



SONS OF SEGOMA LTD

# MINUTE SHEET

Dokezo  
No.

## Ag. EXD

The approved project has fulfilled the investment requirements, which are: -

(a) Minimum finance investment threshold has been exceeded, the project expects to invest USD 0.5 m.....

(b) Legal entity has been incorporated under certificate

No. 81631..... of 22/2/2007

Based on the above, the letter of approval is hereby submitted for signature in order for the project to comply with the requirements of Section 17 of Tanzania Investment Act, 1997.

Submitted for signature.



N. A. Senzia

**DIF**

20<sup>th</sup> January, 2012

## EXD

In response to the TIC letter of registration dated 20<sup>th</sup> January 2012.....

the project has submitted the required documents namely: -

(a) Company Board Resolution.

(b) Reference letter/Financing from M Investment and Corporate Bank.....

(c) Lease Agreement as evidence of land.....

With the above submission EXD is requested to sign Certificate of Incentives No. 042162..... herein attached.

26/01/2012



DIF

# MINUTE SHEET

Dokezo  
No.



Corporate &  
Investment Bank

16<sup>th</sup> December 2011

TO WHOM IT MAY CONCERN

RE: M/S SONS OF SEGOMA LIMITED

This is to confirm that **M/S SONS OF SEGOMA LIMITED** has a banking relationship with us and their accounts in the books of the Bank are well maintained to our satisfaction so far.

In our opinion the Directors of the Company are respectable and financially sound and we do not think that they will enter into commitments which they cannot fulfill.

Please note that this information is given in strict confidence for private use only and without any responsibility or liability on the part of the Bank or any of its officers.

Thanking you,  
Yours faithfully,

**Arun Chauhan**  
Authorised Signatory

**Waseem Arain**  
Authorised Signatory

TICC/PP.10/042162/3

20<sup>th</sup> January 2012

Managing Director,  
Sons of Segoma Ltd,  
P.O. Box 6125,  
**Dar es Salaam.**

**RE: CERTIFICATE OF INCENTIVES FOR INVESTMENT IN THE  
MANUFACTURING OF ESSENSIAL OILS FOR FOODS**

We wish to acknowledge receipt of your project proposal for Manufacturing of essential oils for foods as presented in the TIC P.A. 1 Form No. 09789 and Feasibility Study with a projected investment of USD 0.5m.

We have studied your project proposal and we are pleased to inform you that your investment proposal is now officially registered and therefore your project will be granted a CERTIFICATE OF INCENTIVES, given under authority conferred upon TIC under Part III, Section 17 (1-8) of the Tanzania Investment Act, 1997. In order to enable TIC prepare your Certificate of Incentives, You will be required to submit the following:-

- Bank Reference for equity funding or a letter from Bank/Financial Institution that a loan is granted or is under consideration as required by Section 17(3) (f) of Tanzania Investment Act, 1997.

You will also be required to submit to the Centre a Progress Report on the implementation of the project after every six months for our information and review. Guidelines for the preparation of the report are contained in annexure 2 also attached to this letter. Please do not hesitate to contact the Centre for any clarification if the need arises. Please also note that a facilitation fee equivalent to US\$ 750.00 is payable at the ruling exchange rate before your Certificate of Incentives is prepared. Please make deposit direct to the bank as per bank details below:-

TICC/PP.10/042162/3

20<sup>th</sup> January 2012

*Tanzania Investment Centre  
Standard Chartered Bank (T) Ltd  
US Dollar A/C 8702006002000  
T.Shs A/C 0102006002000*

We wish you every success in the implementation of the project.

Yours sincerely,  
**Tanzania Investment Centre**



B.D. Chonjo  
**For: Executive Director**

**Copy to:** Permanent Secretary,  
Ministry of Finance,  
P. O. Box 9111,  
**DAR ES SALAAM**

Permanent Secretary,  
Ministry of Industry, Trade and Marketing,  
P.O. Box 9503,  
**DAR ES SALAAM**

Commissioner General,  
Tanzania Revenue Authority,  
P. O. Box 11491,  
**DAR ES SALAAM**



# TIC Evaluation Report

Name of the Company  
**Sons Of Segoma Ltd**

Post Box	Kisatango Village	COI Number	81631	Contact	Alnoor Hussein
Post Office	6125	COI Date	22/02/2007	Designation	Director
Region	Tanga	Application F. No	09789	Phone	
Country	Tanzania	Status	New	Direct Phone	
		Sector	Manufacturing	Cell Phone	0717 600511
		Sub Sector	Agro Processing - Essential Oils	Fax	
		File No	042162	E-Mail Address	

