



MINISTRY FOR FOREIGN
AFFAIRS OF FINLAND

**HIGHER EDUCATION AND CAPACITY DEVELOPMENT FOR SUSTAINABILITY AND
CLEAN TECHNOLOGIES IN THE FOREST SECTOR IN MOZAMBIQUE
“VAGALHÃO”**

**TRAVEL REPORT
April 17 – 3 May, 2015**

PROGRAM FOR THE FINNISH AND MOZAMBICAN TEAMS
April 17 – 3 May, 2015

Finnish team:

D.Sc. & MSc Roope Husgafvel
MSc Mikko Martikka

Mozambican team:

Prof. Andrade Egas
Researcher/lecturer Narciso Bila

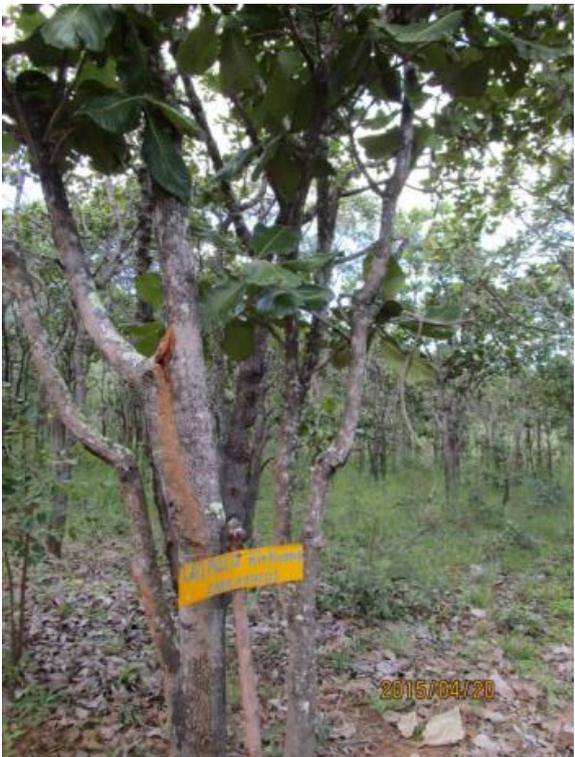
Program:

Sat 18.04	Arrival to Maputo.
Sun 19.04	Preparation for travel/visits
Mon 20.04	Travel to Lichinga (Niassa Province) via Tete. Visit to Lurio University. Prof. Egas gave a presentation about UEM MSc programme in wood products technology and Dr. Husgafvel presented the VAGALHÃO project. Lurio staff and students attended these sessions.
Tue 21.04	Visit to Green Resources (Chikweti) including extensive plantation and nursery excursions.
Wed 22.04	Visit to Niassa Forest including extensive plantation excursions. Meeting at the Green Resources office.
Thu 23.04	Travel to Nampula. Visit to Green Resources office in Nampula.
Fri 24.04	Travel to Beira. Visits to IMM company and Moflor company.
Sat 25.04	Free programme.
Sun 26.04	Travel by car to Machipanda (CEFLOMA).
Mon 27.04	Extensive tour of CEFLOMA plantations, forestry operations, sawmill and facilities.
Tue 28.04	Visit to IFLOMA (Komatiland forests) company in Machipanda and Portucel office in Chimoio
Wed 29.04	Travel to Maputo. Visit to Portucel office in Maputo.
Thu 30.04	Board meeting at the UEM campus. meeting at the UEM international office. Meeting and dinner with MSc students.
Fri 01.05	Free programme. Discussion with Prof. Egas and MSc students about future plans.
Sat 02.05 – Sun 03.05	Travel to Finland

1. Visit to Lurio University

On Monday (20.04) we travelled to Lichinga (Niassa Province) via Tete. Straight from the airport we travelled to visit the Lurio University. Prof. Egas gave a presentation about UEM MSc programme in wood products technology and Dr. Husgafvel presented the VAGALHÃO project. Lurio staff and students attended these sessions. We took a tour of all facilities including an arboretum with outdoor teaching capacity. Potential areas of future collaboration and joint project were discussed and we agreed that there is good potential and we have many new ideas to advance as a joint effort. Collaboration with Lurio University could support the project in many ways including links with topics that are relevant to forestry companies and planned industry development in Niassa province as well as to priority research focus areas (for example both natural and plantation forests, land use, agroforestry and communities). See online: <http://www.unilurio.ac.mz/unilurio/>





2. Visit to Green Resources and Niassa Forest

We visited (Tue 21.04) the Green Resources (Chikweti) company and Niassa Forest company (Riftvalley) including extensive plantation, fire management and nursery excursions. These tours covered all the key operations and detailed aspects of plantation forestry including species (eucalyptus and pines), silviculture and community management. At the offices of both companies we had thorough discussions and presentation of various activities and challenges including use of drones (Green Resources) in planning and management.







