

RECAP FOR THE FIELD TRIP

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AGENDA

INTRODUCTION

SOKOINE UNIVERSITY OF AGRICULTURE

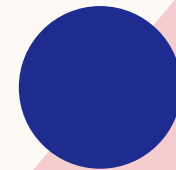
PLANTATION

TREE NURSERY

NELSON MANDELA AFRICAN

INSTITUTION OF SCIENCE AND

TECHNOLOGY





Field trip to SUA FOREST TRAINING INSTITUTION- OLIMOTONYI

- **Mr. Said salum kiparu** the campus manager welcomed us and give a brief about the campus.
- The participants visited the plantation which is situated on 140 hectares of land of which 80% is a manmade forest and 20% still a natural forest.
- Species included: *Pinus caribaea*, *Grevillea Robusta*
- The manager explained the role of the plantation including training.
- He explained the silviculture practices employed e.g pruning, thinning



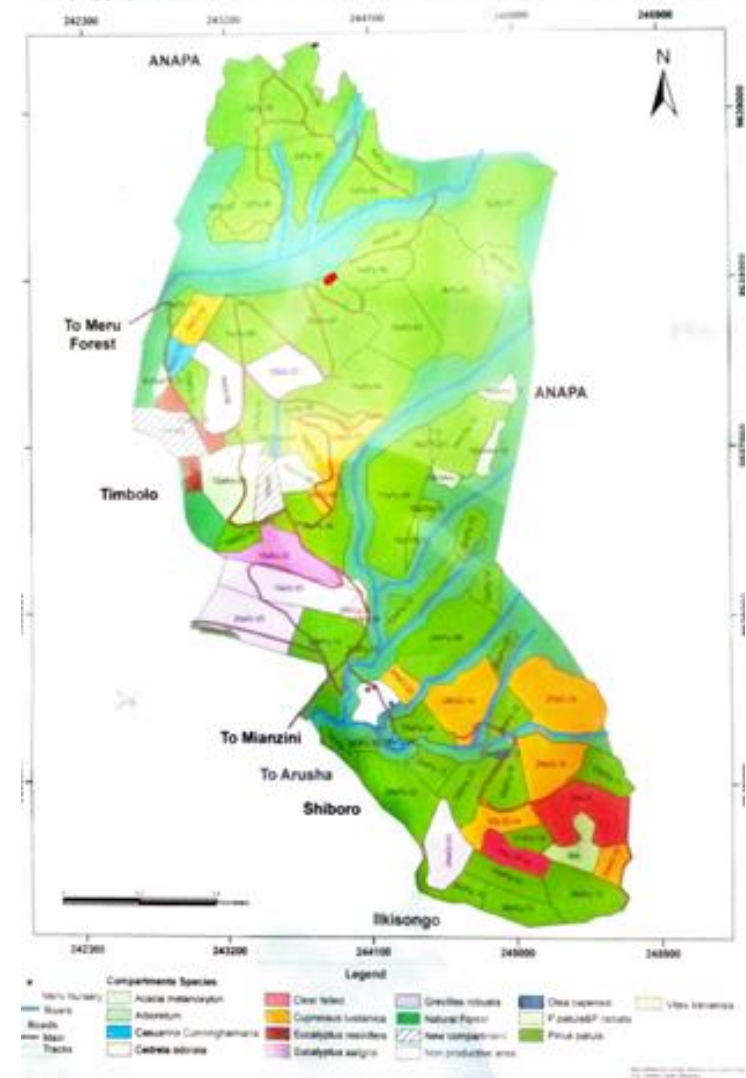


Field trip to SUA FOREST TRAINING INSTITUTION- OLIMOTONYI

Objective of the institution were;

- ✓ To provide practical training and other forest related courses
- ✓ Sustainable supply of forest product
- ✓ To maintain water catchment, soil protection and stabilize the microclimate of the environment
- ✓ To adopt environmentally friendly forest operations like logging operations

MAP OF SOKOINE UNIVERSITY OF AGRICULTURE TRAINING FOREST OLIMOTONYI - AKUSHA





Field trip to SUA cont.....

The forest consist of 140 ha where by 80% is plantation and 20% is natural forest
» 9 different type of species have been planted which are;

No	Species	Area coverd	Parcentage
1	<i>Pinus patula</i>	435.1	63.6%
2	<i>Grevillea robusta</i>	56.5	8.3
3	<i>Cupressus lusitanica</i>	56..8	8.3%
4	<i>Eucalyptus spp</i>	41.5	6.1%
5	<i>Accacia melanoxylon</i>	29	4.4%
6	<i>Olea capensis</i>	26.2	4%
7	<i>casuarina cunningamia</i>	19.1	2.8%
8	<i>Vitex keniensis</i>	12.9	1.9%
9	<i>Cedrela odorata</i>	4.1	0.6%





Field trip to SUA cont.....

- The forest annual allowable cut is 13,983 M³/Per year
- The first plot visited planted two type of species
- ✓ *Gravilea robusta* which has got 30 years (has reached the pick of rotation age).
- ✓ *Pinus Patula* which has got 9 years and was planted 2014. The rotation age of *pinus patul* is 18years
- ✓ All species has been planted by spacing of 3X3





☐ Visited Narok view point

- ✓ From this point you can view 75,% of the forest
- ✓ Mount Meru view
- ✓ Taungya system is forest managment system whereby community are initally allowed to cultivate land for agriculture crops for at least 3 year and leave the plot after tree canopy closure'
- ✓ The size of plot given to community are 400m² and are charged 20,000/ Tsh equal to 8.3 \$





» Why they charge community?

