

Conservation of Peat Swamp Forest in Sabah: The Klias Forest Reserve



By Christopher A.



Introduction



Klias FR – 3,630ha

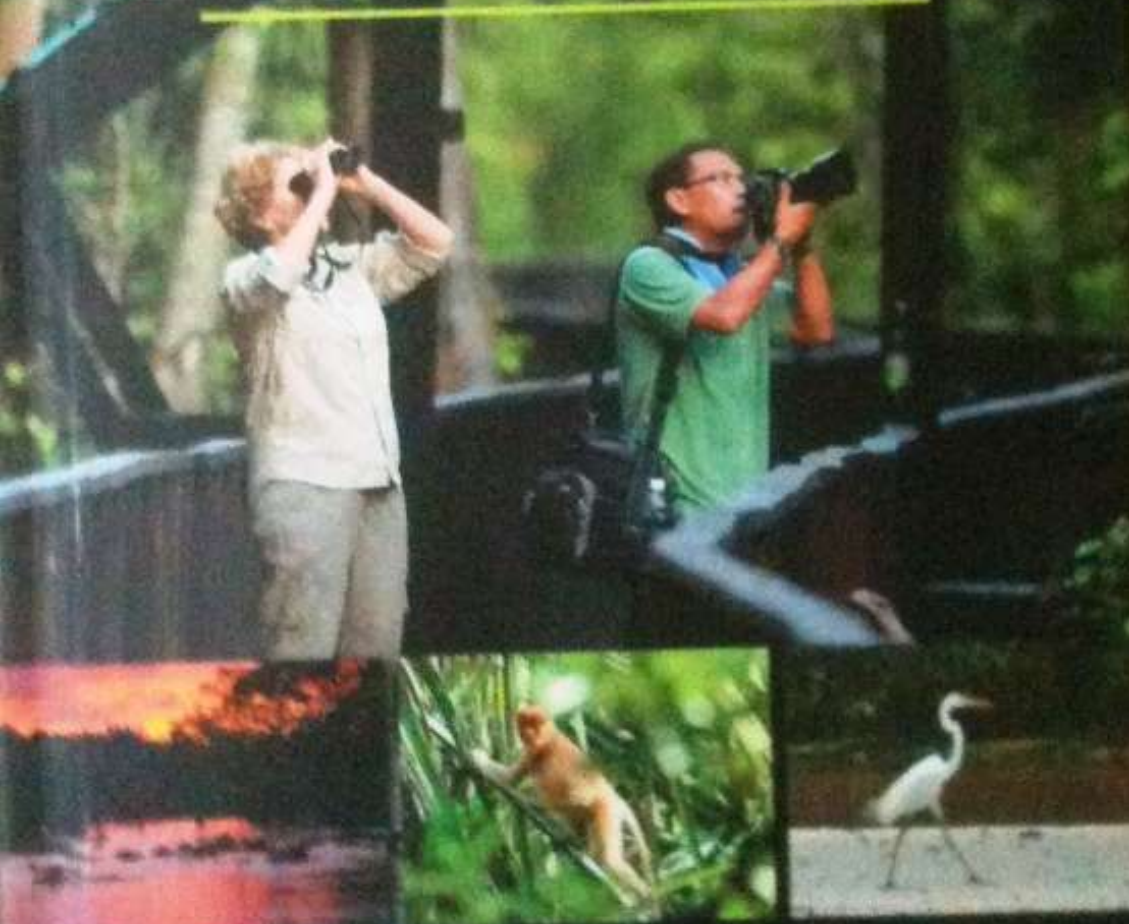
Klias Key Attributes:

Unique forest type, very distinct from any other forest types/ecosystem

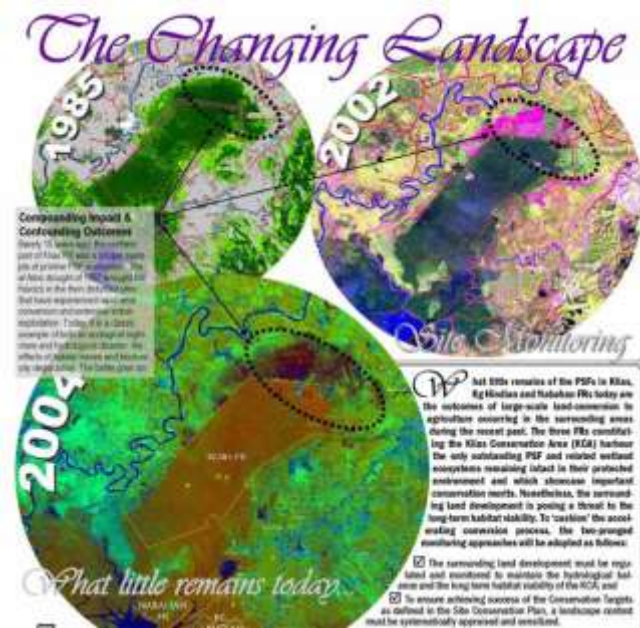


Large individual tree species can be found, e.g. *Gonystylus bancanus* (ramin) & *Dryobalanops rappa* (kapur paya) - recorded to exceed 60 cm dbh

DISCOVERING THE
WONDERS
OF THE **KLIAS**
PENINSULA



**High potential
for eco-tourism,
research and
other academic
purposes**



Klias FR - the few peat swamp forest sites which has been intensively & extensively studied - biological & hydrological aspects – per area basis



Species, Flora

PSF Flora Species

ID: 845

Name:

Scientific name:

Type:

Description: A genus of ferns, the leaves of which shed water, making them very slippery. Also, the black maidenhair, a species of spleenwort.

