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POUR L'EDUCATION, LA SCIENCE ET LA CULTURE

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CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE
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Point 7 de l'Ordre du jour provisoire: Etat de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril

MISSION REPORT / RAPPORT DE MISSION

Lorentz National Park (Indonesia) (955) /
Parc national de Lorentz (Indonésie) (955)

26 March - 8 April 2008 / 26 mars - 8 avril 2008

This mission report should be read in conjunction with Document:
Ce rapport de mission doit être lu conjointement avec le document suivant:

WHC-08/32.COM/7A

WHC-08/32.COM/7A.Add

WHC-08/32.COM/7B

WHC-08/32.COM/7B.Add

UNESCO World Heritage Centre – IUCN

MISSION REPORT

Reactive Monitoring Mission to the Lorentz World Heritage Site, Indonesia

From 26 March to 8th April, 2008



Photo Credit: Peter Hitchcock



Photo Credit: Peter Hitchcock

**Koen Meyers (UNESCO World Heritage Center)
Peter Hitchcock (IUCN Consultant)
April 2008**

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2 EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

Lorentz National Park World Heritage Site remains one of the great protected areas of the planet, protecting a complex of river catchments that extend from a tropical ice-cap to a tropical sea. Although some earlier reported threats have been either discounted (marine pollution) or are currently not active (illegal logging in swamp forests in Asmat region) the 2008 Monitoring Mission has revealed that threats to the outstanding universal values of Lorentz have increased markedly.

Of equal concern is the limited accomplishment of the Park management agency (Balai Taman Nasional Lorentz) to yet engage in effective field management.

The combination of marked increase in threats and the apparent lack of engagement in effective management to combat those threats is doubly concerning and places the outstanding universal values of the property, especially of the alpine, subalpine and montane tract, at serious risk.

The severe constraints on effective operation of the Park management including limited funding, limited staff capacity and technical expertise deserves priority attention of the international community.

The Mission makes the following **recommendations** for consideration by the World Heritage Committee.

1. **Road Construction (Current):**

- (i) Immediate cessation of current damaging road construction across the highly sensitive organic landscape (peatlands, raised bogs) of Lake Habema basin pending investigation of legality and impacts on natural heritage values.
- (ii) Urgent rehabilitation and mitigation of damaging impacts on peatlands and raised bogs.

2. **Road Construction (Proposed):**

- (i) Immediately engage in dialogue with Local, Provincial and National Government on road development programme within the property.
- (ii) Conduct independent cost-benefit analysis as well as environmental impact assessment of proposed roads within the property.
- (iii) Concurrent with (i), commence consultation with all indigenous communities within the park to establish their aspirations and to explore options for community development, including roadless options. (**Note:** For example, one village, Tsinga has already opted for an airstrip (in lieu of a road) to facilitate mountaineering expeditions and provide the village with emergency transport).

3. **Local Government Decentralisation:**

- (i) Immediately engage in high level dialogue with Local, Provincial and National governments to clarify respective jurisdictions within park, the proposed development programme within the park/property and relationship of local government planning with the park Strategic Plan.

4. **Forest Die-back:**

- (i) Urgently commission pathogenic research and survey of the dieback disease currently threatening the Nothofagus forests in the Lake Habema region.
Note: The *Phytophthora* specialist services of the Cairns-based Australian Tropical Rainforest Institute/James Cook University are available to conduct pathogenic investigations and die-back mapping in collaboration with Indonesian authorities and scientific institutions.

- (ii) Develop management guidelines for the purpose of controlling spread of the die back disease and to provide guidelines for any development activities in the property.

5. Strategic Plan:

- (i) Urgently finalise and implement the 2005 – 2010 (2007-2012) Strategic Plan and initiate the next stage of planning.

Note: *The mission recommends that the highest priority for planning is a precinct plan for the now threatened Lake Habema precinct and similar threatened alpine ecosystems. External assistance in resource inventory and planning is recommended.*

6. Illegal Fishing:

- (i) Initiate official marking of marine boundaries and promote awareness within Government and the fishing industry.
- (ii) Seek collaboration of other agencies to conduct law enforcement to effectively protect the marine environment.

7. Water Hyacinth Infestation:

- (i) Initiate a program for preventing further spread of hyacinth into the park and the control of existing infestations.

8. Illegal Mining:

- (i) Conduct regular patrols of rivers in park to detect any illegal mining. (aerial most effective).

9. Management Agency Functionality:

- (i) Urgently seek external assistance (capacity building, technical assistance, equipment, financial), such assistance to include:

Resourcing:

- Funding assistance from the international community.
- Active review of the concept of a "Friends of Lorentz" Foundation (comprising Corporate, NGO and Government agency participants that are able and prepared to contribute financial, technical and intellectual assistance to the Balai Taman Nasional Lorentz).

Technical Assistance:

- Pathogenic research and survey of the dieback disease (see Forest Die-back above).
- Scientific survey and mapping of alpine, sub-alpine and montane tract of park to provide an informed basis for management. (e.g. Palynological, geomorphological, botanical).
- Independent socio-economic, cost-benefit and environmental assessment of planned road construction.
- Independent technical and engineering assessment and planning of road construction options in alpine-montane tract to minimise environmental impact.

Training and capacity building for staff

- Recruit staff with expertise in anthropology, alpine/montane botany, community development.
- General staff training, in particular in protected area planning, environmental impact assessment, alpine ecology, and community development.

3 BACKGROUND TO THE MISSION

3.1. Inscription history

The first formal protection of the core area of the Lorentz landscape was applied by the Dutch Colonial Government in 1919 with the establishment of the Lorentz Nature Monument. In 1956, the protected status was abolished due to conflicts with local people over unresolved land ownership.

In 1978, the Indonesian Government established a Strict Nature Reserve (*Cagar Alam*) with an area of 2,150,000ha. Lorentz National Park (2,505,600 ha), was established by the Ministry of Forestry decree in March, 1997, including an eastern extension (Mt. Trikora, Mt. Rumphius, Lake Habema area) and coastal and marine areas. (WCMC) The final stage of park establishment has not yet been completed pending finalization of a map of the marked boundary.

Lorentz National Park was nominated by the Government of Indonesia in 1998 and listed as a natural? World Heritage in 1999.

Note: An area of about 150,000 ha of the park was excluded from listing as World Heritage due to the presence of mining exploration titles in the park.

3.2. Inscription criteria and World Heritage values

(vii), (ix), (x) (1999 version (i) (ii) (iv))

Criterion (i): Located at the meeting point of two colliding continental plates, the area has a complex geology with on-going mountain formation as well as major sculpting by glaciation and shoreline accretion which has formed much of the lowland areas.

