

# Forest Land Use and Climate Change in North Sulawesi (FLUCC) in the Poigar Forest

Source(s):

[ONF International: REDD in North Sulawesi KPH Poigar Project](#)

[ONF International \(2009\): Forest land use and climate change in North Sulawesi](#) \*2

## Project location

Province: Sulawesi Utara (North Sulawesi, Indonesia)

Districts (Kabupaten): Bolaang Mongondow and Minahasa Selatan

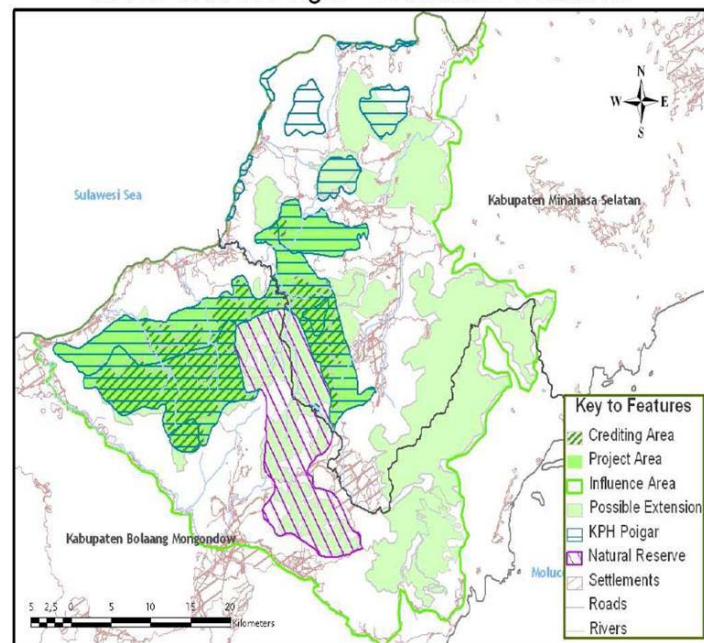
Nearest city: Manado (3-4 hours by car), Kotamobagu (less than 1 hour by car)

Precise location: 0°56'9"N and 124°21'6.59"B.5 E, radius: 47.605m

KPH Poigar in Indonesia



REDD in KPH Poigar - Boundaries Definition



## Forest area and types

Project area = 35,000ha: 'Crediting area' and 'Surrounding deforested areas inside the KPH Poigar' (p. 4) *Note: KPH = Kesatuan Pengelolaan Hutan, or forest management unit*

Local authorities identified four different land uses on project area to which can be associated different condition status. Depending on the coverage, some are considered as forests by the UNFCCC.

	Definition (Naimatu, 2007)	Associated forest coverage (Cannon, 2005)	UNFCCC Status	Total Surface
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<b>LU1 – Natural forest</b>	Natural forest with traditional use (rattan extraction) and/or minor extraction of small trees not affecting the closure of the upper canopy layer	<b>Good</b> – Scattered signs of shifting cultivation or conversion but without roads. No substantial signs of conversion. Disturbance often clustered near rivers, valley bottoms, or ridge tops.	Forest	14 000 ha (40%)
<b>LU2 – Disturbed Forest</b>	Natural forests with timber extraction indicated by large and artificial gaps in the canopy and pronounced decrease of its cover from 100% to 50-60%.	<b>Fair</b> – Obvious signs of human activity, like roads, but at least half the forest cover intact, including selectively logged areas, intense shifting agriculture.	Forest	5 800 ha (17%)
<b>LU3 – Agroforestry</b>	Agroforestry system with remaining natural forest trees as shade trees. Canopy closure 20-50%. Low intensity management.	<b>Poor</b> – Heavily modified areas with less than half forest cover, occasionally containing substantial open patches.	Forest/ Non-Forest	12 300 ha (35%)
<b>LU4 – Settlements</b>	-	<b>Open areas</b> – No forest cover, cities, paddy fields, settlements...	Non-Forest	2 900 ha (8%)

- Lowland and upland intermediate forests often sustain a high level of species diversity. They are excellent (lowland) to moderate (upland) habitat for most vertebrates.
- Vegetation communities highly variable. Thick climbers, large buttressed trees. Canopy extending up to 45 m in height.
- Within the KPH area, most of those species have already disappeared. Improvement of their habitats could enhance the repopulation. (p. 8)

### ***Forest management and use context***

The forest is state-owned, managed by local governments (districts).