Because they want to increase state of ownership

It was observed that community are competing for this land because of;

✓ Scarcity of land

✓ Good weather condition, because area receive rainfall throughout the year

No study conducted to know how much community are earning.

This can be the area for institution to focus since it is the research institution.





Field trip to SUA cont.....

Farmers are not allowed to apply chemical fertilizer or pesticide, they supposed to comply with rule and regulation . In special case they can request to use pesticide with approval of the institution.

The plot are given for specific individual

How do the institution provide plots for farmers/procedures

1. Farmer are applying through village government

2. Then they are approved by VC.

3. Selection will consider gender, level of income etc.





Field trip to SUA cont.....

Visited Laikinoi view point

- ✓ Land use by adjacent village
- ✓ Arusha City view





Field trip to SUA cont.....

☐ Visited tree nursery

- ✓ The size of the nursery is 0.2ha
- ✓ Species planted *Pinus patula*, *Grevillia robusta*, *Eucalyptus*,
- ✓ The nursery has the capacity of raising 40,000 seedlings per season.





Field trip to SUA cont.....

☐ Visited sawmill

- ✓ The campus has three sawmills, 2 old ones and one new one
- ✓ New sawmill - **slidetec**
- ✓ It has high speed for timber processing - it produced 1-2 m³/h
- ✓ Recovery rate 48% to 50%
- ✓ They sell Timber, dust and bark
- ✓ No gender balance, there is only one woman





Field trip to **NELSON MANDELA AFRICAN INSTITUTE OF SCIENCE AND TECHNOLOGY**

- In the afternoon team visited **NELSON MANDELA AFRICAN INSTITUTE OF SCIENCE AND TECHNOLOGY**.
- We were welcomed by Prof Suzana Agostino the Deputy-Vice Chancellor for the Institution, she then introduced us to ongoing Vice Chancellor Prof. Emmanuel Luoga who then give a brief welcome remarks to AFF team.
- Prof. Suzana then give a brief introduction about the University
- It currently offering **Master's and PhD degrees in science and engineering areas**, namely:
 - ✓ Life Sciences (LiSe), Bio-Engineering (BioE)
 - ✓ Mathematical and Computer Science and Engineering (MCSE)
 - ✓ Information and Communication Science and Engineering (ICSE)
 - ✓ Materials Science and Engineering (MaSE),
 - ✓ Hydrology and Water Resources Engineering (HWRE),
 - ✓ Environmental Science and Engineering (EnSE) etc



Field trip to NELSON MANDELA cont

- ❑ Prof Suzana took us to a different place inside the university.
- ❑ **Areas visited**
 - ✓ Tower which will be used for radio broadcasting, the coverage will be Arusha
 - ✓ Botanical garden known as Eco-park, for research and recreational purpose
 - ✓ School of computer science which has planned to be the hub for storing data
 - ✓ Factory for purifying water. This will be the university business
 - ✓ PhD village where PhD student stayed



Field trip to NELSON MANDELA cont



- Lastly area visited were Innovation based Incubation Centre
- The Centre has 2 years
- The centre natured the research which are coming from the student and lecturer
- She mention the stage which are taking place during incubation
 1. Pre incubation stage
 2. Incubation stage





□ Example of innovations

1. The machine which purify TB virus and also detect them

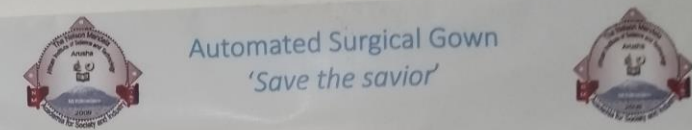




Field trip to NELSON MANDELA cont

1. Automated Surgical gown “save the savior which used to protect a person from getting COCID-19





Automated Surgical Gown ‘Save the savior’


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Problem

A severe shortage in the amount of necessary *personal protective equipment (PPE)* during the COVID-19 pandemic caused concern for health care providers as they feared being infected by the patients they cared for and, in turn, passing the virus on to their own families.



Solution- our product.



Product development stages


- Synthesis of anti-infectious material
- Characterization of anti-infections material
- Testing ability to destroy Corona virus
- Automated Surgical Gown assembly (manufacturing)
- Incubation of the product for further development
- investing on the product to serve community




Service targeted

Market	Size
Hospitals	More than 1000
Dispensaries	More than 2000
Pharmacy	More than 5000
Health laboratories	More than 1000
Health centers	More than 3000


ALIGNED TO SUSTAINABLE DEVELOPMENT GOALS



3 GOOD HEALTH AND WELL-BEING



9 INDUSTRY INNOVATION AND INFRASTRUCTURE



8 DECENT WORK AND ECONOMIC GROWTH

Project outcome: Contribute in highly reduction of deaths of health sector workers due to COVID-19



Field trip to NELSON MANDELA cont

3. Leather products which are processed by using organic chemical instead of industrial chemicals





Dinner Party

Lastly was the dinner party at

<https://drive.google.com/drive/my-drive>





THANK YOU