Criterion (ii): These processes have led to a high level of endemism and;

Criterion (iv): the area supports the highest level of biodiversity in the region. The area also contains fossil sites which record the evolution of life on New Guinea. (WHC)

Note: Although the original nomination included nomination against Criterion (iii) (outstanding natural beauty) the case made was cursory only with the result that the site was not listed against Criteria (iii). It seems inevitable that the spectacular landscape of the Site be recognised and listed against that criterion (New criterion (vii) “*contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance*”). The State Party might be encouraged to consider re-nomination against new Criterion (vii).

3.3. Integrity issues raised in the IUCN evaluation report at time of inscription

The initial IUCN evaluation report recorded: “*Despite its large size, LNP still faces a number of threats and a number of management issues need to be addressed if its stewardship is to be assured. These relate to **boundaries, development pressures, human residents and management constraints***”. All of these topics arise as current issues and are addressed below under ‘Assessment of Issues/Threats’.

3.4. Examination of the State of Conservation by the World Heritage Committee and its Bureau (refer to previous State of Conservation reports etc.)

Commencing in 2004, 5 years after listing, State of Conservation reports by the WHC and its Bureau have registered concern about threats and/or the lack of reporting on the conservation status viz.

WHC Reports

2004 Further recommends that the State Party review the threats arising from claims for “pre-existing development rights” and its implications for the conservation of the property;

2005 Regrets that the State Party of Indonesia did not respond to the specific issues requested;

2006 Notes that there are ongoing significant threats to the values and integrity of the World Heritage property that requires a concerted effort and adequate resources to address;

2007 Notes that there are ongoing significant threats to the values and integrity of the property which require concerted effort and adequate resources to address;

The 2008 Mission has confirmed most forecast threats with increasing urgency for effective response.

3.5. Justification of the mission (terms of reference, itinerary, programme and composition of mission team provided in Annex)

The mission was initiated following the 31st meeting of the WHC (Christchurch, New Zealand) in 2007.

Requests to the State Party for response to the 2004 monitoring report had been previously raised viz. *“Recalling Decisions 29 COM 7B.12 and 30 COM 7B.14, adopted at its 29th (Durban, 2005) and 30th (Vilnius, 2006) sessions respectively..”*

At its 31st meeting in 2007, the WHC recorded its concerns in the form of *“Regrets that the report submitted by the State Party does not provide all the information requested by the Committee at its 30th session (Vilnius, 2006);”*

4 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

Protected area legislation

Lorentz National Park was established by Ministerial Decree in 1997 by Law No.41 on Forestry of 1999.

Law No. 5 of 1990 Concerning Conservation of Biodiversity and Ecosystem also applies.

Institutional framework

Responsibility for management of all national parks and equivalent protected areas in Indonesia is the responsibility of the Directorate of Forest Protection and Nature Conservation ('PHKA') within the Department of Forestry in Central Government. The Head of the Lorentz National Park Bureau (Balai Taman Nasional Lorentz) of Lorentz National Park, is responsible to the Directorate of 'PHKA'.

Note: The management of National Parks is one of the few instances in Indonesia of a Central Government agency being directly responsible for on-ground management whereas responsibility for many other functions of Government are delegated to Provincial or local government. The lack of involvement of Provincial and Local government is often criticised by those levels of Government, particularly in Papua where special autonomy exists at the Provincial level.

Management structure

In 2006, the Minister of Forestry regulation 29/2006 established the management structure for Lorentz National Park – the Balai Taman Nasional Lorentz (Lorentz National Park Bureau) – to be headquartered in Wamena (adjacent to northern boundary) with three branch units in Ilaga, Dekai and Timika. However, the branch units have yet to be operational, and currently most of the LNP staff is still based in Wamena.

A park manager for Lorentz was assigned by Ministerial Decree on 13th October, 2006. At the time of the monitoring mission it was reported that staffing levels had reached 44 personnel. The Bureau became functional in 2007. <http://www.btnlorentz.blogspot.com/>

Response to the recognition of values under international treaties and programmes (World Heritage Convention, Ramsar Convention, Biosphere Reserve etc.)

No other recognition has been accorded to the park or listed property.

5 IDENTIFICATION AND ASSESSMENT OF ISSUES / THREATS

5.1 Management effectiveness

In 2007 the State Party established a special management body, the Lorentz National Park Bureau (Balai Taman Nasional Lorentz) for Lorentz National Park, headquartered in Wamena in Papua Province on the north eastern corner of the park. Notwithstanding the appointment of qualified personnel, presently about 44 in number, the Mission had concerns that the management agency has not yet engaged in effective field management of the site. The indicators of the apparent limited management effectiveness included:

- Detection during the mission of an illegal road under construction adjacent to Lake Habema near Wamena - headquarters of BTNL. (The road was having a serious impact on a fragile montane/alpine environment.)
- Reports, including photographic records, of on-going large fishing boats illegally fishing within the marine section of the Site. (Previously reported as an issue during preparation of the Strategic Plan in 2004.)
- Very limited or no communication yet established with indigenous communities in park.
- No markers of signage of park boundary on Lake Habema Road – the only road into the park.

As the Head of the BTNL was not available to meet with the mission, either on site or in Jakarta, the mission was handicapped in being able to seek explanation for the apparent lack of effective engagement in field management.

It is acknowledged that the capacity of the BTNL is presently seriously limited given:

- Recent 30% reduction in funding (part of a nation wide policy on resourcing of the public service).
- Only one 4 wheel drive vehicle.
- No boats - Notwithstanding the hundreds of kilometres of waterways and a marine park to patrol.
- No staff experience with management of alpine/sub-alpine environments and/or community outreach/anthropology.
- Extended absence of the Head of BTNL from park headquarters.
- Increase in petrol prices, especially in Wamena area, where the petrol prices are very expensive, impacting regular patrolling.

The Strategic Plan prepared (with international assistance) in 2004 for the period 2005-2010, subsequently re-titled 2007-2012, has still not been finalised, distributed or communicated to the community in Papua. This is a most regrettable delay that has placed the management of the property in apparent limbo. In the interim, planning by development agencies has proceeded apace without the benefit of the park strategic plan. A serious impasse has now been reached: a bold road development programme being implemented in the park by local government without guidance from the Strategic Plan or law enforcement by the park management agency.

Lack of effective management engagement now leaves at least the highlands section of the property vulnerable, indeed threatened.

5.2 Nature and extent of threats to the property, taking into consideration the natural values for which the property was inscribed and specific issues outlined by the World Heritage Committee

The mission identified a number of serious threats to the property, all of which have been previously identified or predicted. The main current and prospective threatening processes are:

- **Local Government Decentralisation:** The proliferation of new government administrative areas within and adjacent to Lorentz National Park, whilst not a threat in itself, is translating into demands/expectations/promises for developments which are a direct threat to the property. In particular, planned extensive road construction (See

below), urban and other development within the property, particularly across the high conservation value, fragile alpine and sub-alpine high plateau represents a definite threat to natural heritage values of outstanding universal value.