We discussed potential future areas of collaboration including thesis work, employment of students and research priorities. Many good ideas were generated and there are multiple priority areas that need to be addressed in the near future. These essential focus areas comprise, for example, the following (identified during visits to both Green Resources and Niassa Forest):

- Utilization of trees with no current markets.
- Bioenergy options.
- Sustainability and efficiency.
- Identification of right technologies,
- Pellet manufacturing options.
- Charcoal kiln efficiency.
- Identification of "the right Mozambican solution".
- Acceptability of eucalyptus species locally/nationally.
- Improved planning of plantation forestry operations.
- Logistics (e.g. distance to Maputo, cities and ports).
- Clean technologies solutions.
- Synergies of natural forests and plantations.
- Joint planning of training and R&D priorities.

See online:

<http://www.greenresources.no/Plantations/Mozambique/Niassa.aspx>

<http://www.greenresources.no/Plantations/Mozambique.aspx>

<http://www.riftvalley.com/florestas-de-niassa/>

<http://www.riftvalley.com/>









3. Beira visits (IMM and Moflor)

In Beira, we visited the indústria madeireira de Moçambique and Moflor companies. These visits included tours of all operations and discussions on potential future collaboration including thesis work, student employment, research and training.

See online:

<http://www.moflor.co.mz/contactos/>















4. CEFLOMA (Centro Agroflorestal de Machipanda)

At the Machipanda UEM forest station, we took extensive tours of all facilities and both natural forests and plantations including sawmill operations and nursery/seed collection operations. Sawn timber is sold locally to sustain station activities. There was a lot of potential to develop utilization of thinning wood, bioenergy, fertilization, pesticides, fire prevention and control and utilization of residues. Local community relations could also be promoted in many ways. We identified multiple new areas of research priorities and training needs to be addressed. There is a huge potential to develop higher education collaboration here including industry links.















5. IFLOMA (Komatiland forests)

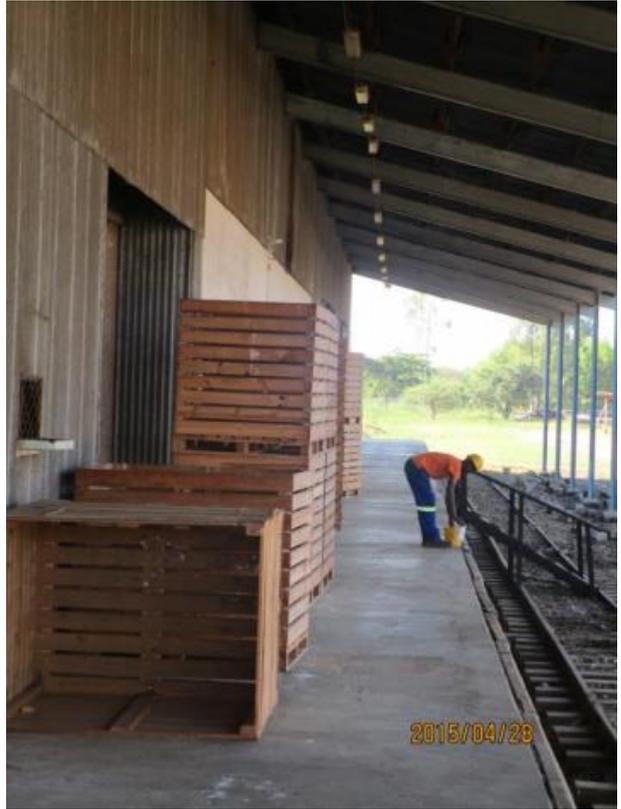
Our visit to IFLOMA (Komatiland forests) company encompassed presentations of their activities, facilities and plantation forestry. We discussed potential collaboration areas such as training, research, thesis work and student employment. We found many areas that we could advance in the future. Their operations were small scale right now and they have extensive plantation areas. The facilities and machines in the field were mostly from 1980s development cooperation (Sweden) and not in use anymore. Potential new ideas and investment options were discussed.

See online:

http://www.komatilandforests.co.za/index.php?option=com_content&view=article&id=41&Itemid=13
<http://www.komatilandforests.co.za/>







6. Visits to Portucel (Maputo and Chimoio)

We visited Portucel offices both in Chimoio (28.4, host Raúl Matos, Forest supervisor) and Maputo (29.4, host Pedro Moura, administrator, Member of the Board). We were given a basic presentation of past, current and coming activities in Mozambique including plantation forestry and emerging industrial development and associated potential. What is more, we addressed the situation and prospects of MSc students with special emphasis on employment in forest industry and associated operations as a whole. Portucel has a need for skilled workers in all job categories from plantations to process engineers. In brief, all kind of people are needed in this industry and training is essential. The aim is to gradually increase the share of Mozambican employees in all work categories. The preferred approach to R&D is to develop a network approach. UEM and Aalto are willing to join this network and put strong emphasis on future collaboration in training, higher education and R&D. UEM will send the CVs of MSc students to Portucel offices.