ID: 053

Name:

Scientific name:

Type:

Description: An order of cryptogamous plants, the Filices, which have their fructification on the back of the fronds or leaves. They are usually found in humid soil, sometimes grow epiphytically on trees, and in tropical climates often attain a gigantic size.

ID: 854

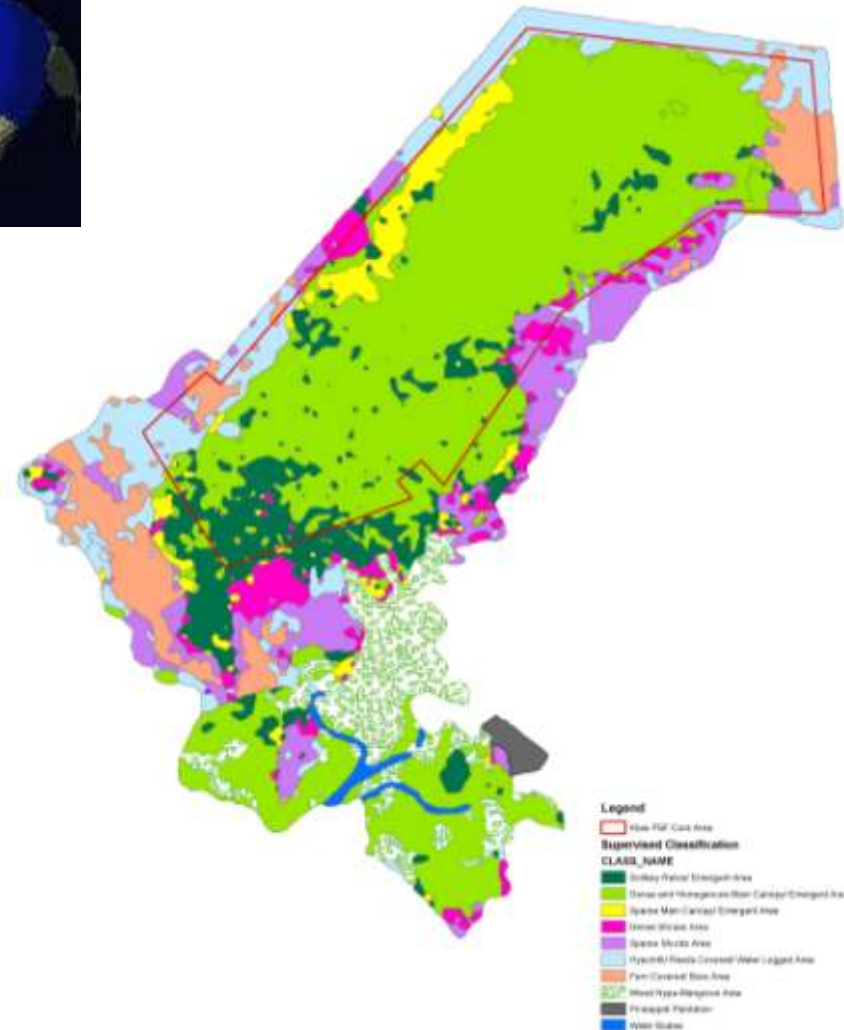
Name:

Scientific name:

Type:

Description: An order of cryptogamous plants, the Filices, which

Records: 1 of 9



Need to protect and conserve – last remaining intact peat swamp forest – for future generation & various purposes.....





Management Issues & Threats

Land Development & Drainage canals

- 15 km stretch of drainage canal
- Affecting the integrity of the hydrological system