One newly established local government area (Nduga Regency/Kabupaten) is almost wholly within the park. The capital of the Regency is planned to be developed inside the park.

Recommended Response to Threat:

Immediately engage in high level dialogue with Local and Provincial governments to clarify respective jurisdictions within park, the proposed development programme within the park/property and relationship of local government planning with the park Strategic Plan.

- **Roads:** Various road proposals, some of long standing, represent a threat to the value and integrity of the Site. One particular proposed road network detailed to the mission, a network of roads across the globally important high plateau region, represents an ***immediate and serious threat*** to the value and integrity of the property. Indeed, construction has already commenced - albeit illegally. Roads potentially impact directly on the fragile alpine and montane landscape (see images of construction in park) and indirectly via initiation of forest die-back disease, illegal logging and many other threatening processes associated with roads. Roads now under construction or planned represent the single most ***serious immediate threat to natural heritage values of outstanding universal value*** in the Lorentz National Park.

Recommended Response to Threat:

Immediately engage in dialogue with Local and Provincial Governments on road development programme within the property.

Concurrent with (i), commence consultation with all indigenous communities within the park to establish their aspirations and to explore options for community development, including roadless options. (**Note:** For example, one village, Tsinga has already opted for an airstrip (in lieu of a road) to facilitate mountaineering expeditions and provide the village with emergency transport).

- **Illegal Road Construction:** The mission observed construction of a road through the highly sensitive organic landscape of the sub-alpine region of the park adjacent to Lake Habema, a glacial lake. The road project had previously been rejected by the Ministry of Forestry but contrary to that refusal of approval, the road was being constructed on the day that the mission visited the locality. Serious damage to the organic landscape was very apparent. (See images). The conclusion is that the management authority has failed to enforce the law in this highly sensitive section of the property.

Recommended Response to Threat:

- (i) Immediate cessation of current damaging road construction across the highly sensitive organic landscape (peatlands, raised bogs) of Lake Habema basin pending investigation of legality and impacts on natural heritage values.
- (ii) Urgent rehabilitation and mitigation of damaging impacts on peatlands and raised bogs.

- **Illegal Logging:** Illegal logging has previously been reported (monitoring mission 2004) along the Lake Habema road in the north east of the park and in the Asmat region in the south east. The mission observed ***on-going small scale illegal logging*** on the Lake Habema road. More than a decade after establishment of the National Park and almost a decade after World Heritage listing, there is still no identifying marker or sign on the boundary of the park on the Lake Habema road (the only road access into the park), a prerequisite for prosecution for illegal logging.

Illegal logging in the south eastern swamp forests is reported to have ceased due to the cost of increasingly difficult access.

Recommended Response to Threat:

- (i) Signpost park boundary on Lake Habema road
- (ii) Enforce law on logging in national park

▪ **Die-back in Nothofagus forest:**

The 2004 Monitoring Report recommended that “*the State Party ... independently conduct an environmental audit of the on-going impacts of the Lake Habbema road, in particular, investigate the evidence of the die back disease in the Nothofagus temperate rainforest*”.

Although an audit of aspects of the “on-going impacts” of the road has reportedly been completed, that report was not available to the Mission; further, it was advised that the audit did not include any pathogenic investigation. Observations recorded during the mission indicate that the die-back process continues and may be much more extensive than previous.

Threatened major (unauthorised) extension of the Lake Habema road could spread the disease and seriously exacerbate the deforestation by die-back in the relict Gondwanan Nothofagus forests on the main mountain range of the Site.

Recommended Response to Threat:

- (i) Urgently commission pathogenic research and survey of the dieback disease currently threatening the Nothofagus forests in the Lake Habema region.
Note: *The Phytophthora specialist services of the Cairns-based Australian Tropical Rainforest Institute/James Cook University are available to conduct pathogenic investigations and die-back mapping in collaboration with Indonesian authorities.*
- (ii) Develop management guidelines for the purpose of controlling spread of the die back disease and to provide guidelines for any development activities in the property.

- **Illegal Fishing:** The marine section of the property is reportedly the subject of on-going illegal inshore trawl fishing by large vessels. The management agency presently has no management presence or capacity to manage illegal activities in the marine section of the property. In reality there is as yet no effective protection or management of the marine waters of the park. The marine natural heritage values cited in the nomination are therefore unprotected and **threatened**.

Recommended Response to Threat:

- (i) Initiate official marking of marine boundaries and promote awareness within Government and the fishing industry.
- (ii) Seek collaboration of other agencies to conduct law enforcement to effectively protect the marine environment.

- **Aquatic Weeds:** A new threat reported to the mission but not confirmed is the reported invasion of water hyacinth (*Eichornia crassipes*) in the south east of the national park. At the time of assessment of the nomination, these waterways were inspected and no water hyacinth was present though its introduction from rivers outside the park was forecast and therefore noted as a threat.

Action to prevent further spread into the extensive wetlands and waterways of the property is a **high priority**.

Recommended Response to Threat:

Initiate a program for preventing further spread of hyacinth into the park and the control of existing infestations.

- **Illegal Mining:** Although no illegal mining was reported occurring in the park, the mission was alerted to this is a potential threat in the future. As many as 8,000 people, many migrated from outside the region, are now engaged in illegal mining in the Ajkwa River downstream of the Freeport ore processing facility. The concern is that illegal mining will extend east into the park. The miners presently consume substantial quantities of mercury

which can contaminate the river and causes health problems for miners. The mission was also informed on the presence of mineral deposits in the park, as well as of the advocacy efforts from certain elements in private sector and local government for the establishment of keyholes (areas where mining is allowed) in the park. However, no further detailed information on this issue could be obtained during the mission.

Recommended Response to Threat:

Conduct regular patrols of rivers in park to detect any illegal mining. (aerial most effective)

- **Management Agency Functionality (Authority, Resources, Capacity):** The apparent failure of the park management bureau (Balai Taman Nasional Lorentz – BTNL) to effectively engage in field management during its initial period of operation is a matter of concern. Whilst there appear to be a number of explanations for underperformance, the reality is that the apparent failure to engage in effective field management represents a serious threat to the values and integrity of the property.

Recommended Response to Threat:

- (i) Urgently seek external assistance (capacity building, technical assistance, equipment, financial).
- (ii) Immediately adopt the Lorentz Strategic Plan and implement threat-driven strategic approach to field management.

5.3 Positive or negative developments in the conservation of the property since the last report to the World Heritage Committee

Several significant positive developments in the conservation of the property were identified by the mission.