Land use status:

- Protection Forest (1 541 ha) + mangroves
- Limited Production Forest (15 660 ha)
- Production Forest (17 790 ha)

Since 1999, the Indonesian government is dividing its Forest Zone into Forest Management Units (KPH) which gather together production and protection forests due to their geographical, ecological and administrative consistency. This KPH system aims to facilitate and ensure Sustainable Forest Management (SFM) achievement and to enhance economic value of forest utilization by incorporating local, national and global issues such as climate change mitigation. KPH Poigar is one of the 14 models that have been developed in 2007 in Indonesia and the only one in North Sulawesi (p. 9). (see [www.dephut.go.id/informasi/unff/COP%2013/FMU\\_System.ppt](http://www.dephut.go.id/informasi/unff/COP%2013/FMU_System.ppt) for explanation of KPH system)

The demographic density is very low but the population is usually located close to the forest borders and highly dependent on the forest resources and/or on the forest surfaces available for small scaled plantations (p. 10).

### ***Rates and drivers of deforestation and degradation***

Historical deforestation rate = 2% (p. 11)

- Type of Deforestation: mosaic deforestation with progressive degradation

Today and since the end of the last concession contract, local communities are the main

deforestation agent of the project area. Due to the lack of management in existing planted surfaces and the lack of governance, local communities steadily establish their small scale plantations behind the forest boundaries. 1,600 farmers are located inside the forest area, and approximately 68,000 people inside the influence area (p. 10). Forests are burned to open small scale plantations (p. 11).

### ***Project proponents***

- Province of North Sulawesi (2, p. 4)
- Green Synergie (2, p. 2)
- Office National des Forêts – International (ONF-I) (2, p. 2)

### ***Project goal***

Address deforestation in at least 20,000 ha of lowland and upland intermediate forests by involving local communities in sustainable development management practices through the REDD financing scheme (2, p. 5).

### ***Implementation timeframe***

30 years (2, p. 5)

### ***Implementation activities***

Based on the Payment for Environmental Services approach, activities can be implemented to both reduce deforestation and enhance local communities:

- Reforestation with productive species on poor and open areas and allocation of permits to exploit those plantations to local communities (6 000 ha)
- Improvement of forest management (selective logs, improvement of productivity, e.g.)

They will be supported by complementary activities:

- Restoration of degraded forests
- Creation of a biological corridor
- Improvement of current economical field and exploration of new ones (p. 12)

The project is to be implemented in two phases (2, p. 4)

#### **First implementation phase:**

The first implementation phase will focus on:

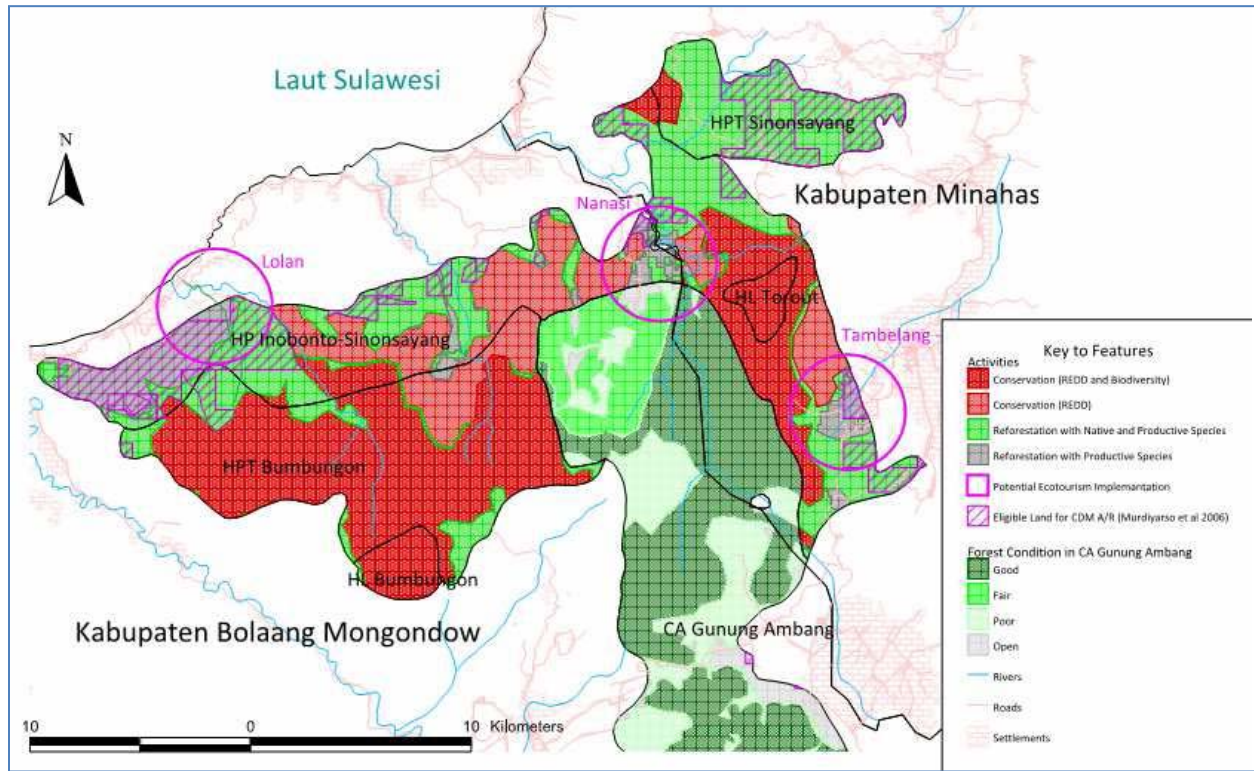
- Social and anthropological investigations
- Land tenure management studies
- Settlement of villagers working group
- Workshops and meetings in collaboration with the Forest Land Use and Climate Change project in North Sulawesi (FLUCC-Sulut) team to design a forest management plan, an organizational diagram and a project action plan
- Implementation of first pilot actions
- REDD methodology development

#### **Second implementation phase**

Deforestation alleviation and local community enhancement activities will consist of:

- Reforestation for local communities on degraded and open areas
- Improvement of forest management
- Restoration of degraded forests and creation of biological corridors
- Improvement and development of economic fields

Suggested Activities map (p. 13)



### Actors' roles and responsibilities

Green Synergie, ONF-I

Coordinated first by Green Synergie, then by ONF-I. Green Synergie initiated the project to enhance forestry carbon related knowledge and capacity of Indonesian parties (from local to national) (2, p. 1).

FLUCC-Sulut team

Created and adopted by provincial decree. This team brings together forestry sector stakeholders, from local to central governments and aims to improve forestry management for the entire province.

### Community participation

As they are the main deforestation agents, local communities are also the key to deforestation alleviation. To guarantee project permanence and efficiency, they should be involved in project design, in collaboration with all levels of authority (2, p. 4).

Thanks to the establishment of the KPH, a strong network of all local communities concerned with the forest has been developed and socialized to REDD initiatives (p. 10).

Mapalus and Moposad are two cooperative elements well known of the Minahasa and Mongondow

cultures (ethnic minorities). It will give warrant to the establishment of the project (p. 10).

### **Project financing**

The project first implementation phase has been submitted for funding to the French Global Environmental facility (FFEM) as part of a global project named “Lutte contre la deforestation en Indonésie” and developed in partnership with the French NGO Planète Urgence. It has been accepted by the FFEM steering committee early July and funding is under finalization (2, p. 4). The budget is estimated between € 8-10 million (2, p. 5).

