The Greater Berbak-Sembilang Integrated Coastal Wetland Conservation Project - GEF MSP (TF 024011)

Implementation Completion Report

I. Basic Data

(1) Date of Completion Report	October 2004
(2) Project Title	The Greater Berbak-Sembilang Integrated
	Coastal Wetland Conservation Project
(3) GEF Allocation	US\$ 731,750
(4) Grant Recipient:	Wetlands International-Indonesia Programme
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(6) Goals and Objectives

Goal:

To conserve the biodiversity and threatened wetland habitats of the Greater Berbak-Sembilang Ecosystem.

Objectives:

To support an integrated conservation and development approach to the management of Berbak and Sembilang National Parks and ensure public support necessary to maintain the Greater Berbak-Sembilang Ecosystem.

(7) Financial Information

The original financing plan as outlined in the project brief estimates that the total budget for the four-year project period as US\$786,253 (comprising of US\$731,750 of GEF funds, US\$25,703 from Wetlands International Indonesia Programme, and US \$28,800 from local Government, excluding the preparation costs of US\$21,000). In relation to GEF eligible expenditures, following the addition of bank services charges and the subtraction of interest earned, the total GEF expenditure was US\$729,626.79. The breakdown of the original budget plan and actual expenditures according to budget components can be found in the Table 1 below. An analysis of the project expenditures compared to the original budget shows that there has been an increase of Wetlands International Indonesia Programme's contribution (approximately US\$1,523.00).

Table 1: Project Expenditures

Description		Original A	llocation			Actu	al	
Special Expenses	GEF	WI-IP	Others	Total	GEF	WI-IP	Others	Total
I. Spatial Planning, Assessment &								
Monitoring								
a. Consultant Services	106,320		9,600	115,920	124,260		8,400	132,660
b. Training	12,150			12,150	956			956
c. Goods	16,505	4,300		20,805	12,784	5,771		18,555
d. Civil Works				0	0			0
e. Incremental Operating Cost	53,422			53,422	57,273			57,273
II. Park Establishment & Management								
a. Consultant Services	112,520		9,600	122,120	136,436		9,900	146,336
b. Training	41,750	11,600		53,350	956			956
c. Goods	20,477	3,353		23,830	2,225	3,353		5,578
d. Civil Works	0			0	0			0
e. Incremental Operating Cost	45,000			45,000	51,063			51,063
III. Capacity Building & Environment								
Awareness								
a. Consultant Services	130,120		9,600	139,720	134,071		9,900	143,971
b. Training	109,550			109,550	145,628	11,600		157,228
c. Goods	3,230	2,400		5,630	4,689	5,646		10,515
d. Civil Works	36,450	4,050		40,500	8,564	856		9,420
e. Incremental Operating Cost	44,256			44,256	50,541			50,541
Total	731,750	25,703	28,800	786,253	729,626	27,226	28,200	785,052

Table 2: Use of GEF Funds

	Original Estimates	Actual Expenditures
a. Consultant Services	348,960.00	394,766.87
b. Training	163,450.00	147,540.19
c. Good *	40,212.00	19,878.43
d. Civil Works	36,450.00	8,564.42
e. Incremental Operating Cost	142,678.00	158,876.88
Total	731,750.00	729,626.79

Note: The total does not include the GEF preparation grant of US \$ 21,000.00. Total GEF eligible expenditures is US \$ 722,731.18.

^{*} Includes boats maintenance cost of IDR453,000 for June '02

II. Project Impact Analysis

(1) Project Impacts:

Located in the eastern coast of the province of Jambi and South Sumatra, the Greater Berbak-Sembilang area has been identified as a priority area for conservation in the National Conservation Plan for Indonesia, and the National Wetland Strategy and Action Plan. The Greater Berbak-Sembilang area is known to sustain important populations of endangered and vulnerable species, such as the Sumatran Tiger (*Panthera tigris sumatrae*), False Ghavial (*Tomistoma schlegelii*), White-winged Duck (*Cairina scutulata*), Milky Stork (*Mycteria cinera*), and Estuarine Crocodile (*Crocodylus porosus*). Peat swamp areas, adjacent to the mangrove forest of Sembilang, have important populations of the Sumatran Elephant (*Elephas maximus sumatraensis*). Mangrove and tidal flats of Berbak and Sembilang are important habitats for thousands of migratory birds, and are important nursery grounds for fishes.

The Greater Berbak-Sembilang area encompasses about 720,000 ha of coastal wetlands, which are designated for a variety of land uses. Strategies to achieve long-term conservation of Berbak-Sembilang are imbedded within the project's objective to support an integrated conservation and development approach to the management of Berbak and Sembilang National Parks and ensure the public support necessary to maintain the Greater Berbak-Sembilang ecosystem. According to the project proposal, the impacts of the project were expected in two areas: management planning and management implementation:

Management Planning

In terms of management planning, project activities were expected to lead to the following impacts:

- A detailed management framework and spatial plan for the Greater Berbak-Sembilang ecosystem based on biological/conservation value and socioeconomic realities
- An expanded national park system to protect the whole Berbak-Sembilang ecosystem
- A forest and wetland management plan to maintain a forest/wildlife corridor between the Berbak and Sembilang conservation areas.

The main project impact on management planning has been the establishment of Sembilang National Park (SNP) in South Sumatra Province by the Government of Indonesia (Ministry of Forestry Decree No. 96, 19 March 03). SNP covers an area of

about 202,896 ha of coastal wetlands, which include large areas of estuarine mangrove forest, backed by some peat swamp forest. The establishment of SNP has allowed the protection of the whole Berbak-Sembilang ecosystem.

The role of the project in the establishment of SNP was to accelerate the process of its establishment through facilitation of coordination meetings in district (*Kabupaten*) and Provincial levels, and assist in the preparation of more realistic boundary options for the Park. The project also facilitated meetings between the local government of South Sumatra and the Directorate General of Forest Protection and Nature Conservation (PHKA) Department of Forestry. During the process, a more realistic boundary option for SNP was proposed to PHKA based on the former Wildlife Sanctuary/Hutan Suaka Alam (HSA) Sembilang boundary. The improved boundary option included some areas of peatswamp in the headwaters of SNP, and excised present settlements and cultivation areas from the former boundary. However, for bureaucratic and administrative reasons, the Department of Forestry gazetted SNP with the former Wildlife Sanctuary/Hutan Suaka Alam (HSA) Sembilang boundary. However, the government of South Sumatra plans to integrate the improved boundary option with the revised provincial spatial plan (RTRWP) in 2004.

The provincial spatial plan (RTRWP) of South Sumatra was prepared in 1992 and endorsed by provincial regulation in 1994. Within the 1992 RTRWP, the boundary of HSA Sembilang was integrated into the RTRWP map, but the local government of South Sumatra had a plan to revise the RTRWP in 1994 due to rapid development and changes of districts of the province. As an agency in charge of coordinating the preparation of RTRWP, the BAPPEDA of South Sumatra has also considered the integration of SNP boundary.

The gazetting of Sembilang National Park, however, is an indicator of one of the project outcomes, namely that the *Hutan Lindung Sungai* Sembilang and the *Suaka Margasatwa* Terusan Dalam in South Sumatra are designated and gazetted as the SNP to complement conservation efforts in the Berbak National Park. Both *Hutan Lindung Sungai* Sembilang and the *Suaka Margasatwa* Terusan Dalam were former status of the HSA Sembilang, which has changed into the existing SNP. SNP now also includes the former Limited Production forest of Terusan Dalam and adjacent wetland ecosystems bordering the BNP in Jambi. This provides a good habitat corridor between Berbak and Sembilang NPs.

The project also identified a buffer zone for SNP, which includes large parts of Lalan production forest, Karang Agung transmigration site, and the coastal waters of SNP. The present Lalan Production Forest includes the remaining peat swamp forest in South

Sumatra Province and is recognized by the local government of Kabupaten Musi Banyuasin (MUBA) as an important corridor between SNP and the Berbak NP, which needs protection. A strategic action plan on protecting a large part of Lalan Production Forest, known as Merang-Kepahyang peat swamp forest, was prepared and endorsed by the Bupati of Kabupaten MUBA in 2003. One important point of the strategic action plan includes conserving the peat swamp forest in Merang-Kepayang, which provides important habitat to the remaining population of False Ghavial (*Tomistoma schlegelii*).

Both SNP and its buffer zone connect with the Berbak National Park (BNP) and its buffer zone in Jambi province, which ensures conservation of the whole Greater Berbak-Sembilang ecosystem. The BNP, was formally declared by a Ministerial decree in 1992 and the buffer zone management plan was endorsed by the governor of Jambi in June 2000.

A long-term management plan for BNP was prepared by the Balai Taman Nasional Berbak (BTNB) in 2001; in 2002 the project assisted the BKSDA SS to prepare a long-term management plan for the SNP. However, the long-term management plans for both BNP and SNP seem only used as major guidelines in managing the park (e.g. the zoning system within the park, and major activities to reach the objectives of park management) and as a basic source of data on biodiversity and park management. Therefore, the project prepared an operational plan which outlined clearer objectives and activities. Implementation of the operational plan was carried out by BKSDA, local government agencies, local NGOs and the project implementation unit.

One of the project outcomes is that the incidence of forest fire and encroachment were reduced as were hunting pressures and harmful environmental changes that were having a negative effect on migratory bird populations and other important species. To reach this indicator, the project prepared and implemented a biodiversity-monitoring strategy to assist the Berbak and Sembilang national park managers to protect and manage biodiversity resources. The project also provided training for park rangers and local NGO staff on monitoring and wildlife survey techniques. Regular monitoring surveys were conducted three times a year both in Berbak and Sembilang national parks.