5.3.1 Impact of Mining on Property:

Background: There have been persistent claims that the huge Grasberg copper and gold mine owned by Freeport Indonesia is impacting on the Lorentz property. The main alleged forms of impact are:

- Direct impact of explosives and dust on the adjacent ice cap in the property
- Contamination of marine component of property by mine tailings

Whilst the mission was unable to investigate the claim relating to the impact of explosives and dust on the ice cap – something that has been previously raised with little or no evidence – the mission was able to form an updated opinion on the issue of marine contamination. Since the establishment of the park in 1998 Freeport has conducted sophisticated monitoring of the marine environment and has continuously upgraded the management of mine tailings. The mission concluded that:

1. *“The mission found no evidence of mine tailings entering or impacting on the marine section of the property.”*
2. *“Further, that the monitoring programme maintained by Freeport Indonesia and periodically advised to the GoI, represents a sound basis for the State Party to continue to monitor the situation in the property.”*

1. **Impact of Explosives and Dust:** In the absence of specialised technical monitoring or any tangible evidence of the impacts of rock blasting on the ice cap, it is not possible to draw any conclusions on this alleged threat. Previous investigations failed to reveal any dust impact on the ice though algal growth was reported.
2. **Mine Tailings:** A condition of the mining authorities issued to Freeport by the Government of Indonesia allows the discharge of ground rock tailings into the Otomona River, a tributary of the Ajkwa River and the requirement that at least 50% of that discharge is to be extracted from the lower river and retained on land. The corollary of

that condition is that it is legally permissible for up to 50% of the tailings to be discharged to the sea.

The main summary points are:

1. The mine tailings primarily comprise finely ground rock produced by milling of ore-bearing rock, the product of physical milling and not subject to chemical treatment.*
2. Freeport presently claim to be achieving a retention level of around 85% of the tailings/sediment load but acknowledge that the balance is flushed to the sea via a channel emptying into the estuary of the Ajkwa River.
3. Freeport has a major and on-going programme of increasing sediment retention which is expected to further reduce, but not eliminate, the discharge of sediment to the sea.
4. Freeport maintains a comprehensive monitoring program which extends eastward into the estuarine section of the Lorentz National Park. Monitoring includes water quality, sediment and biota sampling up to 10 kms off shore. A summary of monitoring results was volunteered to the mission.
5. The monitoring program has been in place since 1997 and is reported quarterly and annually to the Government of Indonesia, including copy to the Ministry of Forestry.
6. The monitoring programme maintained by Freeport has failed to detect any evidence of mine tailings reaching the marine section of the property and therefore reveals no evidence of impacts on the property. Notwithstanding, it is important that the park management maintain an active interest in the monitoring results, particularly for monitoring sites in the national park.

* A small amount of a phosphatic chemical is added to assist flocculation of the ground ore material. This was said to average only about 30 grams per tonne of crushed ore. It would be expected to have no toxic effect to the river and the sea.

Conclusions:

1. The mission found no evidence of mine tailings entering or impacting on the marine section of the property.
2. Further, that the monitoring programme maintained by Freeport Indonesia and periodically advised to the Gol, represents a sound basis for the State Party to continue to monitor the situation in the property.

Recommendation:

Ministry of Forestry collaborate in ensuring that current monitoring continues and is possibly extended to include other monitoring sites in the marine part of the Lorentz property as a basis for monitoring if there is any detriment to the park from on-going discharge of sediment from mine tailings.

5.3.2 Boundaries: Deficiencies in boundary delineation and marking were noted during the 1999 evaluation and again in the 2004 monitoring report. This Mission noted important progress in boundary marking. The full extent of the park boundary requiring on-ground marking has now been marked. However, the compilation map of the ground markers has not yet been completed and is expected to be completed later in 2008. (**Note:** Sections of boundary of the listed area in the east differs from that of the Lorentz National Park due to exclusion of part of the park from the listing. This creates a vulnerability that requires the attention of the management authority)

5.3.3 Information on any threat or damage to or loss of outstanding universal value, integrity and/or authenticity for which the property was inscribed

A number of the threats outlined above are currently incurring "*actual damage to or loss of outstanding universal value, integrity...*". In particular, the:

- Current road construction
- Illegal logging(on-going)
- Forest die-back
- Illegal fishing (on-going)
- Invasive aquatic plants (Hyacinth)

The greatest potentially irreversible damage has been caused by the new road construction near Lake Habema and the disease driven forest die-back in the high altitude Gondwanan Nothofagus forest adjacent to the Lake Habema road. The new road construction has the potential to cause on-going impact as peatlands and a perched lagoon are eroded and drained. Only a substantial and rapid rehabilitation of the road will prevent on-going impact on fragile high-value natural heritage features.

The illegal logging and fishing and the spread of hyacinth water weed are all controllable and potentially reversible but will require effective intervention in all cases.

6 ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

Review whether the values, on the basis of which the property was inscribed on the World Heritage List, and the conditions of integrity are being maintained

The **2004** Monitoring Mission reported “*Since inscription of the site in 1999, there is no evidence that any of the values for which the site was inscribed have been significantly degraded, other than at a local level, over the 5 year period since the field assessment. However, all indications are that without specific intervention and application of a sufficiently robust management regime, degradation will almost certainly accelerate and some of the outstanding universal values will be degraded or lost.*”

The **2008** Monitoring Mission re-affirms the predictions in the 2004 report. Some specific unauthorised road development discovered in the Lake Habema glaciated landscape is tangible evidence of the immediate threat now posed by a major unauthorised road construction programme in the alpine and montane regions of the Site. The unauthorised road construction is also symptomatic of the apparent failure of the new management regime to yet effectively engage in on-ground protection of the Site. The forest dieback in the high altitude *Nothofagus* cool temperate rainforests reported by the 2004 mission has not been further investigated and has been observed to have expanded since 2004. The integrity and outstanding universal value of the alpine and montane of the Lake Habema precinct continue to be significantly impacted in the absence of effective field management. **Unless there is immediate and significant improvement in field management performance of the park authority, important areas of “outstanding universal values will be (further) degraded or lost”.**

Review any follow-up measures to previous decisions of the World Heritage Committee on the state of conservation of the property and measures which the State Party plans to take to protect the outstanding universal value of the property.

Two issues regularly raised by the World Heritage Committee are raised as matters of concern, the Strategic Plan and the forest dieback.