### **Benefit sharing**

- Potential Benefits from Carbon Over 30 years: 20M€ to 100M€, From 680k€ to 3.4M€ per year (p. 11).
- Other benefits
  - Conservation of an exceptional ecosystem (biodiversity)
  - Watershed and soil protection
  - Social Benefits

### **Emissions and removals with and without the project**

(p. 11)

Potential of deforestation	16,000	
Historical rates of deforestation	2% (530 ha)	
National annual rates of deforestation for 2000-2005	<ul style="list-style-type: none"> <li>• In protection forest: 0,55%/year (IFCA Study 8, 2008)</li> <li>• In production forest: 4,2%/ year (IFCA Study 7, 2008)</li> <li>• In limited production forest: 1,4%/ year (IFCA Study 7, 2008)</li> </ul>	
Crediting area	19,800 ha	
Potential loss of carbon	Over 30 years: 1,4 MtC 50MtCO <sub>2</sub> e	Per year: 45,000tC/y 170,000 tCO <sub>2</sub> e/y

To deal with technical and operational issues, the *REDD in KPH Poigar* project has been developed with a multi-boundaries approach (p. 4-5):

1. Crediting area (19,800 ha)
  - Forested lands eligible for REDD and for which carbon valuation is expected
2. Project area: 1+ surrounding deforested areas inside KPH (35,000 ha)
  - Conservation of the forested areas inside the forested lands, i.e. the crediting area
  - Activities on non-forest land in order to avoid deforestation in the crediting area
  - Reforestation with productive species to develop alternative livelihoods for local communities
  - Creation a biological corridor
  - Developing other sustainable activities (ecotourism)
3. Influence area: 1+2+rest of the KPH, impacted villages and forests (200,000 ha / 41,000 ha of forests)
 

To deal with the leakage issue (i.e. with the threat of pressures displacement) by:

  - Including the REDD initiative within the Forest Management Unit (watershed scale) to insure its relevance with the local environmental resources and services needs.
  - Developing other sustainable activities (ecotourism).
4. Possible extension (other impacted forest lands): Cagar Alam Gunung Ambang + Forested areas

outside the designated Forrest Zone (~50,000 ha)

For land tenure reasons, some of the surrounding forested lands have been excluded from the project for its development process (i.e. excluding Cagar Alam Gunung Ambang). After a first implementation phase and depending on the evolving Indonesian regulation about REDD, the project could be extended to some of those forested lands in the mid-term. Area 4 will be therefore monitored and included in the reference zone.

Through Planet Action initiative, FLUCC-Sulut project received 9 images covering all the North Sulawesi Province, i.e. the FLUCC-Sulut project zone. Spot images have been principally used to provide information on:

- Forest definition and type of deforestation
- Baseline scenario
- Project boundaries
- Carbon stock measurements (2, p. 2).

### **Monitoring**

In order to deal with leakage the REDD initiative will be included within the Forest Management Unit (watershed scale) to insure its relevance with the local environmental resources and services needs (p. 4).

### **Reporting**

No data

### **Verification**

No data

### **Risks and risk management**

No data

### **Progress and plans**

#### **2008**

The workshops program ended in September 2008. From September to November, Green Synergie wrote the Project Idea Note (PIN) which it submitted to FLUCC-Sulut members for final approval in early November. After - and since the initial investor (*Société Forestière de la Caisse des Dépôts et des Consignations*) decided to postpone the creation of the funds the project was depending on – a decision was taken to look for additional funds in order to develop the two following projects: Sustainable Management of Poigar Forests: REDD in North Sulawesi; Jatropha Curcas Community based Farming and Forest Resources Management in North Sulawesi.

Since the end of the opportunity study and PIN elaboration, Green Synergie is working on solid and trustful partnerships that could insure the project implementation. On the 16th of February and for that purpose, ONF-I has been entrusted to manage the FLUCC-Sulut project (2, p. 3).

#### **October 2009**

- Time required for financial commitments and negotiations: 3 months
- Time required for legal matters and establishment: 6 months (p. 2)

**2010**

- Identification and pre-selection phase finished
- Opportunity study finished
- Feasibility study and REDD methodology under development (p. 2)

**Links:**

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Project-related documents

[ONF International: REDD in North Sulawesi KPH Poigar Project](#)

[ONF International \(2009\): Forest land use and climate change in North Sulawesi](#) \*2

Others