Idle land

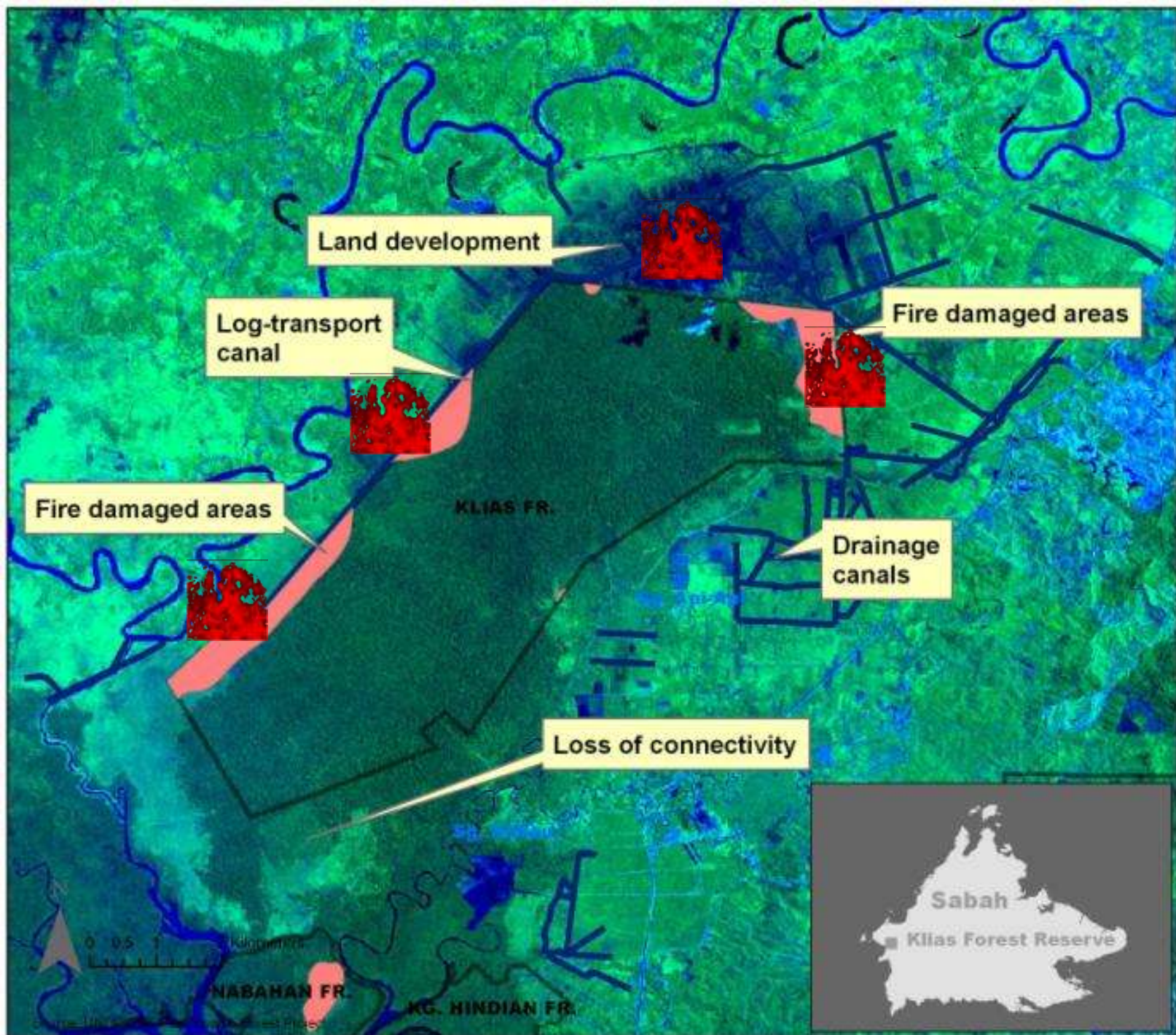
- Land earmarked for conversion/development, often left idle for many years
- These areas pose huge risks - threats fire-risks (large volume of combustible material) and affecting on the underlying hydrological integrity (excessive evapotranspiration).



Fires

- The most significant threat
- Fires destroys peat and results in the loss of the characteristic “peat” properties of the soil
- Burnt areas is unlikely to recover without intervention

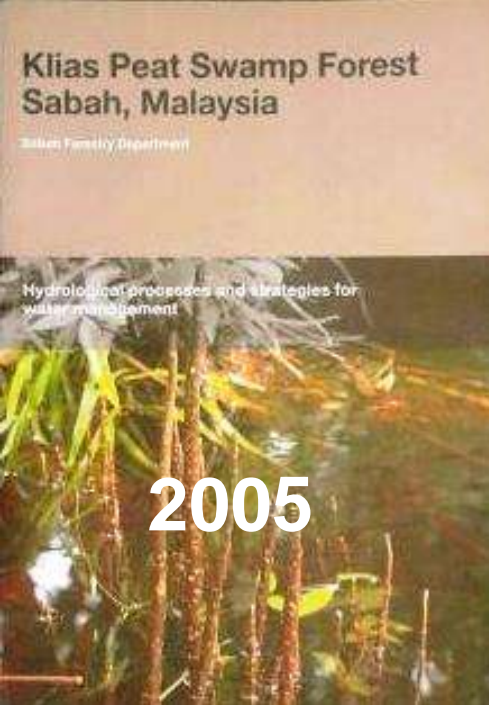




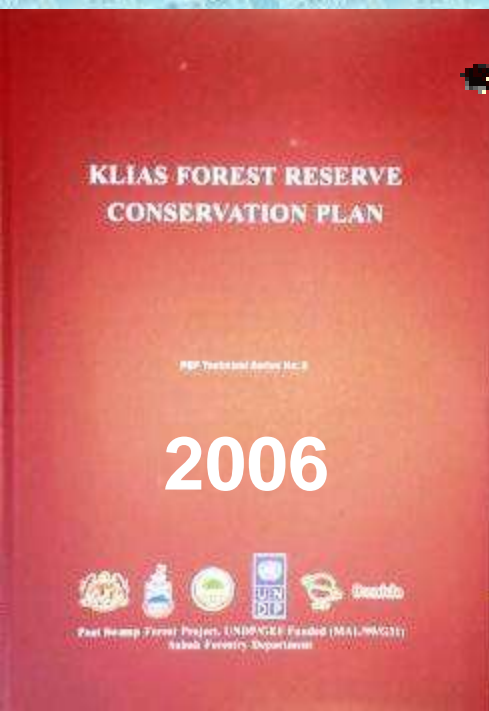
National Peat Swamp Conservation Project