Strategic Plan:

Decisions of the World Heritage Committee have included persistent urging of the State Party to expedite ‘finalization and implementation’ of the Strategic Plan for Lorentz National Park vide:

28COM 15B.10 – Lorentz National Park (Indonesia) 2004

The World Heritage Committee,

1. Urges early finalization and implementation of the strategic plan;

29COM 7B.12 - Lorentz National Park (Indonesia) 2005

The World Heritage Committee,

Having examined Document **WHC-05/29.COM/7B.Rev**,

Recalling its Decision **28 COM 15B.10**, adopted at its 28th session (Suzhou, 2004),

Regrets that the State Party of Indonesia did not respond to the specific issues requested;

30COM 7B.14 - State of Conservation (Lorentz National Park) 2006

The World Heritage Committee,

Having examined Document **WHC-06/30.COM/7B**,

Recalling Decision **29 COM 7B.12**, adopted at its 29th session (Durban, 2005),

3. Notes that there are ongoing significant threats to the values and integrity of the World Heritage property that requires a concerted effort and adequate resources to address;
4. Notes with concern that the Strategic Plan has yet to be formally approved and implemented;
6. Requests the State Party to formally approve and implement the Strategic Plan and to provide a detailed report as soon as possible, but not later than **31 October 2006**, on the human and financial resources required to implement the Strategic Plan and the actual resources currently available from the State Party and other sources;

31COM 7B.18 - State of conservation of World Heritage Properties - Lorentz National Park 2007

The World Heritage Committee,

3. Regrets that the report submitted by the State Party does not provide all the information requested by the Committee at its 30th session (Vilnius, 2006);
6. Requests the State Party to implement the Strategic Plan 2005-2010 and to proceed with the urgent development and implementation of the management plan;

Following financial assistance provided by Ausaid, a Strategic Plan for 2005-2010 for Lorentz was substantially completed in 2004. Although the plan has been 'rebadged' as 2007-2012, the 2008 mission learned that the plan has still not been finalised, unfortunate given that the plan deals with many of the now more serious issues and threats confronting the property.

Investigation of Forest Die-back:

The World Heritage Committee has consistently raised the issue of the need for an "independent environmental audit" on the impacts of the Lake Habema Road, "particularly the evidence linking impacts of the road to dieback disease in the *Nothofagus* temperate forests".

28COM 15B.10 - Lorentz National Park (Indonesia) 2004

The World Heritage Committee,

3. Invites the State Party to commission an independent review of the management of the property's coastal and marine zones and an independent environmental audit of the impacts of the Habema Road, particularly the evidence linking impacts of the road to dieback disease in the *Nothofagus* temperate forests;

29COM 7B.12 - Lorentz National Park (Indonesia) 2005

The World Heritage Committee,

1. Having examined Document *WHC-05/29.COM/7B.Rev*,
2. Recalling its Decision **28 COM 15B.10**, adopted at its 28th session (Suzhou, 2004),
3. Regrets that the State Party of Indonesia did not respond to the specific issues requested;

30COM 7B.14 - State of Conservation (Lorentz National Park) 2006

The World Heritage Committee,

Urges the State Party to provide a substantive response to the World Heritage Committee's request (**28 COM 15B.10** paragraph 3) to commission an independent environmental audit of the proposed Habema Road;

31COM 7B.18 - State of conservation of World Heritage Properties - Lorentz National Park 2007

The World Heritage Committee,

3. Regrets that the report submitted by the State Party does not provide all the information requested by the Committee at its 30th session (Vilnius, 2006);
8. Reiterates its request to commission an independent environmental audit of the proposed Lake Habema Road, as already requested at its 28th session (Suzhou, 2004);

Although there is mention in the State Party Report 2007 of a "10. Study on the road development impact" (page 15) there is no report on the results nor was the Park Authorities able to provide the mission with a copy of any study report, though indicated that 'the study' had not included investigation of the *Phytophthora* issue. The evidence from the 2008 mission indicates that the die-back is continuing to spread, killing the relict *Nothofagus* forest.

The apparent failure to implement these two priority actions raised by the World Heritage Committee each year since 2004 is most regrettable and underscores the apparent lack of effective management engagement to date and the concomitant increased threat.

7 CONCLUSIONS AND RECOMMENDATIONS

Recommendations for any additional action to be taken by the State Party, including draft recommendations to the World Heritage Committee

1. **Road Construction (Current):**
 - (iii) Immediate cessation of current damaging road construction across the highly sensitive organic landscape (peatlands, raised bogs) of Lake Habema basin pending investigation of legality and impacts on natural heritage values.
 - (iv) Urgent rehabilitation and mitigation of damaging impacts on peatlands and raised bogs.
2. **Road Construction (Proposed):**
 - (iv) Immediately engage in dialogue with Local and Provincial Governments on road development programme within the property.
 - (v) Concurrent with (i), commence consultation with all indigenous communities within the park to establish their aspirations and to explore options for community development, including roadless options. (**Note:** For example, one village, Tsinga has already opted for an airstrip (in lieu of a road) to facilitate mountaineering expeditions and provide the village with emergency transport).
3. **Local Government Decentralisation:**
 - (ii) Immediately engage in high level dialogue with Local and Provincial governments to clarify respective jurisdictions within park, the proposed development programme within the park/property and relationship of local government planning with the park Strategic Plan.
4. **Forest Die-back:**
 - (iii) Urgently commission pathogenic research and survey of the dieback disease currently threatening the Nothofagus forests in the Lake Habema region.
Note: *The Phytophthora specialist services of the Cairns-based Australian Tropical Rainforest Institute/James Cook University are available to conduct pathogenic investigations and die-back mapping in collaboration with Indonesian authorities.*
 - (iv) Develop management guidelines for the purpose of controlling spread of the die back disease and to provide guidelines for any development activities in the property.
5. **Strategic Plan:**
 - (ii) Urgently finalise and implement the 2005 – 2010 (2007-2012) Strategic Plan and initiate the next stage of planning.
Note: *The mission recommends that the highest priority for planning is a precinct plan for the now threatened Lake Habema precinct. External assistance in resource inventory and planning is recommended.*
6. **Illegal Fishing:**
 - (iii) Initiate official marking of marine boundaries and promote awareness within Government and the fishing industry.
 - (iv) Seek collaboration of other agencies to conduct law enforcement to effectively protect the marine environment.
7. **Water Hyacinth Infestation:**
 - (ii) Initiate a program for preventing further spread of hyacinth into the park and the control of existing infestations.
8. **Illegal Mining:**
 - (ii) Conduct regular patrols of rivers in park to detect any illegal mining. (aerial most effective).

9. Management Agency Functionality:

- (ii) Urgently seek external assistance (capacity building, technical assistance, equipment, financial), such assistance to include:

Resourcing:

- Funding assistance from the international community.
- Active review of the concept of a “Friends of Lorentz” Foundation (comprising Corporate, NGO and Government agency participants that are able and prepared to contribute financial, technical and intellectual assistance to the Balai Taman Nasional Lorentz).

Technical Assistance:

- Pathogenic research and survey of the dieback disease (see Forest Die-back above).
- Scientific survey and mapping of alpine, sub-alpine and montane tract of park to provide an informed basis for management. (e.g. Palynological, geomorphological, botanical).
- Independent technical and engineering assessment and planning of road construction options in alpine-montane tract to minimise environmental impact.

Training and capacity building for staff

- Recruit staff with expertise in anthropology, alpine/montane botany, community development.
- General staff training, in particular in protected area planning, environmental impact assessment and community development.