See online:

<http://en.portucelsoporcel.com/Institutional/Portucel-Mocambique>

<http://ifcextapps.ifc.org/ifcext/spiwebsite1.nsf/651aeb16abd09c1f8525797d006976ba/641968a1f67cea1185257d6200735d53?opendocument>

<http://ifcextapps.ifc.org/ifcext/spiwebsite1.nsf/0/C183FADC2B9CC23D85257D3B005A203D?opendocument>



7. Day at the UEM campus

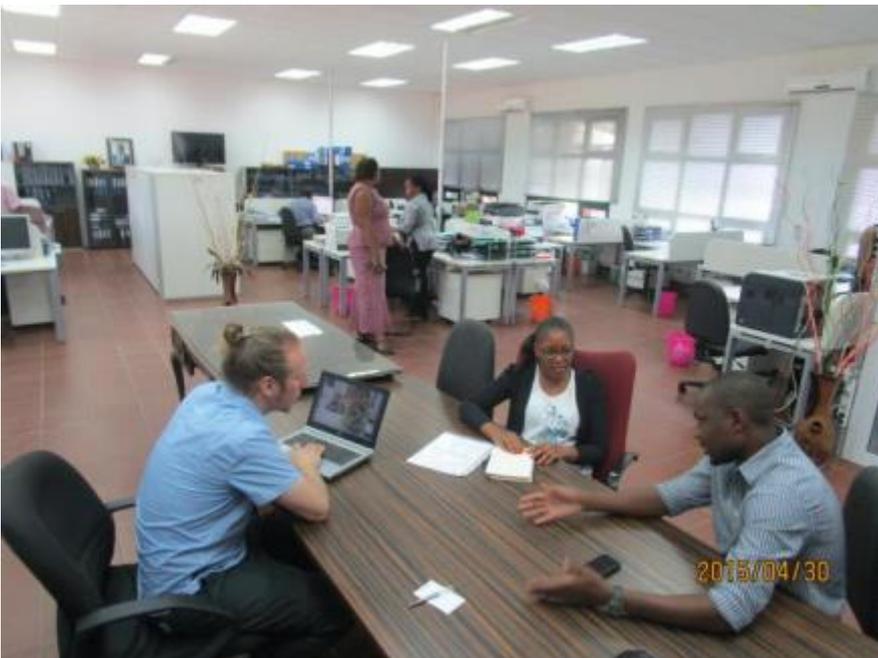
On Thursday 30.04 we had a board meeting at the UEM campus. This meeting was chaired by Dr. Husgafvel (Aalto) and the attendees included Prof. Andrade Egas (UEM), Esperance Chamba (IIAM-MINAG), Albazine Majunguele (DNTF), Anni Penttinen (Embassy of Finland) and Mikko Martikka (Aalto). The discussed topics encompassed, for example, the following priority areas:

- Visited companies and their key challenges, needs and future plans.
- Lessons learnt from our tour of Mozambique including, for example, utilization of raw materials from plantations with no existing use, poles/sawntimber, new products, bioenergy, innovations and new technology, pellets, small scale production with small capital, land/logistics/workforce issues and government support to companies (e.g. land management and community issues).
- How to link MSc students to the emerging needs of companies in Mozambique.
- How to market the new capabilities of UEM in terms of service production for both industry and government.
- UEM service production (e.g. ISO standards based laboratory testing).
- Challenges of forestry industry including discussion on duats and permission processes ect.
- Forest industry development in Mozambique including incentives for companies to produce value added products and process within the country and not only to export raw materials.
- Bioenergy, there is a high demand for energy saving technology (this links with saving forests) and charcoal production efficiency.
- Governance of native and plantation (e.g. energy and timber) forests.
- The role of private sector in protection of forests.
- Company concessions and associated policies.
- Charcoal licenses and tree planting obligations.
- Ecosystem assessment in the context of sustainable forest management.
- How to address public-private-community aspects of land use, forest management/protection and plantation forestry.





Furthermore, we had a meeting at the UEM international office. There we discussed the practicalities of both student and teacher mobility/exchange between UEM and Aalto including MSc programme timeline, accommodation and travel issues.



We met some of the MSc students at the UEM campus and discussed their visit to Finland, thesis projects and ongoing matters such as employment situations and prospects. Eunice Siteo presented her work at the UEM wood laboratory and gave us a general tour jointly with Prof. Egas. Later that day, we had a dinner and enjoyed a live music event with some of the MSc students.