- Government of Malaysia + Danida + UNDP/GEF
- 2002 – 2006
- Sites: Pahang, Sarawak, Klias FR Sabah
- Output: Water management strategies + Klias site conservation plan





2005

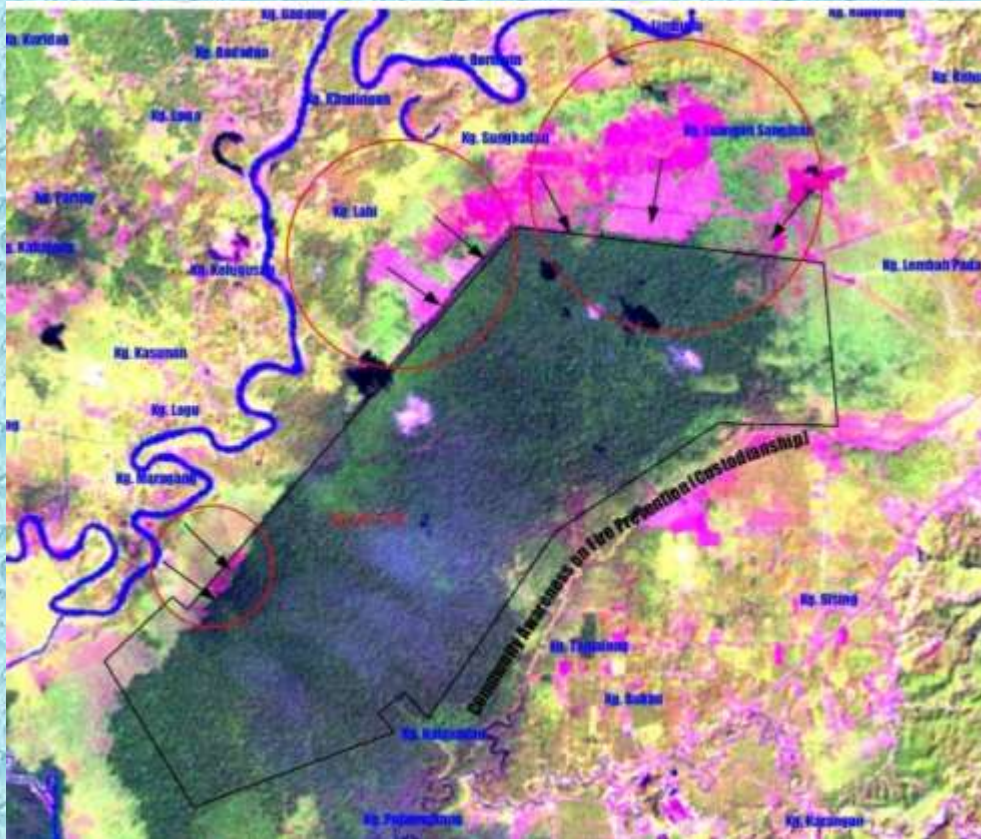


2006

Klias Conservation Strategies:

- promote rapid development on adjacent alienated land;
- initiate critical reforestation exercise;
- extend protected area boundary;
- ensure drainage plans are coordinated;
- address abandoned drainage canals;
- strengthen the importance of peat deposits integrity;
- detect ecological changes;
- monitor critical data for long term management; and
- enhance local knowledge base.

Promote rapid development on adjacent alienated land



- Encourage processes involving rapid development on alienated land, i.e. District land development committee