Whenever further action is needed, clear benchmarks indicating the corrective measures to be taken in order to achieve significant improvement of the state of conservation and a timeframe within which the benchmarks will have to be met

Given the immediacy of the road construction issue – one presumed illegal road under construction at time of mission and many more planned – resolution of this serious threat to the alpine/montane section of the property is a matter of very high priority. Similarly, the related issue of forest die-back associated with roads needs to be dealt with concurrently and expeditiously. The recommended timeframe for the highest priority actions are:

Recommendation Class	Recommendation Reference:	Recommended Timeframe
Road Construction (Current)	1. (i) and 1. (ii) (initiate)	Immediate By July 2008
Road Construction (Proposed)	2. (i) and (ii) (initiate)	By July 2008
Local Govt. Decentralisation	3. (i) (initiate)	Immediate
Forest Die-back	4. (i) (initiate) 4. (ii) complete	September 2008 January 2009
Strategic Plan	5. (i) complete	September 2008

Recommendation as to whether the level of threats to the property warrants the property being included on or excluded from the List of World Heritage in Danger.

Although the current level of threat to the property does not warrant listing as World Heritage in Danger, there are sufficient signs to indicate that unless a greater level of protection and management control is exercised in the immediate future, important vulnerable parts of the Site could be seriously threatened in the foreseeable future. Unless there is decisive management intervention in the immediate future, the current drift towards the whole site becoming threatened will continue.

ANNEXES

ANNEX 1 TERMS OF REFERENCE (1)

Lorentz National Park (Indonesia) (N 955)

Decision: 31 COM 7B.18

The World Heritage Committee,

1. Having examined Document WHC-07/31.COM/7B,
2. Recalling Decisions **29 COM 7B.12** and **30 COM 7B.14**, adopted at its 29th (Durban, 2005) and 30th (Vilnius, 2006) sessions respectively,
3. Regrets that the report submitted by the State Party does not provide all the information requested by the Committee at its 30th session (Vilnius, 2006);
4. Notes that there are ongoing significant threats to the values and integrity of the property which require concerted effort and adequate resources to address;
5. Commends the State Party on the establishment of the park management authority “Balai Taman Nasional Lorentz”;
6. Requests the State Party to implement the Strategic Plan 2005-2010 and to proceed with the urgent development and implementation of the management plan;
7. Calls on the international donor community to accord high priority to funding the implementation of the Strategic Plan, once it has been formally approved by the State Party, and the development and implementation of the management plan for the property;
8. Reiterates its request to commission an independent environmental audit of the proposed Lake Habema Road, as already requested at its 28th session (Suzhou, 2004);
9. Also requests the State Party to invite a joint World Heritage Centre/IUCN mission to assess the state of conservation of the property, in consultation with all relevant stakeholders;
10. Further requests the State Party to submit to the World Heritage Centre, by **1 February 2008**, a detailed report on state of conservation of the property and on progress made in addressing the different issues noted above, as well as the identification and marking of the boundaries of the property and the threats from illegal logging and mining activities, in particular those associated to the discharge of water from the mine tailings, for examination by the World Heritage Committee at its 32nd session in 2008.

ANNEX 2: TERMS OF REFERENCE (2)

Terms of Reference Issued by IUCN:

The IUCN expert will:

Undertake, on behalf of IUCN, the UNESCO / IUCN Monitoring Mission 26 March to 2 April 2008 to the Lorentz National Park World Heritage property in Indonesia. The mission should:

- (i) Assess the state of conservation of this property and the factors affecting the Outstanding Universal Value of the property, in particular in relation to management of water and alien invasive species;
- (ii) Hold consultations with the Indonesian authorities and relevant stakeholders in examining the progress made in relation to the recommendations of 2007 (see Decision 31 COM 7B.18 and previous Decisions);
- (iii) On the basis of the foregoing findings, make recommendations to the Government of Indonesia and the World Heritage Committee for a better conservation and management of the property; and
- (iv) Obtain and study maps, monitoring data and information on impact of mine tailings, and the status of mining in the region, and the status of road and other developments on the values of the property;
- (v) Assess the status of the Strategic Plan and its implementation;
- (vi) Review the wildlife resource management and monitoring including exploitation of marine resources and poaching;
- (vii) Request information on enforcement and compliance of regulations supporting the protection of values of the property, including the prosecution of illegal activities and other mechanisms of enforcement;
- (viii) Assess progress in the physical demarcation of the boundaries of the property and awareness of these boundaries with local communities and stakeholders;
- (ix) Inquire with local authorities if the issues of risk reduction and climate change are incorporated in planning and management and any specific actions implemented;
- (x) Prepare a mission report on the findings and recommendations of this Monitoring Mission following the attached format. This report should be prepared jointly with the other experts involved in the mission.

NOTE: The final decision on IUCN's recommendation to the World Heritage Committee will be made by IUCN in consultation with the expert(s).

- Co-ordinate with the other experts involved in the mission, and as advised by IUCN, in order to organise and undertake the above mission;
- Liaise with the relevant authorities in the host country, as advised by IUCN, in relation to organising and undertaking the above mission;
- While on mission, make contact with various stakeholders, including IUCN Councillor as appropriate, to discuss the state of conservation of the property, and provide IUCN with the contact details of the most relevant and reliable sources of information for follow-up of the mission and future reactive monitoring of the property;

- While on mission, take photographs which reflect the key threats to the property using a digital camera or 35mm slide film and submit a selection of slides/JPEG files with a short text describing the contents of each to IUCN following the attached guidelines;
- Prepare a brief 'trip report' (1 page), for internal use by IUCN, outlining positive and negative aspects of the mission which IUCN should be aware of and suggestions for follow-up action by IUCN;
- Submit to IUCN before 10 May 2008 an electronic version of the draft mission report, brief 'trip report', relevant slides/JPEG files and the contact details of individuals or organisations for future monitoring purposes.

ANNEX 3: ITINERARY AND PROGRAMME

ANNEX 4 DECISION OF WORLD HERITAGE COMMITTEE ON LISTING LORENTZ, MARAKESH, 1999

Property	Lorentz National Park
Id. N°	955
State Party	Indonesia
Criteria	N (i) (ii) (iv)

The Committee recalled that the Bureau at its twenty-third session requested the Centre to inform the Indonesian authorities of a number of aspects suggested by IUCN dealing with the management of the site, and in particular: (a) the priority need to continue the process of management planning for the Park with full involvement of the local stakeholders; (b) encouragement for the proposed establishment of a Foundation which would assist in the management of the Park; (c) possible twinning arrangement with the Wet Tropics World Heritage site in Australia; (d) appointment of a Park Director and support staff; (e) the concern over development projects that would affect the Park, for example the proposed Timika/Mapurajaya road and any expansion of mining activity towards the Park boundary so as not to conflict with Lorentz National Park's nomination as a World Heritage site. A letter from the Indonesian authorities was received noting their agreement with all of the above.

Several delegates and observers noted the issues of the mining concessions surrounding the site, the proposed 6% reduction of the site and the adjacent oil concessions as well as other potential impacts to the sites, such as road construction and visual impacts.

