UNIVERSIDADE JOSÉ EDUARDO DOS SANTOS

FACULDADE DE CIÊNCIAS AGRÁRIAS

HUAMBO-ANGOLA

CURRENT SITUATION OF THE MIOMBO IN ANGOLA

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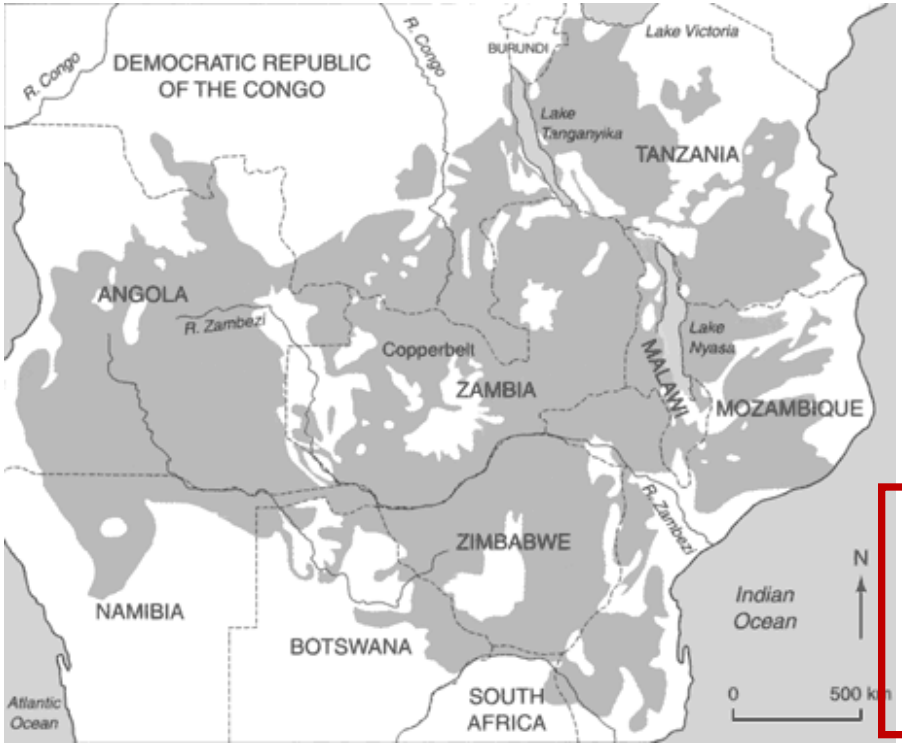
MIOMBO

- The Most Important Tropical Dry Forest In Africa
- 2,7 Millions Km^2



Main Resource for Rural Development in the Southern Africa

1. Current Status of Angola Woodland Resources

ANGOLA

Surface - 1 246 700 Km²

Natural Forests - 53 millions ha (*ca*. 43% national territory)

Only 2.373.000 hectares (*ca*. 2% national territory) **are economically productive and very rich in terms of biodiversity**

MIOMBO REPRESENTS 80% OF NATURAL FORESTS
(with different levels of human intervention)

***Ca.* 18 % are mainly wetlands, deserts and semi-deserts**

MIOMBO

MAIN SPECIES

Central Angola Highlands

Brachystegiae spiciformis

B. tamarindoides

Isoberlinea angolensis

Julbernardia paniculata

→ **CHARCOAL**

→ **FIREWOOD**

Moxico, Kuando Kubango, Cunene, Bié (East and South East)

Marquesia macroura **(muvuca)**

Afzelia cuanzensis **(ovala/muvala)**

Guiburtia coleosperma **(mussibi)**

Pterocarpus angolensis (girassonde)

→ **TIMBER**


Brachystegia, *Julbernardia* & *Isoberlinia*
Tropical dry forest
High spatial heterogenity






Provinces with the biggest rates of deforestation

Huambo	31,26 % (HUMAN INTERVENTION)
Bié	19,44 % (HUMAN INTERVENTION)
Benguela	15,97 %
Huíla	27,46 % (HUMAN INTERVENTION)
Kwanza Sul	11,31 % (HUMAN INTERVENTION)
Cunene	12,30 %
Luanda	52,91 %

Fonte: IDF - Proj. Avaliação Espacial Estado das florestas e ecossistemas sensíveis de Angola (2000)

In the current circumstances of the development of Angola, forests play an important role with regard poverty and hunger.

More than 60% of population lives in the rural communities where charcoal and firewood are important sources of domestic energy and of income (household consumption of charcoal and firewood represents *ca*. 56,8%)

Other products:

- **hunting**
- **honey**
- **medicinal plants**
- **raw material**
- **forest fruits**

Can contribute to a better food security for rural comunities.