Although the monitoring surveys reveal that threats to the biodiversity of Berbak and Sembilang parks seemed to not significantly decrease, monitoring surveys have allowed the effort to identify the most critical areas for more effective patrolling activities by the park rangers, leading to active advocacy from local NGOs to stop at least one forest exploitation scheme adjacent to the SNP in 2002.

Other project impacts included the increased awareness and support from policy makers and local communities regarding the conservation of Berbak and Sembilang national parks, which was one of the indicators of project outcomes mentioned in management planning.

Support from policy makers, particularly for the new SNP and its buffer zone were indicated by a letter of support from the Governor of South Sumatra regarding the formation of a Coordinating Team on the development of coastal villages of Sembilang (SK Gubernur No 306/Kpts/ Bappeda/2002); the formation of National Park Supervision

Team by BAPPEDA SS (SK Kepala Bappeda SS No: 036/SK/Bapppeda-PS/2004); a letter of support from the BAPPEDA SS (Letter from BAPPEDA SS No. 600/0563/Bappeda-Kp/2003) and Bupati Kabupaten MUBA (Letter from Bupati H. Alex Noerdin No. 522/073/Bappeda-Sekrt/2003) regarding the conservation of Merang-Kepahyang peat swamp forest, which functions as the buffer zone of SNP and as a corridor to the Berbak National Park. In addition, the local government of South Sumatra constructed a Guard Post in Sembilang village to support protection of SNP. In August 2004, a new 20 seated-speed boat, the "KM Sembilang" was provided by the local government to serve visitors to visit SNP.

An economic valuation model for Sembilang National Park was prepared by the project and presented to local government agencies in South Sumatra to increase awareness and support from policy makers on conservation, particularly of Sembilang. The valuation model was useful to ensure and justify the need to conserve Sembilang area. The model indicated that the park not only functions as habitats for endangered species but it can provide an actual economic benefit of at least US\$ 15 million per year as well, mostly from fisheries. Although the valuation model is far from perfect and the value of Sembilang should not only be regarded from a monetary point of view, the economic figures for Sembilang NP provide an overview of the values and benefits of the area. A number of local government agencies were interested in the valuation model during presentations held at provincial and district levels. The valuation model becomes one of the important justifications for local government (both Provincial and District) to recommend Sembilang as a national park, which eventually brings about supporting policies and actions to conserve the park and stronger local constituency for the park management as well.

A training and excursion for senior local government officials and park managers of Berbak and Sembilang was held in S.Buloh Singapore and Tj.Piai NP in Johor Malaysia. The excursion provided better insight for participants in appreciating values of national parks and ideas for better management for Berbak and Sembilang. Positive appreciation of the excursion was indicated by a program to develop eco-tourism in SNP initiated by the local tourist agency (Dinas Kebudayaan & Pariwisata) of South Sumatra in June 2004.

To increase awareness of local communities on conservation, the project produced and disseminated a number of conservation awareness materials, including posters, leaflets, environmental education materials for school children, a documentary film, etc. Promotion of Berbak and Sembilang national parks were also carried out by facilitating local conservation events in villages. At the local level, the impact of these activities included better-informed and aware local communities - especially local government at village level and community leaders - on conservation values and planning for Berbak and Sembilang national parks. Local village meetings were held to discuss participatory planning issues, and problem

resolutions (e.g. problem on Tambak, park zonation). School children from Sungsang and Sembilang, the main settlement in Sembilang, were actively involved in conservation education activities.

At present, the environmental education materials are officially used in elementary schools of Kabupaten Banyuasin and integrated in the current local school curriculum. At least six local NGOs, namely YGB, PINSE, WBH, LPHPEM, KPB-SOS, PESISIR have been focusing their activities in the Greater Berbak-Sembilang regions following the project.

Promotion and awareness campaigns on Berbak-Sembilang conservation area included a number of seminars, trainings and workshops held in both Jambi and South Sumatra. Some academic seminars were held based on invitations from local universities of South Sumatra (UNSRI, UMP, Universitas PGRI) to promote research and study in the SNP. As part of the results, some field excursions involving university students were held in SNP and three local university students carried out their final research on SNP issues under the supervision of project staff.

Increased public awareness and support from policy makers were also achieved by a mass media campaign on specific issues. At least two national newspaper agencies (i.e. Kompas and Suara Pembaharuan) and some local newspaper agencies (i.e. Jambi Pos, Sriwijaya Pos, Sumatra Express, etc.) actively assisted the project in campaigning on conservation issues in Berbak & Sembilang. The project also published a newsletter (WKLB) regularly which contained information on Berbak & Sembilang conservation issues.

The following table summarizes the project progress achieved relevant to indicators of the project outcomes:

Indicators of project outcomes	Progress achieved
Management framework and wetland conservation areas included in agreed provincial spatial plan.	 The new established SNP boundary was in line with the former 1994 Provincial Spatial Planning. A new more realistic boundary option of SNP was proposed by the local government of South Sumatra and the new boundary option was integrated in the revised Provincial Spatial Plan 2004.
	 A buffer zone to SNP was identified, including the Karang-Agung transmigration site, coastal waters of SNP, and Merang-Kepahyang Peat Swamp Forest (MKPSF) of Lalan Production Forest. The buffer zone was considered in the revised provincial spatial plan. The MKPSF area is currently being discussed to

Indicators of project	Progress achieved
outcomes	
	be integrated in the MUBA district spatial plan.
The Hutan Lindung Sungai Sembilang and the Suaka Margasatwa Terusan Dalam (S.Sumatra) are designated and gazetted as the Sembilang National Park, to complement conservation efforts in the Berbak National Park, MOFEC Decree issued.	 About 202,896 ha of coastal wetland of Sembilang was gazetted as a new National Park, called the Sembilang National Park (SNP), which included a large part of estuarine mangrove, backed with some peat swamp forest. The SNP was gazetted based on Ministry of Forestry Decree (SK Mentri Kehutanan No. 96/Kpts-II/002, 19 March 03).
The Limited production forest Terusan Dalam and adjacent wetland ecosystems are managed under an agreed conservation plan as a forest corridor between the designated Sembilang and Berbak conservation areas.	The gazetted Sembilang National Park includes the area of Terusan Dalam, as indicated in the Berbak-Sembilang map. This will ensure corridor between Berbak and Sembilang national parks.
Production forest adjacent to the proposed Sembilang National Park are managed to maintain permanent forest cover.	 Management Plan of SNP buffer zone includes a large part of Lalan Production Forest, where remaining peat swamp forest occur (known as the Merang-Kepahyang Peat Swamp Forest/MKPSF). The local government of Kabupaten Musi Banyuasin has formed a Coordinating Team, led by Bappeda MUBA to prepare a management plan to conserve the MKPSF. Draft of spatial plan for the MKPSF was prepared and is awaiting endorsement from the local government of MUBA district.

Indicators of project	Progress achieved
outcomes	
Incidents of forest fire and forest encroachment reduced. Decrease in hunting pressure and harmful environmental change on migratory bird populations and other selected endangered animal and plan species e.g. false ghavial, tapir, protected tree spp.	 The project prepared monitoring and evaluation strategy for Berbak-Sembilang area. The project provided training for park rangers and local NGOs on monitoring techniques and wildlife surveys. Regular monitoring surveys (three times a year) were conducted by park rangers, local NGOs and BSP staff in both Berbak and Sembilang. Monitoring surveys revealed that threats to the biodiversity of Berbak and Sembilang parks seemed to not significantly decrease One forest exploitation scheme adjacent the SNP was stopped in 2002
Increased awareness and support from policy makers and local communities regarding the conservation of natural habitats in Berbak-Sembilang region.	 Supports from policy makers to conserve the SNP was obtained from the Governor of South Sumatra, BAPPEDA South Sumatra, and district government Some facilities were prepared, including the guard post near Sembilang village, and a speed boat for SNP was purchased. An economic valuation model for SNP was prepared by the project and is now an important justifications for local government (both Provincial and District) to recommend conservation efforts for SNP. Excursion to S.Buloh and Tanjung Piai for senior local government officials produced an ecotourism program planning for SNP. A strategy to raise Conservation Awareness was prepared and implemented by the project, by producing awareness materials, holding seminars, exhibitions, and local events. Environmental education materials produced by the project are used as current local curriculum for elementary schools in Kab. Banyuasin. At least six local NGOs have been focusing their activities in the Greater Berbak-Sembilang regions.

Indicators of project outcomes	Progress achieved	
	Three local university students carried out their final research on SNP issues.	
	The mass media assisted to raise issues of Berbak and Sembilang national parks.	

Management Implementation

Four project outcomes were expected to be achieved by the project regarding the management implementation, including:

- Strengthen the park management in Berbak
- Establish the park management in Sembilang
- Form provincial co-ordination committees (Jambi-South Sumatra), with stakeholders participating in the decision-making for planning and development in and around the parks to mitigate impact on park biodiversity
- Develop stronger local NGOs to support park management and biodiversity conservation.