The Chairperson, in thanking the Committee for the extensive debate and consideration of the matter, suggested that the following points be transmitted to the State Party:

- a. The Committee noted that as per the request of 25 October 1999 from the Indonesian authorities, an adjustment of approximately 150,000 hectares were made to exclude oil exploration concessions in the south-east corner of the Park. The Committee accepted this reduction in the size of the property and agreed with the new boundaries as submitted in Map C (see [Annex V](#)). The modified size of the site is now about 2.35 million hectares.
- b. The Committee recognized the potential risks and threats as indicated in the IUCN evaluation and requested the State Party to consider these in actions concerning the site.
- c. The Committee encouraged further action on the proposed Trust Fund that would assist in strengthening conservation in Lorentz National Park.
- d. The Committee requested that a monitoring mission be undertaken to gauge progress three years after inscription.

The Delegate of Australia noted that his country still has not been officially informed about the suggestion of twinning arrangements between the Wet Tropics of Queensland and Lorentz National Park, but will be willing to co-operate if invited by the State Party.

The Committee decided to inscribe the site under natural *criteria (i), (ii) and (iv)*.

The site is the largest protected area in Southeast Asia (2.35 mil. ha.) and the only protected area in the world which incorporates a continuous, intact transect from snow cap to tropical marine environment, including extensive lowland wetlands. Located at the meeting point of two colliding continental plates, the area has a complex geology with on-going mountain formation as well as major sculpting by glaciation and shoreline accretion which has formed much of the lowland areas. These processes have led to a high level of endemism and the area supports the highest level of biodiversity in the region. The area also contains fossil sites that record the evolution of life on New Guinea.

ANNEX 5: COMPOSITION OF MISSION TEAM

The mission team comprised:

<p>Peter Hitchcock Member, IUCN's WCPA Forest Conservation Consultant Cairns, Far North Queensland Australia</p>	<p>Koen Meyers Technical Adviser for Environmental Sciences UNESCO Office Jakarta Science Bureau for Asia and the Pacific Jl. Galuh (II) No.5 Kebayoran Baru Jakarta 12110 PO Box 1273 JKT Indonesia Tel: (62-21) 7399818 Ext. 808 Fax: (62-21) 72796489</p>
<p>Mr. Dadang Wardana Head of National Park Section, Sub- directorate of Conservation Areas and Hunting Park, Directorate of Conservation Areas Directorate-General of Forest Protection and Nature Conservation (PHKA), Ministry of Forestry Manggala Wanabakti Building, Block VII, 7th Floor Jalan Jenderal Gatot Subroto, Jakarta 10270, Indonesia Tel./Fax: +62-21-5720229</p>	<p>Mr. Leon Simangungsong Sub-division for Technical Cooperation Division of Programme and Budget Secretariat Directorate-General of Forest Protection and Nature Conservation, Directorate General of Forest Protection and Nature Conservation (PHKA), Ministry of Forestry Manggala Wanabakti Building, Block I, 15th Floor Jalan Jenderal Gatot Subroto, Jakarta 10270, Indonesia Tel./Fax: +62-21-5730244</p>

ANNEX 6

- **list and contact details of people met**
- **In preparation**

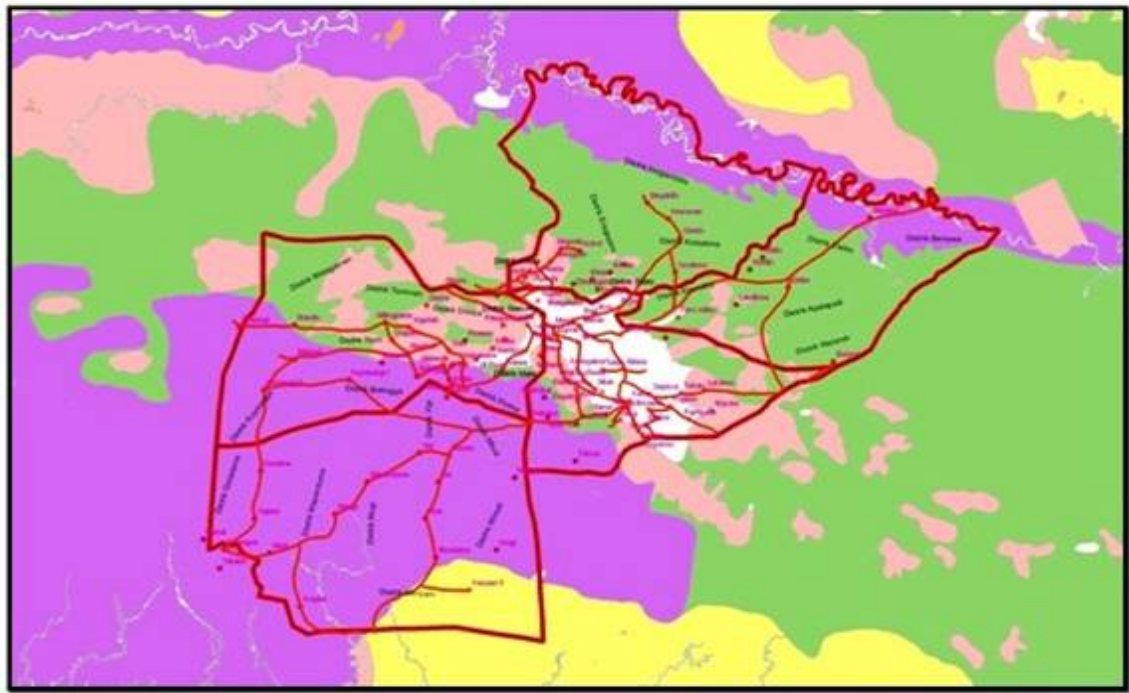
ANNEX 7



PROPOSED ROAD NETWORK INSIDE LORENTZ NATIONAL PARK (Lower purple colour area)

If implemented, this road system and the development that will follow will threaten World Heritage values