Initiate critical reforestation exercise



300 ha of burnt areas restored



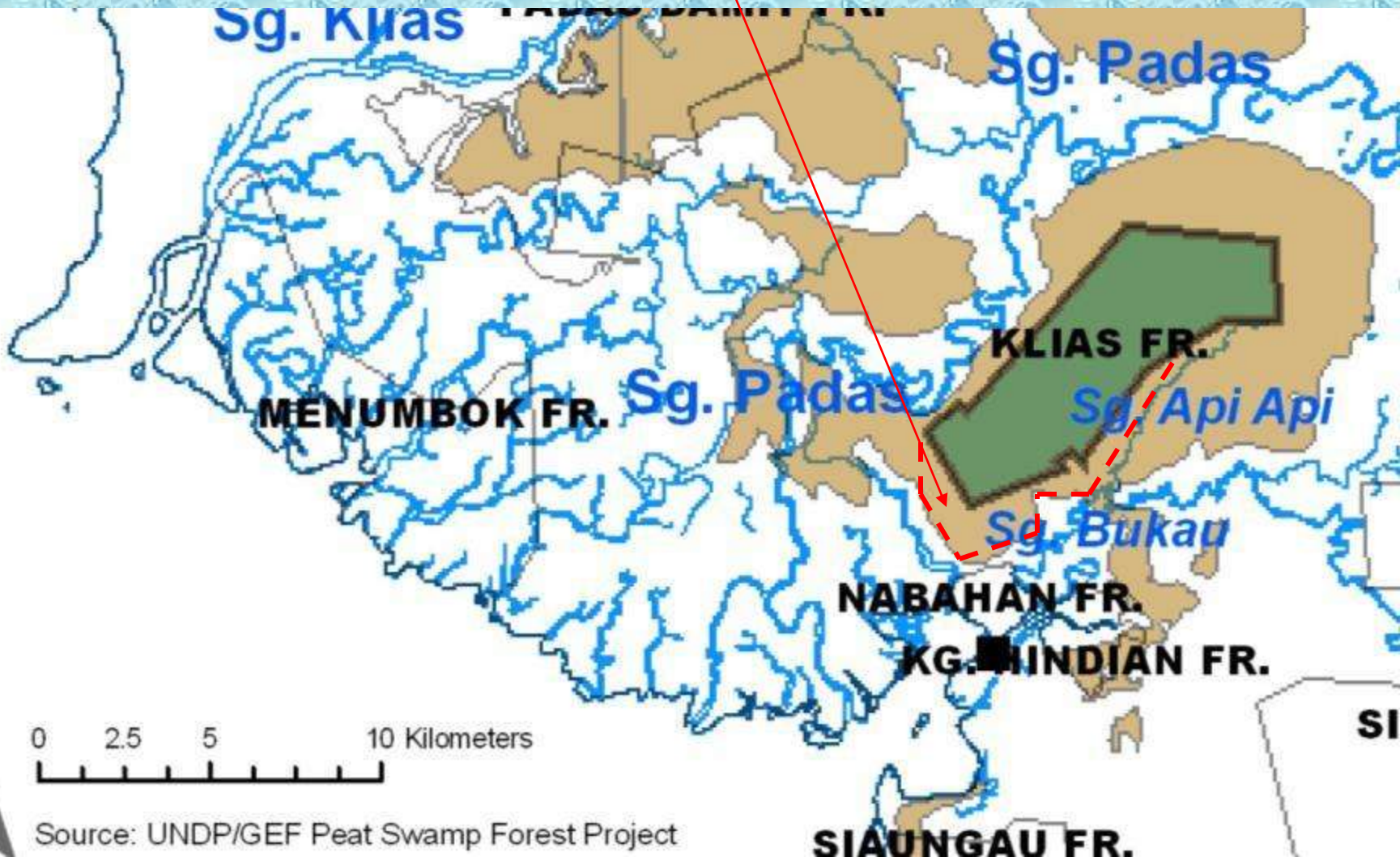
Tarikh Penanaman : Bulan Mei 2007
Keluasan : 10 Hektar
Jarak Penanaman : 5 m x 5 m
Bilangan Pokok : 4,000 pokok
Jenis : 1. Geronggang (*Crotonyllum arborescens*)
2. Putai (*Alstonia spatulata*)
3. Ramin (*Gonyostylus bancanus*)

300 ha of burnt areas restored



Extend protected area boundary

Enhancing Protected Area Connectivity (approx. 2,000ha)