Strengthening park management in Berbak

Berbak National Park is currently managed by Balai Taman Nasional Berbak (BTNB) in Jambi, under the Directorate General of Forest Protection and Nature Conservation. During the project implementation period, the management of BNP underwent some obstacles. Difficult conflicts between local villagers and the BTNB staff occurred, indicated by the destruction of te park's guest house in Air Hitam Dalam by local villagers in 2001. Lack of law enforcement accelerated forest encroachment and illegal logging within the park. Repressive measures by BTNB staff became counter-productive for park conservation. Problems with coordination among BTNB and local government also occurred.

The project started to strengthen park management by conducting a rapid assessment and illegal logging survey in 2001. Field survey results (e.g. findings of existing illegal logging, forest fires, etc.) were used by existing local NGOs (e.g. YGB, WARSI, PINSE) in advocating the conservation of BNP. To strengthen the capacity of BTNB staff as well as local NGOs, monitoring surveys were conducted several times in BNP. However, due to low cooperation from BTNB, some monitoring surveys were cancelled for some time (see Institutional Capacity/Institutional Assessment). Existing conflicts and no forest rangers stationed in the field meant that some project plans were cancelled as well, including a plan to rehabilitate existing guard posts in BNP and a plan to put up "Don't burn signs" around the boundary of Berbak.

A number of meetings and workshops were facilitated by the project to strengthen coordination among stakeholders of BNP. Collaborations with other projects managed by Wetlands International-Indonesia Program (such as the Climate Change Forest and Peatland in Indonesia/CCFPI project) were made to strengthen the conservation of Berbak National Park.

In collaboration with CCFPI project, the Berbak-Sembilang Project strengthened institutional coordination in Berbak National Park through the rehabilitation of the burned area of Berbak National Park. With support from the CCFPI project, 22,000 tree seedlings of meranti, ramin, jelutong, tanah-tanah, balam, nyatoh and rengas were prepared by Putra Duta Indah Wood (Timber Concessionaire) for the forest rehabilitation program. Thirty local fishermen were provided with training, and prepared 20,000 mounds for planting the seedlings. By November 2004 about 14,000 seedlings had been planted in the degraded peat swamps adjacent to the Air Hitam Laut River running through Berbak National Park. However, two floods impacted the replanting area between December 2003 and March 2004. It is estimated that the first flood in December destroyed approximately 40% of the planted seedlings. A much more serious flood occurred at the end of January. By mid-February the seedlings were still completely covered by water, meaning that it was not possible to ascertain survival rates. The remaining 8,000 seedlings, which were in the nursery and unaffected by the flooding, were planted in April 2004. Depending on the level of damage to the mounds, it was expected that repair work would be needed before planting could start.

Close partnerships with PINSE, a local NGO in Jambi, has leveraged conservation efforts in BNP and better cooperation among other stakeholders. Evidence of better cooperation included joint rehabilitation of the Air Hitam Dalam guard post at the entrance of BNP in November 2003. Cooperation with local community near Air Hitam Dalam has improved, and they planted trees directly behind the park facility. Some joint patrols and joint planning were made facilitated by PINSE and the project.

Establishing the park management in Sembilang

The establishment of the new SNP in South Sumatra needed to be followed-up by the establishment of a UPT (a park management agency) for SNP. The effort towards the formation of the UPT is being processed in PHKA but it still awaits its official realization. Low provision of budget of central government for conservation and long bureaucratic process has prolonged the establishment process for the UPT. However the BKSDA South Sumatra has expanded its organizational structure to handle the management of SNP. In addition, the BKSDA SS also appointed 16 personnel for SNP in July 2003 (Head of BKSDA SS letter No. 718/BKSDA-SS/2003). The agency also proposed to provide a specific budget for the SNP to PHKA.

A long-term management plan for Sembilang National Park was prepared containing baseline data of the park and major guidelines for conservation management. Some project field surveys and analysis were added in the 25-year management plan. A simpler operational plan was prepared by BKSDA and the project in 2002 to ensure effective conservation efforts in Sembilang. The operational plan was integrated with the project's work plan and some local government agency's work plan (e.g. plan to maintain existing park boundary with local agency of Forestry). To ensure the implementation of the operational plan, the local coordinating agency, BAPPEDA of South Sumatra, facilitated coordination meetings with relevant agencies.

To facilitate the implementation of the operational plan in SNP, the existing construction guard post in Terusan Dalam was rehabilitated by BKSDA SS, with participation from local villagers. The project also procured an additional speed boat to facilitate water transport to the park. A house was rented from a villager for Sembilang National Park Secretariat in Sungsang and maintained by local NGO Pesisir. Sungsang is the largest village close to Sembilang National Park.

Strengthening coordination to manage Sembilang National Park

Learning from the non-functioning Conservation Steering Committee (TPKSDA) in Jambi which was formally formed by the Governor of Jambi in 1997 to strengthen coordination especially at local government level, the project tried to encourage local government agencies to maximize coordination mechanisms to support the conservation of Berbak and Sembilang through a series of meetings and discussions. Coordination meetings were organized by BAPPEDA of Jambi and South Sumatra, as well as with BAPPEDA of Kabupaten MUBA and Kabupaten Banyuasin. However, some ad-hoc and task force teams were formed to cope with specific issues, such as one to resolve the problem of Tambak in SNP, and a coordination team to review development plans in Sembilang coastal area (formed by the Governor of South Sumatra-SK No. 306/KPTS/Bappeda/ 2002), as well as a South Sumatra National Park Supervision Team (in 2004).

Instead of forming a formal committee like TPKSDA in Jambi, an open forum called Forum Peduli Taman Nasional Sembilang was declared. The forum accommodated ongoing coordination and collaborations among stakeholders during the project implementation and aimed to assist the SNP management authority in implementing conservation programs. The forum is attended mainly by local government agencies, local NGOs, research agency/university, and the private sector. A secretariat was established in Palembang to support the forum activities.

Developing partnerships with local NGOs

At the beginning of project implementation, the project recognized the need to develop partnerships with local NGOs both in BNP and in SNP. *Yayasan Mitra Taman Nasional Berbak* (YMTNB) in Jambi was originally targeted as the main partner of the project, which was assumed could extend its activities and network into the Sembilang area. YMTNB was formed in 1999 and the establishment of this organization was facilitated by WIIP and the ISDP-Berbak Project. However, it was found out that the YMTNB was not effectively functioning. Instead of revitalising YMTNB, a rather informal communication forum among existing local NGOs was set up in Jambi and Palembang to establish better partnerships with the local NGOs. The project then continued to develop partnerships with existing local NGOs working in Berbak and Sembilang area.

In Berbak National Park, Jambi, two local NGOs (Yayasan Gita Buana-YGB and Yayasan Pinang Sebatang-PINSE) were actively implementing conservation activities, including facilitation of participatory boundary mapping of some villages near the BNP. In South Sumatra, partnerships were established with local NGOs in advocating for the SNP, implementation of conservation awareness program and community development. At least seven local NGOs, including WALHI South Sumatra, YALHI and other NGOs joined hand-in-hand with the project in preventing a forest exploitation scheme adjacent to the SNP in 2002. Community development initiatives were organized by WBH in Merang village, near the Merang Kepahyang peat swamp forest; KPB-SOS played an important role in initiating a community-based biodiversity monitoring activity in SNP, while the LPH-PEM and PESISIR played an important role in facilitating community based conservation activities in Sembilang villages.

The project strengthened the capacity of local NGOs by involving the local NGOs in implementation of project activities (e.g. conservation education, monitoring and wildlife surveys) and by providing training on water bird identification and wildlife survey techniques. Excursions to Pangandaran Park and visits to other NGOs (e.g. BirdLife, Flora & Fauna Indonesia) in West Java were organized to strengthen the capacity of local NGOs in understanding the conservation activities.

The table below summarizes the project progress achieved relevant to indicators of the project outcomes:

Indicators of project outcomes	Progress achieved
Operational plans under implementation	 In Jambi, the project in collaboration with CCFPI project facilitated some activities which are listed in the Berbak NP management plan, including rehabilitation of the burned area of the Berbak NP, rehabilitation of Air Hitam Dalam facilities, joint patrols, and trainings. The project assisted BKSDA SS to prepare an operational plan for Sembilang NP. Based on the operational plan, a number of activities were implemented by BKSDA SS, including preparation of conservation cadres, socialization of SNP, joint patrol, and rehabilitation of park facilities.
UPT established for Sembilang	 As the formation of the new management unit (UPT) by PHKA would take some time, a temporary arrangement for SNP was made such that a new section under BKSDA SS was established to be fully responsible for park management. Some facilities to support operational management and monitoring activities in Sembilang have been constructed by BKSDA and

Indicators of project outcomes	Progress achieved		
	local government, including a guard post in Terusan Dalam and in Sembilang. A Sembilang National Park Secretariat in Sungsang was		
	established and facilitated by a local NGO.		
Functioning-South Sumatra Steering Committee to review development plans; coordination between Jambi	 Local government of South Sumatra province initiated active roles in coordinating and planning for the development of SNP, including: 		
and South Sumatra Committees	 A Coordination Team to review development plans in Sembilang coastal area was formed by the Governor of South Sumatra.(SK No. 306/KPTS/Bappeda/ 2002). The coordination team was chaired by Head of Bappeda South Sumatra. 		
	 Outcome of the team include the construction of Integrated Post in Sembilang village, and some integrated patrol activities to reduce logging activities. 		
	 In 2004, a team (Tim Pembinaan Taman Nasional) was formed by Bappeda South Sumatra, to provide inputs on the management plan of national parks in South Sumatra, including the SNP. 		
	A Sembilang Forum was formed as an information network for stakeholders of SNP.		
Yayasan Mitra Taman Nasional Berbak (YMTNB) to	 Local NGOs focusing on Berbak and Sembilang were identified for Jambi and South Sumatra. 		
extend activities and network into Sembilang area.	 Since the early stage of project implementation, it was identified that the YMTNB in Jambi had not worked out as expected. 		
	 Instead of revitalising YMTNB, an informal communication forum was set up in Jambi. Meetings were partially facilitated by the project. 		
	 Some of the forum members, such as Yayasan Gita Buana and PINSE, continued their activities focusing on Berbak NP. A number of the activities 		

Indicators of project outcomes	Progress achieved	
	were jointly prepared and implemented with the	
	project and Balai TNB.	
	In South Sumatra, BSP facilitated regular NGO	
	meetings to discuss conservation issues in	
	Sembilang and South Sumatra.	
	A number of joint activities were conducted by	
	local NGOs and the project, including advocacy	
	for SNP conservation, conservation awareness	
	activities, and monitoring surveys.	