○

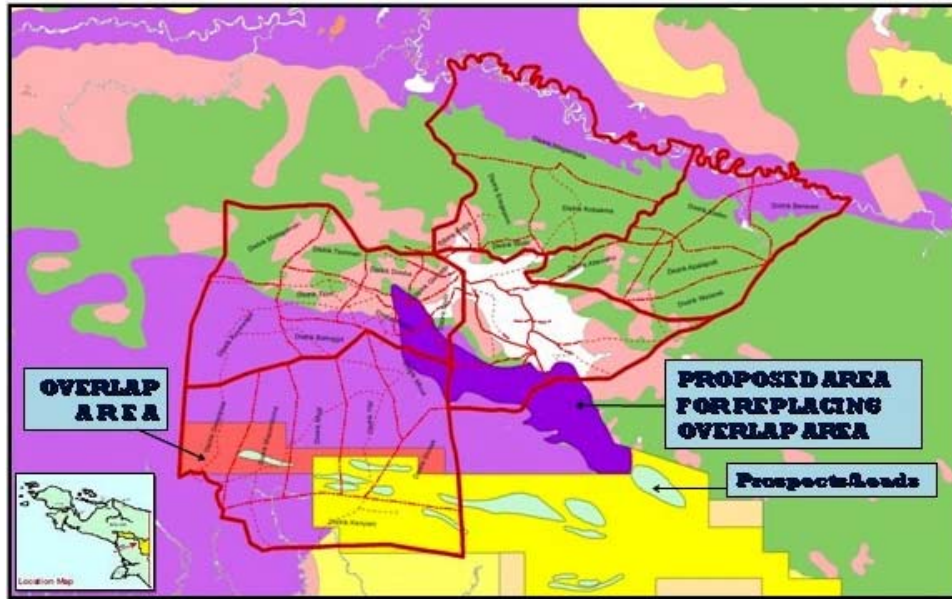


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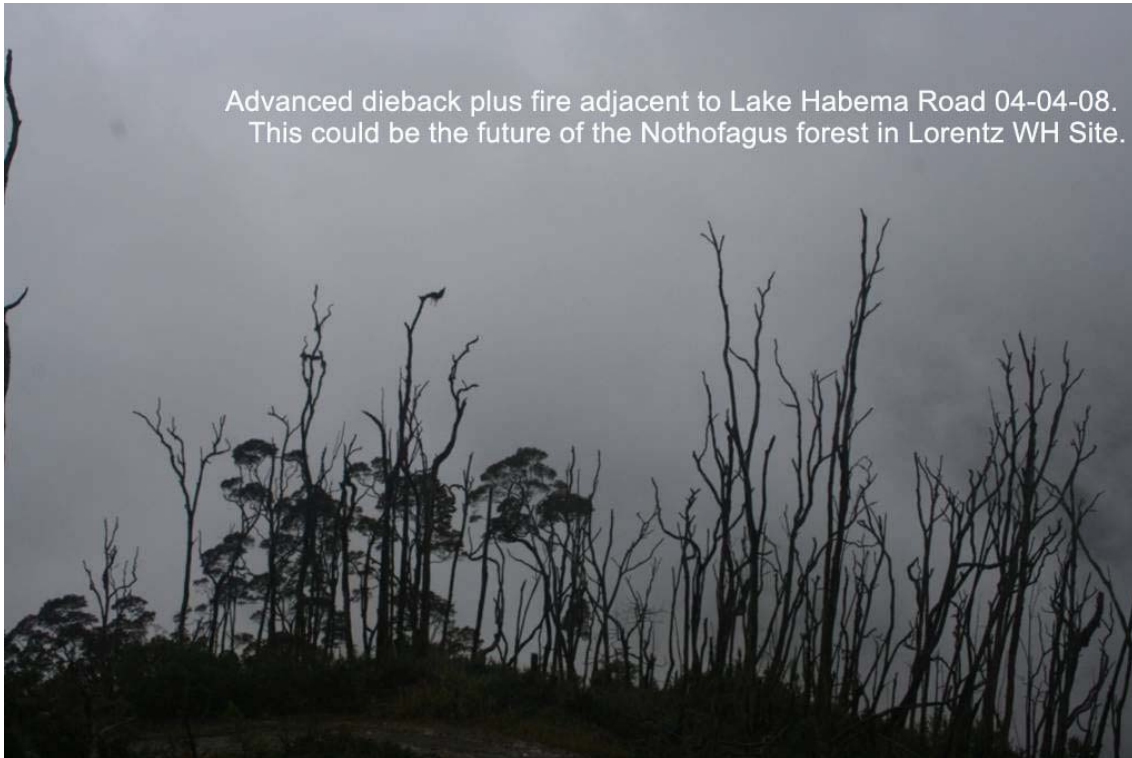
PROPOSED MINING

Local Government is proposing that part of the park/property be revoked to allow mining by Conoco



ANNEX 8

Photographs and other graphical material (showing issues of integrity)





Trawlers allegedly fishing inside Lorentz National Park



Illegal road has already initiated erosion and drainage of peat bog near junction with Lake Habema Road.
Further major drainage and drying of peat bog is predicted 04-04-08.



Serpentine channel through which effluent from tailings disposal area reaches the sea.

ANNEX 9

Impact of Mining on Property:

Background: There have been persistent claims that the huge Grasberg copper and gold mine owned by Freeport Indonesia is impacting on the Lorentz property. The main alleged forms of impact are:

- Direct impact of explosives on the adjacent ice cap in the property
- Contamination of marine component of property by mine tailings

Impact of Explosives: In the absence of any tangible evidence of the impacts of rock blasting on the ice cap, it is not possible to draw any conclusions.

Mine Tailings: A condition of the mining authorities issued to Freeport by the Government of Indonesia allows the discharge of ground rock tailings into the Otomona River and the requirement that at least 50% of that discharge is to be extracted from the lower river (here called the Ajkwa River) and retained on land. The corollary of that condition is that it is permissible for up to 50% of the tailings to be discharged to the sea.

The main summary points are:

1. The mine tailings primarily comprise finely ground rock produced by milling of ore bearing rock, the product of physical milling and not subject to chemical treatment.*
2. Freeport presently claim to be achieving a retention level of around 85% of the tailings/sediment load but acknowledge that the balance is flushed to the sea via a channel emptying into the estuary of the Ajkwa River.
3. Freeport has a major and on-going programme of increasing sediment retention which is expected to further reduce, but not eliminate, the discharge of sediment to the sea.
4. Freeport maintains a comprehensive monitoring program which extends into the estuarine section of the Lorentz property. Monitoring includes water quality and sediment sampling up to 10 kms off shore. A summary of monitoring results was volunteered to the mission.
5. The monitoring program has been in place since 1997 and is reported quarterly and annually to the Government of Indonesia, including copy to the Ministry of Forestry.
6. Details of the monitoring programme maintained by Freeport reveal no evidence of mine tailings reaching the marine section of the property and therefore no evidence of impacts on the property. Notwithstanding, it is important that the park management maintain an active interest in the monitoring results, particularly for monitoring sites in the national park.

* A small amount of a phosphatic chemical is added to assist flocculation of the ground ore material. This was said to average only about 30 grams per tonne of crushed ore. It has no toxic effect on tailings discharged to the river and the sea.

Conclusions:

1. The mission found no evidence of mine tailings entering or impacting on the marine section of the property.
2. Further, that the monitoring programme maintained by Freeport Indonesia and periodically advised to the Gol, represents a sound basis for the State Party to monitor the situation in the property.

Recommendation:

1. Ministry of Forestry collaborate with Freeport in ensuring that current monitoring continues and is possibly extended to include other monitoring sites in the marine part of the Lorentz property as a basis for monitoring if there is any detriment to the park from on-going discharge of sediment from mine tailings into the Arafura Sea.