CONSEQUENCES OF DEFORESTATION

Agriculture → **the main activity of rural population**

Despite the low fertility of soils the small farmers know how to take advantage of the environment and physiographical conditions.

Nevertheless if deforestation rates continues at the present rate considering soils, climate and topographical conditions a sharp decrease in soil organic matter content and consequently of natural soil fertility will occur (mainly in central highlands).

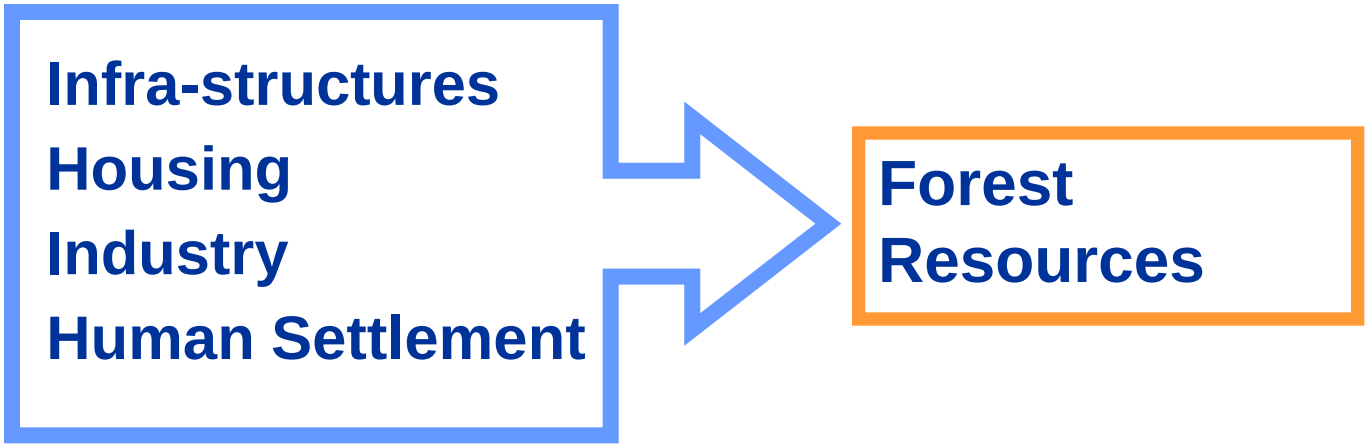
Even lower productivity of the subsistence crops

Even more poverty and hunger

Models of Forest management must be compatible with economical income and the different forest functions

If the existing model persists we are not working for a sustainable forest management

On the other hand, in the current context of Angola development (end of war)



- The expansion of shifting agriculture, human setlement, deforestation for cattle areas, the cut of trees for firewood and charcoal and timber production, several causes contribute for surface reduction and empoverishment of forests.

The need of a sustainable economical growth for the rural environment is the main way

3. NATIONAL MITIGATIONS MEASURES

National Forest Inventory

Since the end of the war, the national forest inventory is being done in Angola for the first time (2012) and with the support of FAO.

Angola has 591 samples.

This is very important because as we have seen the rates of deforestation are from 2000 (out-dated).

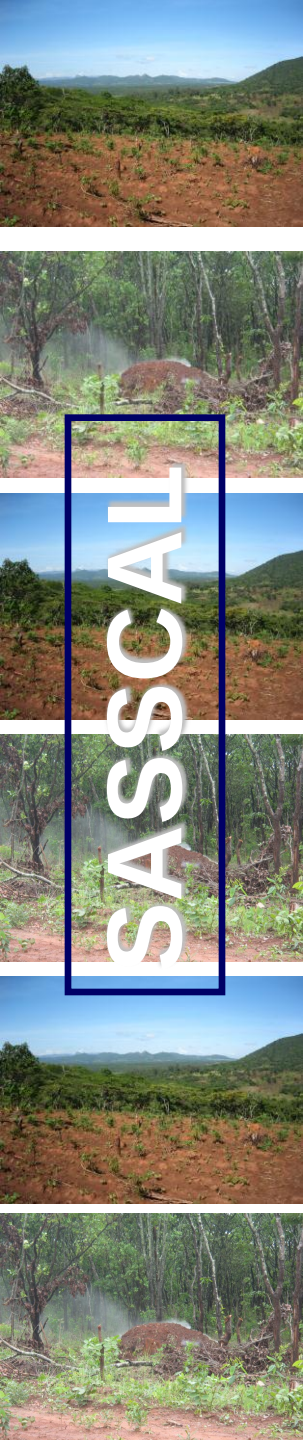
3. NATIONAL MITIGATIONS MEASURES

National Forest Inventory

This forest inventory will be completed:

- **Using systems of remote detection**
- **Processing satellite images**

Also with the support of FAO



SASSCAL

Southern Africa Science Centre on Climate Change and Adaptative Land Use

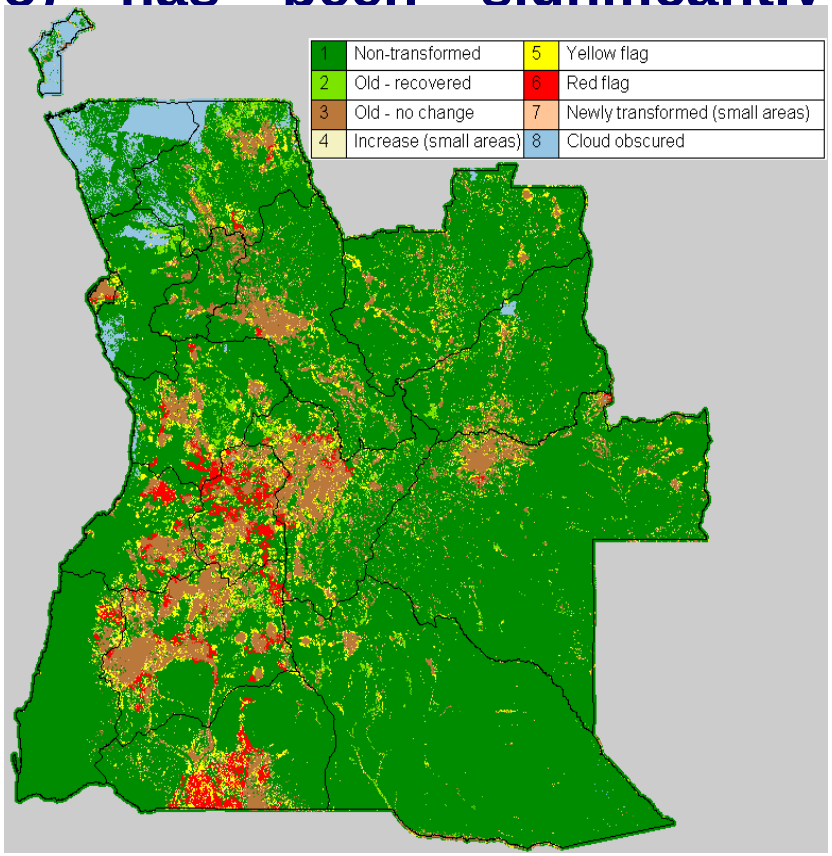
TASK 137:

MONITORING DEFORESTATION IN HUAMBO PROVINCE USING DETECTION TECHNOLOGIES AND GEOGRAPHIC INFORMATION SYSTEMS

3. NATIONAL MITIGATIONS MEASURES

1. Thematic background and rationale

Deforestation in Angola and in particularly in Central Angola highlands (Huambo) has been significantly increased since last years.



- **intensive tree cuts without a sustainable plan management**
- **inexistence of delimited areas of protected natural forests.**

Source: Caetano, Tomás. IDF (2000)

Consequences to the population which directly depends from forest ecosystems

Negative impact on

- **climatic changes**
- **hydrological cycle**
- **land management**
- **biodiversity**

It is very important:

- **to know exactly in what extension**
- **which are the most affected areas since 2002 (end of the war) to nowadays**

To recommend some measures aiming the reducing of deforestation rates.

Using systems of remote detection
Processing satellite images

Guarantees consistence of observation with
Possibility of continuous sampling, recurrent and spatially explicit of the same territory

Is a good way to achieve accurate information for this purpose.

ANGOLA:

- **No appropriated capacity building**
- **Neither technology for that end**

THERE IS A SPECIFIC NEED IN THESE TOOLS.

- **Forests play an important role in determining the regional climate, especially rainfall.**
- **The MIOMBO forests region has been identified as one of the global "tipping points" (*ponto sensível*) and such is contextually relevant here.**

➡ **Many forest assessments in the partner countries are out-dated;**

➡ **No regionally harmonised monitoring system exists.**

The achieved knowledge is very important to constitute a baseline in:

"Forest quality over time based on low resolution satellite imagery, geographically focused high resolution images and extensive ground-truthing"

3. NATIONAL MITIGATIONS MEASURES

Graduation in Forest Engineering since 2010 - Faculdade de Ciências Agrárias – Universidade José Eduardo dos Santos (Huambo)

Cooperation with University of Cordoba and IDAF, Spain financed by AECID (Spanish Agency of Cooperation and development)

Several NGOs working with communities: (COSPE, Italian), ADRA (Angolan),

FAO and PNUD working in areas related to Sustainable Land Management and Capacity

All the initiatives related to capacity development (training, institutional, policy) promoted by the most developed countries from miombo meeting will be well received by Angola.

We only have 11 Forest Engineerings.

MUITO OBRIGADA!

TWAPANDULA!

THANK YOU VERY MUCH!