(2) Project Sustainability

To address how sustainability of project benefits will be achieved by the project is rather difficult to address. What this project did was to establish necessary conditions for sustainability of project benefits gained during project implementation. The sustainability will depend on some key factors and conditions.

One of the project benefits was that conservation issues both in Berbak and Sembilang were identified, and necessary recommendations were made to prevent threats to the Greater Berbak Sembilang area. To ensure the sustainability of this benefit, the project has taken some approaches as follows:

- (a) Strengthened existing local NGOs capacity to monitor conservation issues and development schemes within the Greater Berbak-Sembilang area, through training, excursion and organizing workshops and discussions. The role of local NGOs in monitoring development schemes in the area was significantly important and recognized by the project, this was indicated by a number of conservation activities initiated by local NGOs. At least two local NGOs in Jambi (YGB and PINSE) are currently focusing their conservation program in Berbak NP; and some NGOs in South Sumatra (including WALHI, WBH, LPHPEM, KPBSOS and PESISIR) have put the SNP in their conservation agenda.
- (b) Addressed current issues of the Greater Berbak-Sembilang area with decision makers through workshops and coordination meetings organized by local government.
- (c) Facilitated the declaration of Forum Peduli Sembilang involving a variety of stakeholders, including local NGOs, local government agencies, research agency, etc.

Key factors of these approaches included identifying an effective mechanism to address conservation issues with the government and the government's responses on issues addressed by local NGOs or

other stakeholders. The formation of Forum Peduli Sembilang was expected to enhance the effectiveness doing this.

Increased protection for the Greater Berbak-Sembilang area especially by the establishment of the Sembilang coastal area as a new national park, was one of benefits from the project.

Approaches taken to ensure sustainability of this benefit include:

- (a) Ensuring the SNP and its buffer zone concept were integrated in the 2004 revised South Sumatra Provincial Spatial Plan (RTRWP). The project provided spatial data to the BAPPEDA South Sumatra regarding the boundary and buffer zone of SNP.
- (b) Initiating conservation planning issues with the local government of Kabupaten MUBA on the Merang-Kepahyang peat swamp forest, which is part of the buffer zone of SNP and a corridor to BNP. A strategic action plan on the peat swamp has been endorsed by the BAPPEDA MUBA and a protection status is proposed for some peat swamp areas adjacent to the SNP.
- (c) Initiating regular monitoring surveys both in Berbak and Sembilang national parks. The monitoring surveys were jointly conducted by integrated patrol unit, consisting park rangers, local NGOs local community and project field staff.

In addition to these approaches, sustainability of increased protection of the Greater Berbak-Sembilang area depends on continuing law enforcement from the authorities against forest exploitation and encroachment and provision of sufficient budget for patrolling, facility and human resources.

The project also alerted people about problems that affect the environment and informed people about sustainable practices and why sustainable management is important. A number of awareness materials (incl. poster, leaflets, etc) were produced by the project as tools to raise community conservation awareness. The project also developed conservation awareness and environmental education activities, and worked with local NGOs during implementation. The role of local NGOs to initiate conservation awareness activities at the field level were demonstrated by participatory conservation activities in Berbak villages facilitated by PINSE and in Merang village by WBH, regarding the management of peat swamp forest. LPHPEM and PESISIR initiated community development activities in villages of SNP. As long as these local NGOs exist and are able to replicate their activities with other communities, people will continue to be informed of sustainable practices.

Activities initiated by the project directly enhanced conservation practices in Berbak-Sembilang. To continually increase the conservation practices, the project took the approach to encourage other stakeholders, particularly local NGOs, research institutions and local universities to initiate conservation practices in Berbak and Sembilang, through trainings and seminars. Assistance from local government and park management authority for conservation initiatives are needed to ensure the sustainability of this benefit. In addition, conservation practices, especially in Sembilang are expected to increase by promoting the status of SNP as an internationally important site for conservation, e.g. as a new Ramsar Site. Therefore, the project has recommended PHPA to propose the SNP as new Ramsar Site to the Ramsar Bureau. By doing so, it is expected that more funds can be raised for conservation of the park.

The table below summarizes project benefit sustainability:

Project benefits	Approaches taken	Key factors/conditions
		needed
Issues were identified and necessary recommendations made to policy/decision makers to prevent activities that would threaten the Berbak and Sembilang national parks	In general, the project developed partnerships with local NGOs as well as strengthened the capacity of the management authority of Berbak and Sembilang NPs through training activities and technical assistance. In Jambi, the project worked with LSM PINSE which has strong network with local communities near the BNP. In South Sumatra, the project worked with more diverse NGOs and facilitated formation of Sembilang Forum.	Local NGO and NGO network focusing on Berbak and Sembilang. Support and endorsement from PHKA to Balai TNB and BKSDA in managing Berbak and Sembilang Local government, both Provincial and District, policies on development of Sembilang buffer zones.
Increased protection of Berbak and Sembilang	The project initiated regular monitoring surveys in both Berbak and Sembilang, conducted by Integrated Patrol Unit (i.e. forest rangers, NGOs, and local community).	Continued law enforcement in Berbak- Sembilang national parks by local government
Alerted people about problems that affect the environment; informed people about sustainable practices and why sustainable management is important	The project developed conservation awareness and environmental education activities, and worked with local NGOs during the implementation. The project assisted local NGOs in developing conservation awareness initiatives in local communities.	Local NGO focus on community development and environmental awareness in Berbak and Sembilang Support from local government (Dinas Diknas) to implement environmental education materials in schools
Enhanced conservation practices of Berbak-Sembilang	Propose SNP as a Ramsar Site	Endorsement from the Ramsar Bureau

(3) Replicability

Assessment and description of likelihood of replication

To ensure long-term sustainability of project benefits as described above, replicability of some activities and processes need to be established. To achieve this, in general the project focused the efforts to put conservation of Berbak-Sembilang on the local government's agenda, so that conservation activities could be conducted not only by the project but also by government agencies. This included integration of Berbak and Sembilang national parks boundaries in the provincial spatial plan, involvement of the project in existing and relevant coordinating teams and task forces initiated by local government, and facilitation of training and excursions for local government and park authorities.

Important activities and processes, which are essential in achieving project benefits, included:

Strengthening coordination among stakeholders of Berbak & Sembilang

Management of national parks needs coordination among stakeholders, especially during decentralization. Coordination between central institutions such as BTNB and BKSDA SS and local government agencies is a must. A number of project activities were aimed to strengthen coordination by facilitating discussions, meetings, and workshops. In addition, other targeted stakeholders for replication were the BAPPEDA (Board of Planning and Development Agency), a local government coordinating agency. The role of BAPPEDA in keeping the conservation of Berbak and Sembilang is important.

Some members of *Forum Peduli Sembilang*, particularly some local NGOs, BAPPEDA South Sumatra and BKSDA SS had already a good coordination before the Forum was formed. Local NGOs together with BKSDA SS and BAPPEDA SS on some occasions held meetings to discuss conservation and development issues in Berbak and Sembilang. Coordination among stakeholders was initiated by BAPPEDA SS as well as by forming a team to coordinate development of national parks in the province. Other agencies who demonstrated replication of efforts to strengthen coordination among stakeholders included the local agency of Culture and Tourism, and the local agency of Forestry. Some meetings were held involving other stakeholders such as local NGOs, private sectors to discuss tourism development and forestry sectors in Berbak and Sembilang and surrounding wetlands.

Monitoring and Evaluation of the park

Monitoring and evaluation are essential aspects of Berbak & Sembilang national parks management. Monitoring and evaluation are important to assess and identify current threats and problems faced by the park. The project conducted monitoring surveys together with forest rangers, local NGOs and local villagers to assess biodiversity condition and threats in the park. This activity was proved to be effective to monitor the condition of the park and needs to be replicated. To achieve this, the project provided training to the monitoring survey team (including forest rangers, local NGOs and villagers) on wildlife and monitoring survey techniques. Local NGOs like KPB-SOS and PINSE are likely to replicate the effort to initiate monitoring surveys in Sembilang and Berbak.

Participatory approaches in spatial and management planning

Participatory approaches are required to ensure the sustainability of national park management in Berbak and Sembilang. Lack of participatory approaches were indicated by conflicts that occurred between local villagers and park rangers in Berbak National Park some time ago resulting in the destruction of some park facilities. Participatory approaches in District and Provincial levels are required in spatial and management planning (e.g. assessment of park zonation, buffer zone development) as well.