Ensure drainage plans are coordinated and address abandoned drainage canals



7 units of intermittent regulatory dams
Constructed on a 15km existing canal

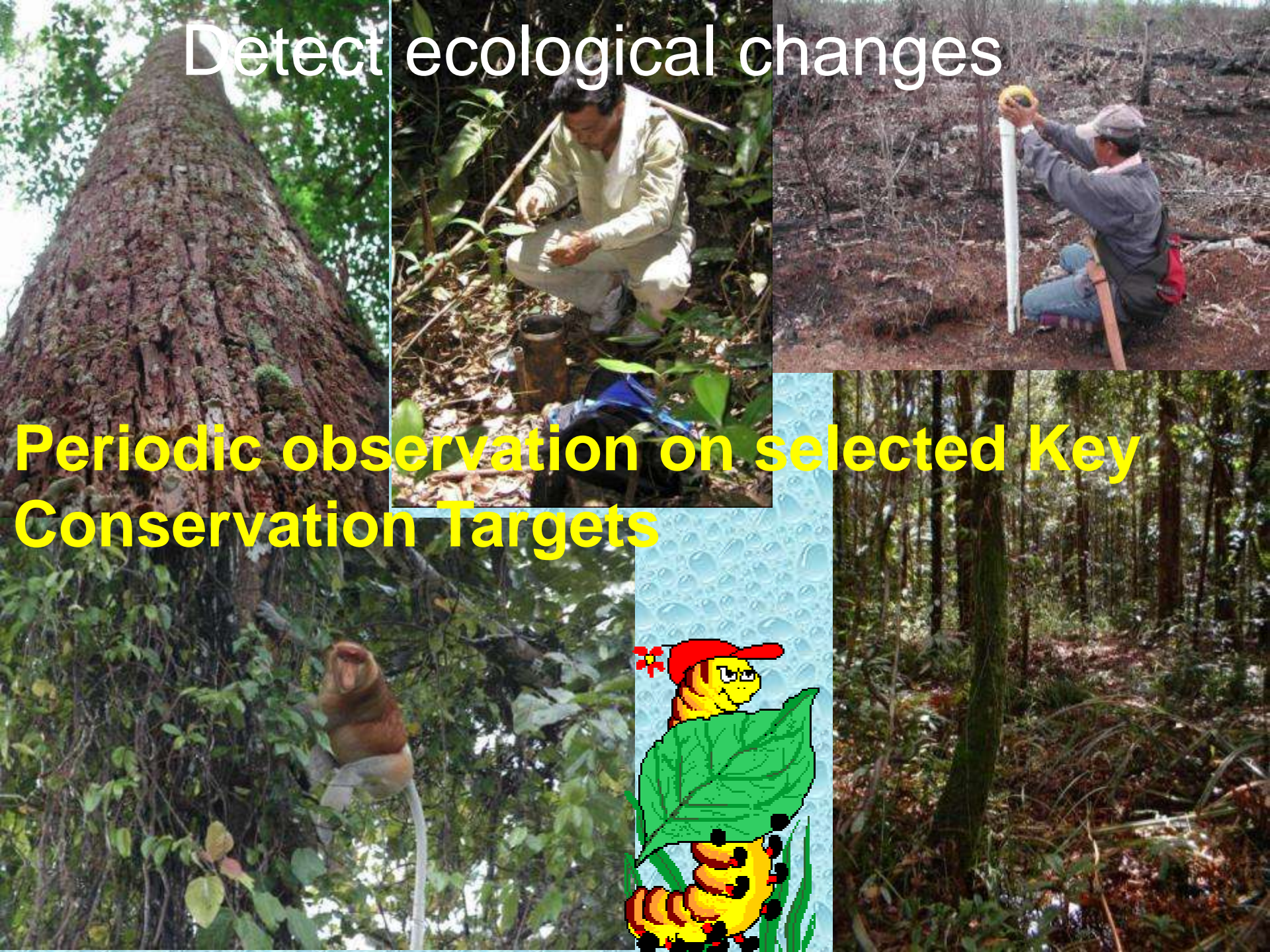


Strengthen the importance of peat deposits integrity/awareness raising



Detect ecological changes

Periodic observation on selected Key Conservation Targets



Hydro well

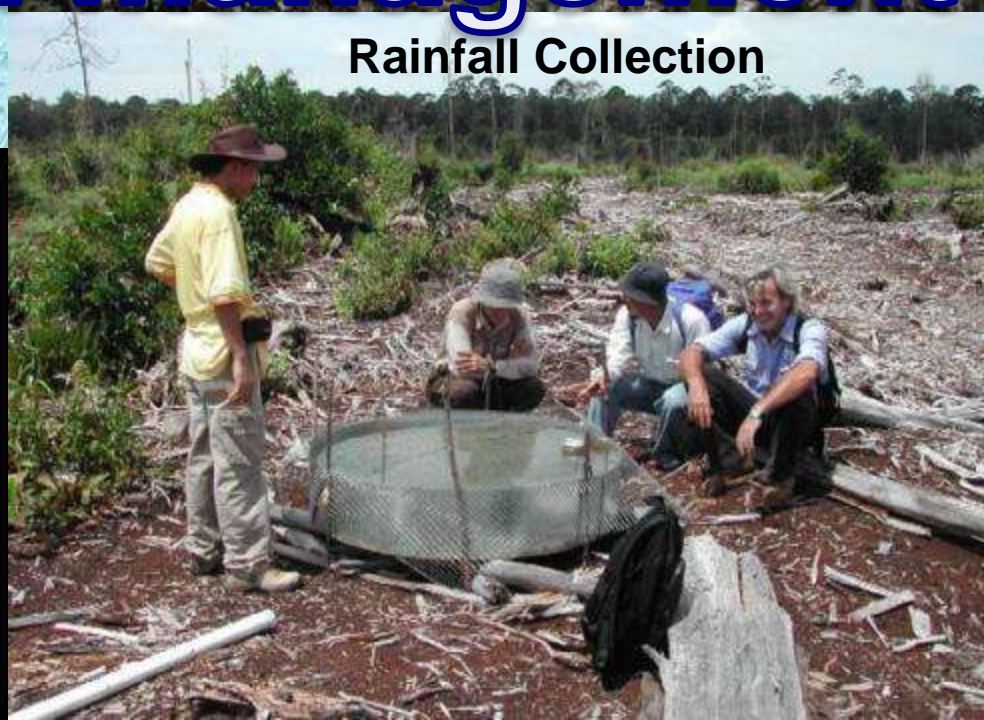


Peat Depth Study

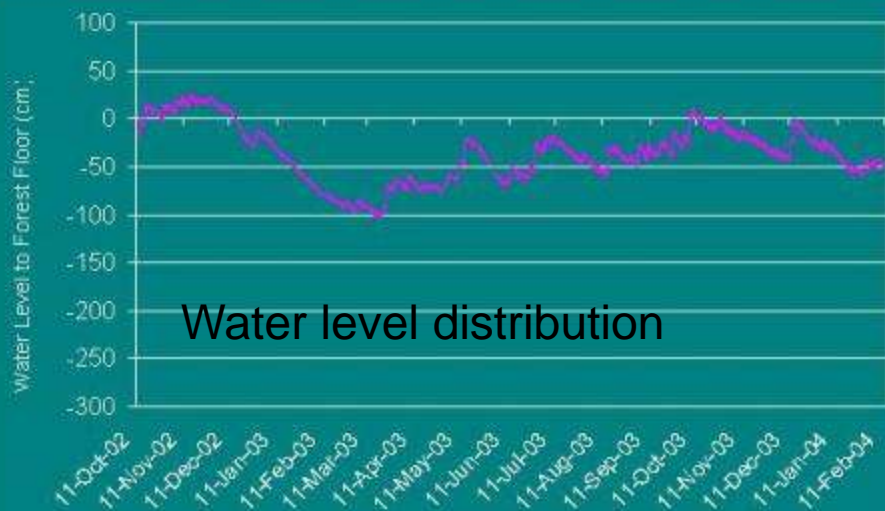


Monitor critical data For long-term management

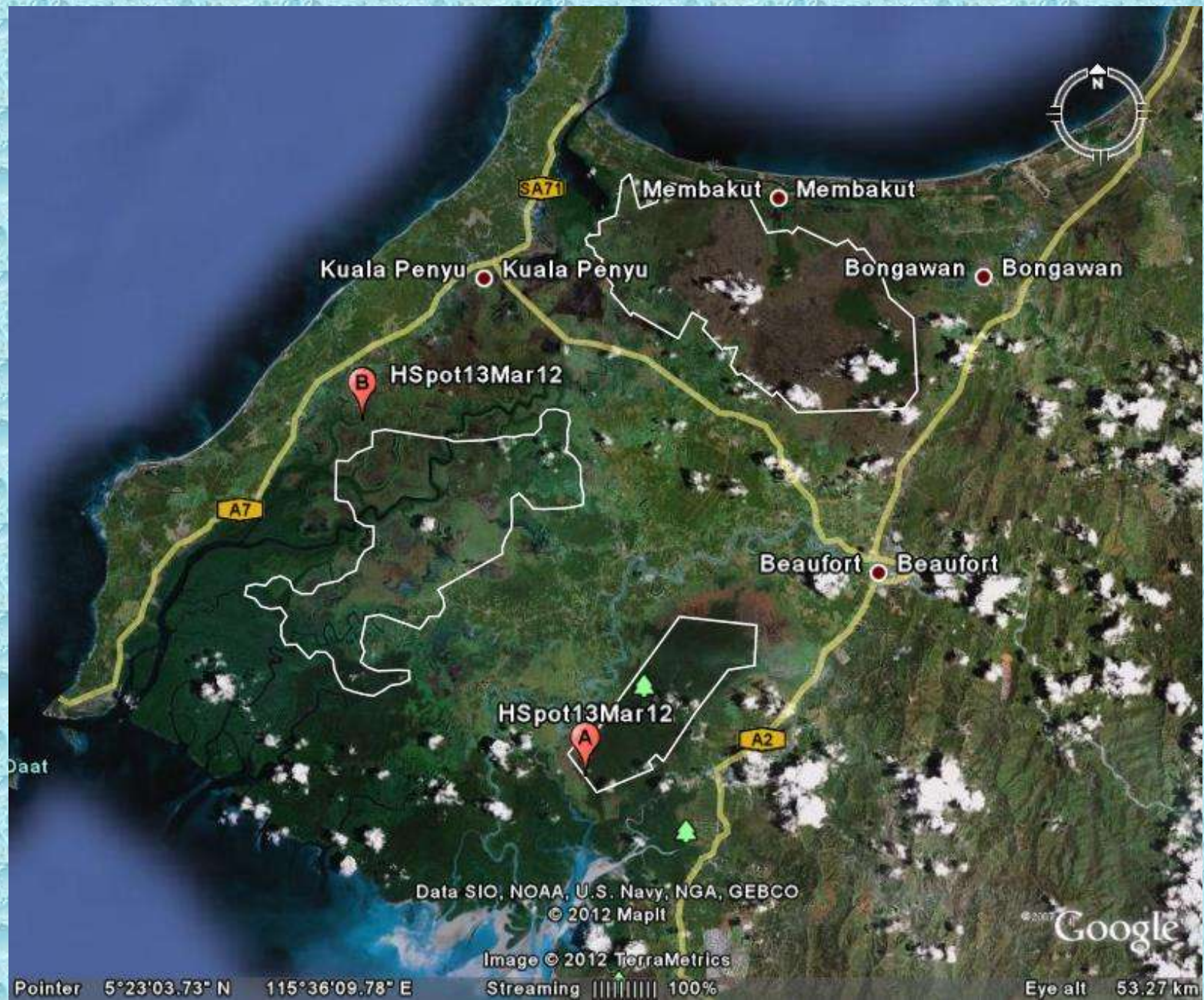
Rainfall Collection



Water level distribution



FDRS – Fire Danger Rating System



9. Enhance local knowledge base

- Findings on R&D information were appropriately disseminated to the general public;
- Students from higher learning institution were encourage to conduct related studies on peatland;
- Various consultants were engaged to enhance the knowledge base related to peat swamp conservation and management
- Various extension activities initiated periodically
- A Field Centre was constructed to house the various conservation activities



