularly skilled in identifying the local species of birds and animals.

On September 12 we set out for a four days expedition to the Arfak Mountains. Our primary goal was to verify the presence of the New Guinea Harpy Eagle which, according to a handwritten report by two English ornithologists, has been observed in the area. After a three days' walk into the forest, we recorded the species (by its characteristic call) in an area with montane moist rain forest at 1700 m a.s.l.

We left Manokwari for Biak and Jakarta on September 16.

Evaluation of the Arfak area

- We have localised a territory of the New Guinea Harpy Eagle, and have obtained information about another locality in the Arfak mountains.
- The area is accessible by foot from Warkapi near Manokwari (2-3 days walk).
- There are different types of secondary forest and logged areas near the study area. We obtained information about a nest of a raptor (Eagle or Long-tailed Buzzard) that was abandoned after logging near the nest tree.
- We have contacted local people with great knowledge about the area, and who are very interested in participating in the project.
- The area is protected as a nature reserve.

Based on the above points, we conclude that the Arfak mountains appear suitable for studying the New Guinea Harpy Eagle.

5 Concluding remarks

- * Valuable contacts have been established with the Indonesian Ministry of State for Environment, as well as with potential co-operative partners within the Directorate General of Forest Protection and Nature Conservation, and the Indonesian Programme Offices of World-wide Fund for Nature and BirdLife International.
- * We have localised potential study areas for the two eagle species, and have contacted knowledgeable local people who are willing to be engaged as field assistants/guides.
- * We have obtained first-hand information on the country as a basis for realistic project planning and budgeting.

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Appendix 1

The original project description

Project title

Conservation biology of rain forest eagles in Eastern Indonesia.

Location

Field-work in Vogelkop area in Western Irian Jaya and Halmahera in the Moluccas.

Executing agency

Norway: Directorate for Nature Management

Indonesia: Ministry of State for Environment

Objectives

- To obtain basic knowledge about the New Guinea Harpy Eagle *Harpypopsis novaeguineae* and Gurney's Eagle *Aquila gurneyi*.
- To develop specific field methods appropriate to these two species.
- To prepare proposals for recording of the species' status and establishment of population monitoring.
- To evaluate whether the protected forest areas which are established or planned in Irian Jaya are adequate to support viable populations of these species.

Results will be presented in fieldwork-reports and a final report. The latter will include precise biological knowledge relevant for preservation of the two species and proposals for a country-wide investigation of their breeding status. A proposal for a monitoring programme will also be worked out.

Project Background

Tropical rain forests are acknowledged as being the areas requiring the greatest efforts within conservation biology. The clearing of tropical rain forests today poses the greatest threats to the preservation of species diversity, and it is recognised that large areas have to be preserved (cf. Janzen 1992).

The ICBP's (BirdLife's) Biodiversity Project has identified 24 Endemic Bird Areas (EBAs) in Indonesia, which is significantly more than for any other country. These 24 EBAs support 411 restricted-range endemic birds. Indonesia is a biodiversity "hotspot" (Bibby et al. 1992). In the ICBP's list of Threatened Birds (Collar et al. 1988) Indonesia has 126 species, significantly more than any other country.

New Guinea is a tropical mini-continent with a very special fauna of terrestrial mammals dominated by marsupials, rodents and bats. Since terrestrial carnivores are absent, big raptors are the top-predators in the forest ecosystems. The preservation of the top-predators is necessary to be able to preserve both the diversity and the particular characteristics of the natural environment. Large raptor species are good biological indicators. If these species can be safeguarded in

viable numbers, it will mean that the ecological systems will remain intact. However, because of their large size, specialisations and low densities, those species are among the most extinction-prone species (Willis 1979).

In Indonesian New Guinea a comprehensive network of protected areas have been established or planned in order to secure that the biological diversity in the country being safeguarded (Diamond 1986, Collins et al. 1991). But it is uncertain if such large areas can be efficiently protected in the future. Accordingly, it is important to throw light on which areas should be given the highest priority in order to secure the habitats of the top-predators in the rain forest.

In eastern New Guinea, the New Guinea Harpy Eagle and Gurney's Eagle are top-predators in the lowland rain forest. Today we have extremely inadequate knowledge of these two raptor species. Almost nothing is known of their status and biology (Coates 1985, Thiollay 1985, Burton 1989). In the ICBP's list of the threatened bird species of the world (Collar et al. 1988), the New Guinea Harpy Eagle is included as being threatened both by the destruction of its habitat and its being hunted extensively for its feathers. These are traditionally used as head-dresses by certain of the islands tribes. Gurney's Eagle is not mentioned in the ICBP's list, but was assumed by Burton (1989) to be threatened with extinction because of the destruction of its habitat. Meyburg (1986) has also included it in his list of threatened species.

Large species of eagles have been used as "flagship-species" in the conservation of rain forests in other countries, e.g. the Harpy Eagle in the Maya Project in Guatemala (Anon. 1989) and the Philippine Eagle (Krupa 1989).

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Appendix 2

Environmental Cooperation between the Republic of Indonesia and the Kingdom of Norway

In 1990 a bilateral agreement on environmental cooperation between Indonesia and Norway was established. The first work period under the cooperation agreement was signed April 24. 1991. This first work period included seven projects which have now been completed. The second work period was signed October 29. 1993, and includes five projects. This work period has a time frame of two years, and will be completed at the end of 1995. Four of the projects have obtained funding , while the fifth is still on a budgetary waiting list.

Overview of the projects under the second work period (1993-95) and economic frame for each project.

	Economic frame (NOK)
Project 1: Sustainable Reforestation on Degraded Grasslands	1.540.000
Project 2: Development of a National Wetland Policy and Action Plan of Indonesia	1.100.000
Project 3: Integrated Coastal and Marine Biodiversity Management	3.300.000
"Institutional development"	500.000
Project 4: Macroeconomic Modelling for Environmental Analysis	1.060.000
On waiting list:	
Project 5: Conservation Biology of Rain Forest Eagles in Eastern Indonesia	1.000.000

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