The project initiated some participatory approaches at the village level by involving local NGOs as partner organisations. Some evidence that participatory approaches are likely to be carried out by local NGOs include the rehabilitation of the park facility in Air Hitam Dalam, Berbak National Park. BKSDA SS also initiated participatory approaches in shrimp pond problem solving in Sembilang National Park.

Conservation Awareness and Education

Conservation awareness and education is another important aspect to ensure long-term conservation efforts in Berbak-Sembilang. Formal education in schools is lacking conservation education and the project produced and implemented conservation education materials for school children in villages around Berbak and Sembilang national parks. Major targeted stakeholders to replicate this effort are school teachers, and existing local NGOs. Training on how to implement conservation education materials was facilitated by the project, and an implementation plan of the material was discussed with District Agency of National Education. The conservation education materials were implemented in schools in villages near the park. Some local NGOs including PINSE in Jambi, WBH and KPB-SOS assisted with the implementation of education materials in other remote areas.

Formation of Forum Peduli Sembilang

In July 2004, an exit strategy workshop was held to evaluate project implementation, identify current problems and formulate a strategy to maintain conservation efforts in Berbak and Sembilang, particularly after the project implementation period. The workshop was officially opened by Ir. Syahrial Oesman, the Governor of South Sumatra and attended by more than 50 participants including the Director of

Conservation Area PHKA, local government agencies, NGOs, representative of private sector and representative of local communities.

One key results of the workshop was the declaration of *Forum Peduli Sembilang* by workshop participants. The Forum was expected to become a medium especially for stakeholders of Sembilang National Park to strengthen communication and coordination, which eventually can support the management of Sembilang National Park and the Greater Berbak-Sembilang region in general. Replication of major/important project activities were explicitly stated in the objectives and strategic action plan of the Forum.

Objectives of the Forum included:

- (1) Assist in facilitating network and synergic interaction among stakeholders
- (2) Assist in facilitating Forum members to strengthen the capacity in conducting conservation programs or activities relevant to the management of SNP
- (3) Assist in facilitating monitoring and evaluation activities, research, publication and awareness campaign
- (4) Assist in gathering supports for the management of SNP.

A strategic action plan was also designed::

- (a) to manage existing data compiled from the project
- (b) to carry out monitoring & evaluation of SNP
- (c) To carry out conservation awareness campaign and
- (d) To monitor the implementation of environmental education in schools

To ensure effective work of the Forum, a Forum Coordinator was appointed by the workshop participants, and a small secretariat was formed. In addition, an *ad-hoc* team was chosen to assist the establishment of the Forum Secretariat, including BKSDA SS staff, BAPPEDA staff and individuals from partner local NGOs. The secretariat was placed in the office of Centre of Data on Swamps and Wetlands in Palembang, South Sumatra – an existing organisation dealing with swamp and wetland data holding in South Sumatra.

Lessons learned

Replications of activities and processes in Berbak-Sembilang conservation were demonstrated by various stakeholders. Both BTNB and BKSDA SS, as the park management authority has agreed to involve other stakeholders in planning and managing the parks. Rehabilitation of park facility in Air Hitam Dalam, BNP and problem resolution on fish ponds in SNP are examples of participatory approaches initiated by the park authority. Local government agencies have also facilitated meetings and workshops to strengthen coordination among stakeholders.

Local NGOs often managed better replication of conservation efforts initiated by the project. Local NGOs often facilitate participatory approaches in conservation activities including in workshops and community development. Local NGOs like KPB-SOS and PINSE managed to organise and initiate monitoring surveys in Berbak and Sembilang. Training for school teachers in Jambi on conservation education was also facilitated by local NGO. The role of local NGOs in managing the *Forum Peduli Sembilang* was also dominant. They were involved in the *ad-hoc* team and initiated the implementation of the strategic actions of the Forum.

Successful replication of activities and processes depend on some factors, including strong commitment of stakeholders and availability of budget. Strong commitment of stakeholders was indicated by development program and action plans of local government agencies, which relate and support the management of the park (e.g. a program to develop eco-tourism in SNP by local agency of Culture and Tourism, local agency of Forestry agenda to maintain boundary of SNP, etc.). Availability of budget is another essential factor to support the replication of conservation activities. Allocation of budget needs to continuously be provided by local government as well as PHKA. Income generating activities carried out by local NGOs are options to support their conservation activities.

(4) Stakeholder Involvement

Stakeholder involvement in the project was a crucial factor for the achievement of project outcomes. Stakeholder participation in the project occured at national, provincial, district, sub district and village levels:

- (a) At national level, Directorate General of Forest Protection and Nature Conservation (PHKA) and Agency of Planology (BAPLAN), and Department of Forestry played an important role in the establishment of Sembilang National Park (including SNP boundary). PHKA also provided guidelines and endorsement for BTNB and BKSDA SS to support project implementation in the Berbak and Sembilang national parks.
- (b) At the local level (provincial and district), local government institution BAPPEDA as Board of Development and Planning was the key institution to coordinate and integrate the project into local (provincial and district) development plans, including preparation of Provincial/District Spatial Planning (RTRWP/K). As a coordinating body, BAPPEDA has a mechanism to coordinate development plan with other local government agencies (e.g. Dinas). In addition, a number of project activities related to specific sectors required endorsement and support

- from other government agencies (Dinas). Other important stakeholders at this level included local NGOs, and local research institutes/universities.
- (c) Stakeholders in sub-district and village level included the head of *Kecamatan* (sub-district) and villages, park rangers, primary school teachers, community leaders and local NGOs.

General approach of stakeholder involvement

To initiate stakeholder involvement in the project, an inception workshop was held in Jambi at the beginning of project implementation. In the workshop, stakeholders were expected to recognize the objectives and expected outcomes of the project, as well as stakeholders' role in the project. To ensure good communication between stakeholders and the project, local government agencies appointed one of their staff as a permanent counterpart.

Raising conservation issues, addressing ideas and conservation initiatives among stakeholders through meetings, seminars and workshops were some of the approaches to invite closer involvement of stakeholders. A rather informal forum with regular meetings for local NGOs was managed in Jambi and in Palembang to strengthen communications among organizations. Project staff were also actively involved in a variety of existing local conservation and development fora arranged by other institutions/organization (e.g. Multi-stakeholder Forum on Conservation, Coordinating team on development of coastal villages, etc.) relevant to conservation of Berbak-Sembilang.

In sub-district or village level, stakeholder involvement was often facilitated by local district government staff, BKSDA SS/BTNB staff, and local NGOs. Some local NGOs often established access to local community through community development activities. Special events such as Indonesia Independence day or Environmental Day were used to initiate participatory conservation events involving local stakeholders, such as local school teachers, local youth forum, etc.

The table below describes approaches for stakeholder involvement in achieving project outcomes and some lessons learned:

Stakeholders	Approach for stakeholder involvement	Adjustment to the approach	Lessons learned
Dept. of Forestry, Dit.Gen PHKA & BAPLAN	Involved PHKA & BAPLAN in establishment of SNP	Discussed accelerated process of establishment of SNP and its boundary options prepared by local government level	SNP was established in 2003, but the boundary option proposed was not yet accommodated. Local government of South Sumatra (especially BAPPEDA) has more clear access to continue coordination with Dept. of Forestry on SNP.
	Provided endorsement to the project and	PHKA evaluated performance of BTNB and BKSDA SS in	BTNB & BKSDA SS have guidelines in supporting project activities which

Stakeholders	Approach for	Adjustment to the	Lessons learned
	stakeholder	approach	
	involvement		
	guidelines for BTNB & BKSDA SS to support the project	supporting the project	ensure better management of the Berbak & Sembilang National Parks
BTNB and BKSDA SS	Preparation of parks management plan and operational plan, and day-to-day management of the parks.	Preparation of management plan and operational plan assisted by the project. Appointment of BTNB & BKSDA SS staff as project counterparts to ensure effective coordination.	Rapid assessment survey carried out by the project complements the management plan prepared by BTNB and BKSDA SS. Project counterparts ensured better communications and coordination in achieving project outcomes
BAPPEDA in provincial and district levels	Facilitated coordination among park stakeholders in provincial & district levels, especially among local government agencies.	Involved in integration of park spatial planning into local spatial plan (RTRWP); Facilitated meetings, and coordinating (ad-hoc) team to discuss development programs to support park management	Accountability of park establishment was indicated by integration of park boundary into RTRWP. Effective supports from local government for the conservation management of the park were initiated from coordination of local development program facilitated by BAPPEDA.
Dinas (other local government agencies)	Developed programs in various sectors to support the conservation management of the park and its buffer zone	Local agency of forestry involved in identification of park's buffer zone, and coping forestry issues which threaten the park (e.g. forest fire, illegal logging).	Instead of some forest exploitation schemes endorsed by district agency of forestry which may threaten the park, the agency provided law enforcement on illegal logging by initiating integrated patrolling and facilitated enforcement on forest fire management as well.
		Local agency of fishery involved in coastal fishery management, including strengthening local fishermen capacity through training programs.	Coordination with other stakeholders in fishery sector was facilitated by BAPPEDA. Some fishery activities using destructive fishing methods were prohibited by local government.
		Local agency of Culture & Tourism of South Sumatra developed eco-tourism program for SNP	Eco-tourism becomes one interesting sector for local government to obtain benefit from SNP; some initiatives have been conducted including discussion on tourism development in SNP with tour operators, and procurement of boat.
		Other agencies in coordination with BAPPEDA to support conservation in Berbak and Sembilang.	Effective coordination was facilitated by involving relevant agency in coordinating team initiated by BAPPEDA.
Local NGOs in Jambi & South Sumatra	Monitoring development schemes in the Greater Berbak-Sembilang area; Implementation of	Existing local NGO forum monitored existing development schemes; Existing local NGOs assisted the implementation of	The role of local NGO and NGO forum to monitor development schemes was significantly effective. Conservation awareness initiatives