Klias Peat Swamp Forest Field Centre

Staff Quarters

Dormitory

Reception Centre

Canteen

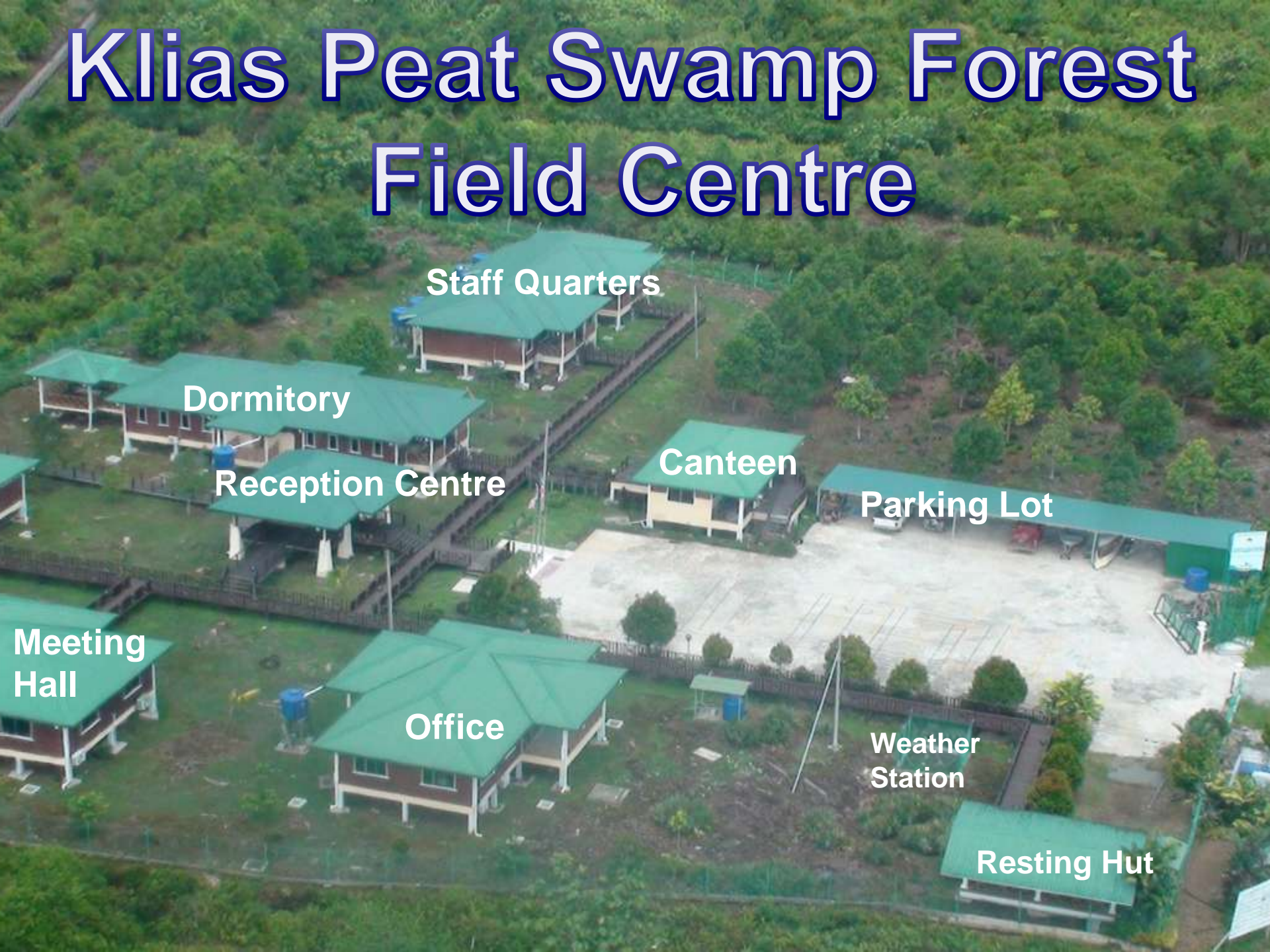
Parking Lot

Meeting
Hall

Office

Weather
Station

Resting Hut



2.7 km Belian Walkway



THANK YOU
KAP KINUA TOPO
SALA MATA PO
SASEI MUDA
HAD NAMA KASIH
TERIMA KASIH