Stakeholders	Approach for	Adjustment to the	Lessons learned
	stakeholder	approach	
	involvement		
	conservation campaign	project's environmental	were initiated by local NGOs in villages
	and awareness	awareness activities	of Berbak & Sembilang national parks.
	activities, as well as		
	local community		
	development.		
School teachers	Prepared and	School teachers were	Training to implement environmental
in villages of	Implement ed	coordinated by the local agency	education materials was required and
Berbak and	environmental	of National Education to	provided by the project as well as
Sembilang.	education for school	prepare and implement	trained local NGOs.
	children in villages	environmental education	Endorsement of local agency in
		materials prepared by the	implementation of environmental
		project.	education in schools by integrating the
			material with existing curriculum was
			required to ensure implementation of
			the materials.
Local	Participated in planning	Facilitated by local NGOs,	Involvement of local community and
community/ and	and awareness building	identified current problems in	community leaders required facilitation
community	program activities	accessing nature resources at	from other stakeholders, especially
leaders		village level, and initiated	NGOs. More efforts to strengthen the
		conservation awareness	capacity of local community are still
		activities during celebration of	needed.
		special events (e.g. during	
		celebration of environmental	
	5	day, independence day, etc.)	
Private sectors	Participated in	BAPPEDA and other agencies	Private sectors provided more realistic
	coordination meetings	involved private sectors in	inputs in preparing development
	and support	preparing development	program. Some obstacles in private
	conservation initiatives	program. (e.g. involvement of	sector involvement are lack of
	in Berbak & Sembilang.	tour operators in assessing eco-	mechanisms and supporting regulations
		tourism potential in SNP)	issued by local government.
Research	Promoted research on	The project provided a valuation	Some students of local universities
institutions/	biodiversity in Berbak	model to initiate more research	carried out research on eco-tourism
Researchers	and Sembilang.	on biodiversity and economic	potentials and socio-economic condition
and students.		values of Berbak and	of villages of SNP.
		Sembilang by research	
		institutes and students.	

(5) Monitoring and Evaluation

Approaches taken

Monitoring and evaluation is a project management tool to readjust conservation activities in order to react to temporal changes, e.g. changes caused by unforeseen events. Every conservation area is subject to permanent changes, some occurring naturally, others caused by people. In order to react to these changes in an appropriate

way they have to be monitored in a standardized and regularly repeated style. A monitoring and evaluation plan was prepared for the project as a guideline in carrying out monitoring and evaluation as summarized below:

Given the vastness of the area and the limited time, funds and personnel, a landscape approach was chosen to monitor the condition of Berbak-Sembilang. It was assumed that most threats to conservation areas are caused by human activities. Thus, the major focus of all monitoring activities was to watch the interaction between people and the national parks.

While the existing patrol system of BTNB/BKSDA SS contributed more or less random data to the understanding of the present situation, an additional *integrated monitoring unit* (IMU), consisting of 1-2 rangers (Polhut) and 2-3 local people/NGO members, monitored selected routes (mainly rivers, platforms, coastline) on a regular base (3x/year; February/March-June/July-October/November). These units were trained by the project in the required field techniques (e.g. basic species identification skills, field diaries, photo documentation, GPS use, transect walks/river surveys, focus group discussion). The training was partially done on the job, partially during specific training courses. Besides monitoring the state of the national park, the participants were trained in identification skills, as well as in documentation techniques.

The selection of the monitoring routes and the details of the surveys were extensively discussed with the project's counterparts. The monitoring teams collected data on human activities, habitat disturbance, species occurrence, and general threats to the conservation area¹.

Besides the IMU's contribution to monitor the state of Berbak-Sembilang, it strengthened the park management's efforts to reduce disturbances, as direct action can follow the monitoring surveys².

In addition to primary data, reports from NGOs, GOs, university theses/reports, newspaper articles, legal decrees/regulations, information from local people, park reports and police reports were used to describe the area's state more comprehensively. In addition information on conflicts between the park(s) and local communities needed to be compiled in order to avoid counter-productive project measures.

Evaluations of the observed changes were carried out following the monitoring activities, and results were addressed to relevant stakeholders. To evaluate project implementation performance, regular evaluation missions were carried out by the World Bank.

¹ However, rapid monitoring surveys can only produce fuzzy snapshots of the real situation. These snapshots must not be over-interpreted. Yet, they can lead to further questions and investigations. E.g. the underlying causes of a recent increase in illegal logging activities cannot be fully understood by a rapid appraisal, but it can be detected and lead to additional activities. The same holds for an obvious decrease in the total number of waders from one year to the next. The underlying causes are unclear and might not be linked to the state of the conservation area, but refer to changes in the breeding habitats in northern Siberia. Therefore, the findings of the IMU surveys must be interpreted with special care.

² The detection of large scale logging just outside of the Sembilang National Park during the try-out led to immediate investigations by the provincial forestry department (Dinas Kehutanan). In this particular case, most of the logging appears to have been legal, although the respective concession had almost expired.

Lessons learned

Monitoring the condition of Berbak and Sembilang was not only carried out by deploying the IMU to conduct monitoring surveys, but the effort was also aided by other field activities (e.g. regular patrolling by BKSDA SS/BTNB, findings from village meetings, etc.) and secondary information from newspaper articles, university thesis reports etc.

Regular monitoring surveys were carried out on a regular basis three times a year for Berbak and Sembilang. Involvement of local NGOs, park rangers, and local community made monitoring surveys not only result in monitoring findings, but also served as part of on-the-job training activities for the monitoring team in recording the condition of Berbak and Sembilang (biodiversity, current and potential threats).

Evaluation of project performance, involving project counterparts and partners, as well as a team from the World Bank during evaluation mission, made it possible to discuss priorities and refocus project activities.

(6) Special Project Circumstances

Decentralisation Policy in Indonesia

The introduction of Indonesia's new decentralization policy by the issuance of Government Regulation No.22 in 1999 which reduced the control of the central government and devolved authority to local government (provinces and districts), has created both opportunities and risks, including for the management of protected areas. Decentralization, on one hand, offers opportunities for more local participation in resource allocation decisions, greater accountability by local governments, and more efficient and more sustainable use of natural resources. On the other hand, decentralization carries a substantial risk of accelerating environmental degradation in the near future, which could block realization of its long-term benefits.

The impact of decentralisation on the conservation efforts in the Greater Berbak-Sembilang area included the establishment of a new national park in the Province of South Sumatra, namely the Sembilang National Park. The option to expand the national park system of Berbak in Jambi to the Sembilang area in South Sumatra was rejected, not only due to too extensive an area but also due to the interest of South Sumatra province in having its own national park.

Strong commitment of the province of South Sumatra to conserve the Sembilang area was an advantage that enabled the project to accelerate the establishment process of SNP. However, the process was not without challenges. At the initial stage, the project facilitated a series of meetings to discuss more realistic boundary options for the park at Provincial and Kabupaten MUBA government levels. A park boundary option was determined and discussed further with the PHPA (central government) for further process. However, due to bureaucratic stringencies and the need to immediately declare the status of Sembilang

as a national park, the central government (i.e. the Ministry of Forestry) decided to establish the Sembilang National Park in 2003 without accommodating the boundary option proposed by the local government. The BAPPEDA South Sumatra plans to integrate the new boundary option to the revised Provincial Spatial Plan (RTRWP) in 2004.

The establishment of a new district within the Province of South Sumatra, the Kabupaten Banyuasin in 2002 where the Sembilang National Park occurs, triggered new problems and questions regarding district resource use. The Kabupaten Banyuasin was formerly within the Kabupaten (district of) MUBA. About 20% of the new district comprises the Sembilang National Park, and the district needs to generate their own revenue by utilizing local resources, including the forest resources in SNP. The Development Planning Agency (BAPPEDA) of Kabupaten Banyuasin questioned how to generate revenue from the park, as the park management authority was under the central government agency, the BKSDA South Sumatra. Lack of strong coordination between BKDSA and the Kabupaten Banyuasin led to more pressures on local natural resource utilisation and became counter-productive to the conservation task. To overcome this situation, the project facilitated coordination meetings between stakeholders.

In the province of Jambi, the Berbak National Park authority was under pressure to overcome threats to the biodiversity of BNP (particularly illegal logging). Insufficient budget and human resources to overcome the threats had led to an inability to manage the park properly. In 2002, the local district of Kabupaten Tanjung Jabung Timur where the BNP lies was urged to override the park authority to overcome these problems. However, better cooperation facilitated by a local NGO was established to offset this challenge.

Decentralisation brings more access to local government, especially at district level, to exploit forest resource to generate revenue. This leads to contradictions in forest resource management. Central government has retained the power to issue large-scale concessions, while district and provincial governments issue smaller, local forest concessions which may threaten adjacent national parks. The role of local NGOs in overseeing the concession schemes in the Greater Berbak-Sembilang region is important. The PT STC forest concession adjacent to the SNP was one good example of improper exploitation scheme that was stopped due to active advocacy of local NGOs on behalf of the forest area subjected to the scheme.

Wetland as major habitat of the Greater Berbak-Sembilang area

The major wetland habitat of the Greater Berbak Sembilang area, which contains extensive peat swamp and mangrove swamps, rivers, and coastal mudflats, is one of its unique characteristics. The extensive Greater Berbak-Sembilang area, which encompasses about 720,000 ha, and the physical condition of the area make it difficult to access. Both Berbak and Sembilang National Parks can only be reached by boat, using rivers as major access routes. The remoteness of the national parks from the towns of Jambi and Palembang where most local government agencies reside is an obstacle in mobilizing coordination between the provincial government and village/local communities. To visit the village of Sembilang within the SNP alone from Palembang, will take at least one full day trip (e.g. at 07.00 depart from Palembang, and arrives in Sembilang at 12.00 visit some mangrove forest, and back to Palembang at 17.00). To visit representative sites in SNP will take at least 3 days and two nights.

The consequence of remoteness and physical wetland condition to access the Berbak-Sembilang area is the large transportation budget required to facilitate field trips for park management. One-day trip to Berbak or Sembilang using a 40PK speed boat will require about Rp. 250,000-Rp.300,000. or about USD 30 for fuel. Limited regular transportation which serves between villages in Berbak and Sembilang requires provision of a park boat or else requires renting a boat. Average time for field visits and organising field activities to Berbak or Sembilang takes 3-4 days per activity. However, frequent visits to villages of Berbak and Sembilang are required to ensure coordination of conservation activities.

Thus, one obstacle in the implementation of management of Berbak and Sembilang national parks is the high cost of transportation. To overcome this problem, joint field activities were often organized between government agencies. Local NGOs and the project also strengthened the capacity of existing local village groups in carrying out conservation activities. With the advanced information technology, it is expected that communications between communities in remote villages will served by cellular phones in less than five years.

(7) Institutional Capacity/Partner Assessments

Implementation of the Greater Berbak-Sembilang project was jointly organized by partner institutions. This section describes the institutional capacity of partner institutions, which contributed to the implementation of the project and some circumstances which influenced their institutional capacity.

PHKA

The Directorate General of Forest Protection and Nature Conservation (PHKA), Department of Forestry was the main central government partner in implementing the project. The PHKA plays an important role in decision making for the two national parks (BNP and SNP). At local government level and relevant to Berbak and Sembilang national parks, PHKA's policies and roles are played by the BTNB and BKSDA SS.

PHKA, in coordination with BAPLAN was one of the most important stakeholders in accelerating the establishment of Sembilang National Park and its boundary, as the SNP was formally a protected area – HSA Sembilang. Direct involvement of PHKA in project implementation was only in providing guidelines to BTNB and BKSDA SS to support the project, but they were less directly involved in field activities.

BTNB

Formerly, the *Balai Taman Nasional Berbak* (BTNB) was Unit TNB, a smaller agency in charge of the management of Berbak National Park in Jambi. Institutional changes from Unit TNB to BTNB indicated a greater commitment from the Government of Indonesia to managing the BNP. BNP is one of Indonesia's Ramsar Site and needs special attention as the park is some of the last remaining peat swamp forest on the eastern coast of Sumatra.

Despite its focussed work on the management of BNP, the capacity of BTNB in managing the national park was not sufficient. Low budget for transportation was one classical reason for not keeping forest rangers in the park. Prior conflicts between forest rangers and local villagers was another reason and this led to lack of public accountability for BTNB in managing the park. A serious discussion between the BTNB and local government occurred in 2002, as the local government asked for BTNB to work more seriously in managing the park. However, the project saw this condition was complicated by the effect of decentralisation policy which gave more "power" to local government in accessing the nature resource, including the national park.

Positive changes occurred as the new head of the BTNB was appointed (during the project implementation, the head of BTNB underwent changes three times) and collaborative signals were provided by BTNB and the local government, after a series of meetings involving local NGOs and other stakeholders.

BKSDASS

Balai Konservasi Sumberdaya Alam Sumatera Selatan (BKSDA SS) is located in Palembang and is in charge of more than 5 protected areas in South Sumatra and Bangka Provinces, including the Sembilang National Park. The large number of protected areas, which are scattered throughout the province of South Sumatra and Bangka made it difficult for BKSDA SS to focus its resources on the management of Sembilang National Park. As the status of the HSA Sembilang was changed to the Sembilang National Park, BKSDA SS took steps to give more focus to the management of the park by developing a specific organisation structure to be in charge of the park. In addition, BKSDA SS has proposed to allocate specific budget for the park.

Major involvement of BKSDA SS in project implementation included the preparation of a long-term management plan for SNP as well as an operational plan, and they facilitated discussion on SNP boundary options, problem resolution on mangrove conversion to Tambak, conservation cadre training, and monitoring surveys. Intensive communication between BKSDA SS and the project was attained as both project and BKSDA SS offices were located in Palembang.

Limited human and budget resource especially for transportation to the field and extensive areas to be managed made it difficult for BKDSA SS to manage the whole SNP. Existing conflict within the park boundary (e.g. tambak/fishponds) distracted BKSDA SS's focus from managing the remaining natural habitats.

Board of Development and Planning (BAPPEDA)

At local government level, the project worked closely with BAPPEDA both in Jambi and South Sumatra provinces, as well as in District level. BAPPEDA plays an important role in providing local government directions for planning and development, including the local spatial planning (RTRWP/K). As a coordinating agency, BAPPEDA has a key role in coordinating development schemes, programs, and projects.

BAPPEDA South Sumatra and Kabupaten MUBA played a positive role in facilitating coordination among stakeholders during the preparation of SNP boundary options. BAPPEDA was an important channel to disseminate conservation issues to other local government agencies. A number of conservation issues raised by the project, local NGOs, and other stakeholders were channelled by BAPPEDA to other Dinas/agencies e.g. disseminate economic valuation model, development of coastal villages, conflicting land-uses, etc. Strong support from BAPPEDA South Sumatra was indicated by formation of an *ad-hoc* team to supervise the management of the national park.

As a new district, Kabupaten Banyuasin where SNP is located has little experience in planning and developing its area. The BAPPEDA of Kabupaten Banyuasin has limited human resources, facility and budget. Efforts to strengthen the capacity of human resources have been taken through participation in trainings and excursions. A post-graduate program at the local university in collaboration with the project has trained staff of BAPPEDA and other Kabupaten agencies in planning and development of coastal and wetland area, where SNP was one of the main issue discussed. Excursion to S.Buloh in Singapore and Tanjung Piai Johor was facilitated by the project for senior staff of BAPPEDA and other agencies to provide more positive ideas for managing SNP.

Other Local Government Agencies (Dinas)

Conservation of the Greater Berbak Sembilang area requires support from other local government agencies in various sectors, including Agency of Forestry, Agency of Fishery, Agency of Culture and Tourism, etc. Local government's policy and implementation of development plans especially in the buffer zone of the parks are led by these agencies. coordination among these agencies is facilitated by BAPPEDA.

Different perceptions on protected areas, particularly the Sembilang National Park still exists in these agencies. For some, a national park is still considered as a land use only to serve "central government's interest, and is beyond the jurisdiction of local government agencies. A national park is considered not to be able to provide benefits for locals and other sectors, such as fishery, forestry, and other services. One perception of decentralisation sometimes led Dinas to raise more revenue from natural resources by exploiting the resources without thoroughly considering the long-term impacts on sustainability of natural resources. This is indicated by the occurrence of small forest concessions and a number of "legal" sawmills near the park, which may affect the national park.

To overcome the above problem, the project developed an economic valuation model for Sembilang National Park, which identified values that can be provided by a national park. It was expected that the valuation model could change negative perceptions of a national park. The strong commitment of the Governor and Bupati as well as strong coordination facilitated by BAPPEDA created a positive environment for implementing this project. Positive responses of Dinas on the conservation efforts of Berbak-Sembilang area were indicated by their support of programs implemented, such as the maintenance of existing boundary of SNP by the Agency of Forestry South Sumatra, capacity building of fishermen in SNP by the Agency of Fishery, preparation of eco-tourism in SNP led by the Agency of Culture and Tourism, etc.

Local NGOs

Local NGOs in Jambi and South Sumatra are important stakeholders in the on the environment, especially on the BNP and SNP. Most of these local NGOs have a background in environmental advocacy and community development but few have worked in biodiversity. This state of local NGO experience was effective for assuming a monitoring role on development schemes in Berbak-Sembilang area.

Limited capacity and skills of local NGO staff, especially in understanding biodiversity issues, was an obstacle in gathering primary biodiversity data for biodiversity monitoring and other management purposes. The project involved a number of local NGO staff in monitoring surveys and provide trainings on wildlife surveys, monitoring techniques, bird counting, etc. to strengthen the capacity of local NGO staff.

Limited skills in fund raising was another major obstacle for local NGOs in sustaining conservation activities. Most local NGO activities still depend on funds from other funding agencies and from some local government projects. The Berbak-Sembilang project took some steps to assist some local NGOs in proposal development to be submitted to potential donor agencies; other efforts included facilitating a network with other stronger NGOs.

The role of local NGOs was sometimes neglected by programs or projects initiated by park authority or local government. Limited time for preparation and limited information resources on stakeholders are some of the reasons. A number of local NGOs were "not known" by local government agencies. This condition was highlighted by "reactions" of local NGOs against existing development programs or projects.

Wetlands International-IP (WIIP)

As a project implementing organization, WIIP established a project office in Palembang to coordinate conservation activities under the Berbak-Sembilang project in Jambi and South Sumatra. WIIP Head Office in Bogor had provided good and the necessary support and direction to project staff in Palembang in managerial, technical, financial and administrative aspects throughout project implementation. In addition, WIIP Bogor Office also had a very important role in good coordination and collaboration with related agencies at central level (especially Ministry of Forestry and Ministry of Environment) such as in the issuance of the decree for Sembilang National Park and other collaborative activities in the field.

The World Bank

As an implementing agency of GEF fund, during the project period the World Bank provided regular supervision missions to the project (a total of six supervision missions including an ICR mission), by visiting project sites and becoming actively involved in evaluation meetings together with other project stakeholders. Supervision missions made it possible for the project to refocus project activities and help the project to select priority actions and rated the project implementation in general as satisfactory.

Changes of government officers and decision makers

A number of changes of government officers and decision makers who were important stakeholders of the project occurred during the project implementation period. Although this condition did not affect the overall objectives of the project, in some situations it decreased and halted the pace of progress.

During the project implementation period, the head of Berbak National Park in Jambi was changed three times without prior notice to the project and the head of BKSDA South Sumatra was changed once. Changes of senior position in local government levels included changes of the Governor of South Sumatra, the new formation of Banyuasin District, changes of the head of BAPPEDA and head of some Dinas (local government agencies). For the Berbak National Park, this condition significantly influenced project implementation, and resulted in some changes in project work plan in Berbak. Some project activities needed to be postponed and on-going process needed to be reiterated. To overcome this problem, the project strengthened coordination and ensured good communication with project counterparts.

Some changes of government officers who were participants of specific training program (e.g. participants of training on wildlife survey technique, wetland management training, etc.) organized or facilitated by the project, have made the training investment less useful to the conservation of Berbak-Sembilang area per se, but has allowed the training to be applied at other protected areas.

III. Summary of Main Lessons Learned

Implementation of the project caused a significant improvement in conservation of the Greater Berbak-Sembilang region, especially indicated by the establishment of the new Sembilang National Park in the province of South Sumatra which expanded the protected area system of Berbak National Park in Jambi. This four-year project to strengthen the conservation effort in Berbak-Sembilang also reveals many lessons learned. Main lessons learned during the project implementation period were as follows:

 Support from the local government on planning and management of Berbak and Sembilang national park was relatively strong, and collaboration between local government agencies with BTNB & BKSDA SS needs to be maintained.

Greater accountability from local government to protect conservation areas is required due to the introduction of the policy on decentralisation. BTNB and BKSDA SS, as park management authorities, need to design clear mechanisms for involvement of local government in park management. Strong support and commitment from local government were indicated by a plan to integrate SNP boundary in the provincial spatial plan, to form an ad-hoc team to coordinate the local development plan with the management of national park, and to design some development programs to support the park management, such as a program to develop eco-tourism in Sembilang National Park. The newly formed new district Kabupaten Banyuasin put conservation awareness program for SNP in its strategic action plan.

• Insufficient coordination between Department of Forestry and local government occurred during the establishment of Sembilang National Park.

Although the establishment of SNP occured in 2003 by gazetting about 202,869 ha of Sembilang area into a new national park, some processes undertaken in preparing boundary options for the park were neglected and not accommodated in the newly gazetted SNP boundary. For example, the boundary of SNP did not include the headwaters of rivers in Sembilang where the remaining peat swamp forest occur and did not exclude conflicting areas in SNP.

 With regard to decentralisation, district government is a key stakeholder in restricting adverse land use and development schemes surrounding the park, which may threaten the national park.

Decentralisation gives both more opportunity for local government in conserving natural resources for sustainable use, and more risks to exploit the natural resources to increase local government's revenue. For Banyuasin district, Sembilang national park covers about 20% of the whole area of the district. For the district, Sembilang is important as a coastal fishery resource. Incorrect management of this fishery resource, for instance when the local government tends to open mangrove forest for more cultivation/ tambak area, leads to the destruction of the whole ecosystem which supports fishery resources in surrounding coastal waters. Local government of the new Kabupaten Banyuasin is thus seeking ways to use resources in a more sustainable way, especially in Sembilang coastal wetlands. Another example was the issuance of small forest concessions adjacent to Berbak and Sembilang national parks. Most concessions were issued by district and sub-district government without coordination with provincial government. Such concessions and lack of monitoring efforts and law enforcement present threats to the national parks.

 Thorough research on economic and biodiversity values served by a national park is one important tool to raise awareness and policy support from local government especially following the policy of decentralisation.

An economic valuation model prepared by the project on SNP was used as a tool to raise policy support from the local authority. The economic valuation model describes economic values provided by the park, for instance from fisheries and forestry, as well as other optional values which can be derived from a national park. Basic research on eco-tourism potential carried out by a local university student was used as input to develop eco-tourism in SNP.

 The greater Berbak-Sembilang area, which is largely dominated by wetlands, gives rise to problems of access to remote sites, which eventually has impact on the transportation budget in managing the conservation area.

A higher than anticipated cost of transportation was experienced during implementing the project. Remote areas of Berbak and Sembilang can only be accessed by rivers, and no infrastructure from one village to another was constructed. The higher cost of water transportation should be considered in managing wetland conservation areas such as Berbak and Sembilang national parks.

Formation of new UPT for Sembilang National Park takes more time than anticipated;
 some scenarios need to be prepared to ensure effective management of the park in the future.

According to existing regulation on conservation area in Indonesia, establishment of new national park, such as the Sembilang National Park, will be followed by the formation of an UPT as a management authority under the PHKA. However, due to lack of budget and because of other bureaucratic reasons, the formation of the new UPT for Sembilang still awaited its realization at the end of the project. In its place, the BKSDA SS has developed its organization structure to manage SNP more intensively, but more budget allocation is still needed.

• Structural changes and changes of senior officers in park authority and local government agencies have influenced project progress.

Some changes of organization structure and senior staff in park authority and local government agencies in some cases influenced project progress. To overcome this problem, appointing staff as counterparts played an important role in continuation of the coordination and cooperation that had been set up.

 Availability of budget is one key factor to ensure sustainable management of Berbak and Sembilang national parks.

Both Berbak and Sembilang park authorities (BTNB and BKSDA SS) have limited budgets for day-to-day management of the park. One reason is the high cost of transportation in wetland areas as stated earlier. Other reasons include improper timing of budget availability (proposed budget often available at the end of the year which gives limited time to implement), and unfocused allocation of budget (especially for BKSDA SS who is responsible for more than one protected area). The park authorities of Berbak and Sembilang have limited human resources and weak coordination with other stakeholders to raise funds to support conservation activities.

 Monitoring surveys jointly conducted by park rangers, local NGOs and local community in Berbak and Sembilang not only gave rise to survey findings on biodiversity and current threats, but also facilitated close coordination between the stakeholders.

Regular monitoring surveys were conducted three times a year in Berbak and Sembilang national parks, and were conducted by an integrated monitoring unit which consisted of park rangers, local NGO staff and representatives from local communities. The surveys provided close communications between the survey team members which eventually strengthened coordination in other activities.

 Local NGOs played an important role in initiating conservation activities and monitoring efforts in Berbak and Sembilang National Parks. However, some organisational limitations occur and the role of local NGOs was sometimes neglected by projects run by local government and park authority. A part of the success of project achievement belongs to local NGOs as partner organisations in conducting conservation efforts in Berbak and Sembilang. Field activities, including monitoring surveys, community development, and conservation awareness campaigns were often jointly carried out with local NGOs. However local NGOs have some limitations which sometimes became an obstacle to participating in bigger programs or projects. Local government sometimes neglected the role of local NGOs due to the limited information that was available on the NGOs.

Replicability of project activities was better managed by local NGOs.

A number of project activities need to be continuously conducted to ensure conservation of Berbak and Sembilang. Such activities include monitoring efforts, environmental education for school children, community development and other supporting activities for the management of the parks. Local partner NGOs have demonstrated a strong commitment to conservation and initiation of conservation activities in line with project activities. Less bureaucratic procedures is one of the main reasons for effective replication of activities conducted by local NGOs.

• Formation of an "open and informal forum", like Forum Peduli Sembilang, where stakeholders can interact, was endorsed by the local government of South Sumatra as well as other stakeholders of Sembilang National Park. The forum is expected to replicate project activities to promote the conservation of the Greater Berbak-Sembilang region.

Instead of forming a formal forum like the former steering committee in Jambi to support the management of BNP buffer zone, which was proved not to function, a rather informal forum was declared by stakeholders of SNP in South Sumatra. At the first stage the forum served only as a medium for communications and coordination among stakeholders of SNP, and existing mechanisms initiated by the project were maintained. However, the endorsement of local government given to the Forum was strongly indicated by active involvement of local government representatives in the forum.

IV. Financial Management Status

The audit reports received and the periods they covered were as follows:

<u>No</u> .	Period Covered	<u>Completed</u>
1.	1 October 2000 – 31 December 2001	April 2002
2.	1 January 2002 – 31 December 2002	April 2003
3.	1 January 2003 – 31 December 2003	April 2004

According to the Grant Agreement, the annual audit reports were to be submitted to the Bank within six months of the end of each calendar year. All audit reports received an unqualified opinion.

Due date of final statement of accounts and external audit with period of coverage from 1 January 2004 – 30 September 2004: April 30, 2005.

Received by Task Manager: No (not yet due).

Approved by Country Director	Date	Signature
Andrew Steer		