Project Location		Investment Finance Plan in Millions USD										
Plot No.	1259	<table border="1"> <tr> <th>Foreign Equity</th> <th>Local Equity</th> <th>Foreign Loan</th> <th>Local Loan</th> </tr> <tr> <td>0</td> <td>0.248</td> <td>0</td> <td>0.252</td> </tr> </table>	Foreign Equity	Local Equity	Foreign Loan	Local Loan	0	0.248	0	0.252		
Foreign Equity	Local Equity		Foreign Loan	Local Loan								
0	0.248		0	0.252								
Street	Kisatango Village											
District	Muheza											
Region	Tanga											

Shareholders Detail			Investment Breakdown (USD Million)	
Name	Nationality	(%)	Land/Building	Plant
Michael S. Karata	Tanzanian	33.33	0.2	0.06
Alnoor A. Hassain	Tanzanian	33.33	Vehicles	0.05
Ismail O. Kasama	Tanzanian	33.33	Furniture & Fittings	0
			Pre-expenses	0.06
			Others	0.05
			Working Capital	0.08
			Total	0.5

Employment	14	Evaluated By	wf officer2
Capacity	60	Drawn By	wf registry2
Project Turn Over		Project Type	Local

**Description**

Manufacturing of essential oils for foods

**Recommendations**

Be approved subject to providing evidence as required by section 17 of Tanzania Investment Act, 1997

**Decision**

*Approved*  
  
 AG EXD  
 18/01/12

# SONS OF SEGOMA LIMITED

P. O. Box 6125  
Tanga

Date: 10<sup>th</sup> January 2012

The Executive Director,  
Tanzania Investment Centre,  
P. O. Box 938,  
Dar es Salaam.

Dear Sir,

**APPLICATION FOR CERTIFICATE OF INCENTIVES FOR THE  
ESTABLISHMENT ESSENTIAL OILS PROJECT IN TANZANIA**

Enclosed for your kind attention is our application for a Certificate of Incentive in order to establish an essential oils processing plant to be located on Plot No: 1259 Kwatango Village, Muheza District – Tanga Region - the cost of which is going to be US Dollars 500,,000.



<b>CAPITALL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	80,000	0	80,000
<b>Total Initial Investment</b>	<b>326,113</b>	<b>172,200</b>	<b>500,000</b>

Enclosed for your ease of reference are the following documents: -

- (i) Copy of Memorandum and Articles of Association;
- (ii) Certificate of Incorporation;
- (iii) Two copies of the Business Plan;
- (iv) Evidence of Land and Financing (tenancy/lease and bank reference);
- (v) Board Resolution authorising the investment.

We look forward on your ready and prompt co-operation as we hope to benefit from the assistance of your office in being exempted the respective tax(es) in this regard.

Yours faithfully,  
**SONS OF SEGOM LIMITED**

  
**A. F. G. MSHANA**  
PROJECT CONSULTANT = Phone: 0713 33 72 55





# TANZANIA INVESTMENT CENTRE

Shaaban Robert Street, P.O. Box 938, Dar Es Salaam, Tel. +255 22 2116328-31, Fax: +255 22 2118253

**RECEIPT** REC005921

4

Received from : **SONS OF SEGOMA LTD**

No. **000669**

Address : **P. O. Box 6125 TANGA**

Received the sum of (In words): **SEVEN HUNDRED FIFTY AND ZERO CENIS ONLY**



Being payment in respect of : **CERTIFICATE OF INCENTIVES**

Amount : **USD 750.00**

Cash / Cheque No: **D/Deposit**

Date : **23-Jan-2012**

**Bujiso**  
Receiving Officer



TIC

# SONS OF SEGOMA LIMITED

P. O. Box 6125

Tanga

Phone: 255 767 677 151

5

Date: 30<sup>th</sup> January 2012

Commissioner for Customs & Excise,  
P.O. Box 9053  
Dar es Salaam - Tanzania

UFS:

The Executive Director,  
Tanzania Investment Centre,  
P. O. Box 938,  
Dar es Salaam.

Dear Sir,



RE: DUTY/VAT EXEMPTION ON CAPITAL/DEEMED CAPITAL GOODS –  
CERTIFICATE OF INCENTIVE NO: 042162

We are TIC approved project with Certificate of Incentives No: 042162 which is valid up to December 2015.

We have been registered with objectives of establishing a project for manufacturing essential oils for the food processing and allied industries.

Attached herewith please find a list of Capital/Deemed Capital Goods for Duty & VAT Exemption for your approval.

Submitted for your kind attention.

Yours truly,  
**SONS OF SEGOMA LIMITED**

**Ismail O. Kasomo**  
Director

A. F. G Mshana – TACO, FEAC/(FECA)  
PROJECT CONSULTANT Phone: 0713 33 72 55

Encl. Copy TIC Certificate  
TIN Certificate

## SONS OF SEGOMA LIMITED

No: 042162 Dated 26 <sup>th</sup> January 2012			
ITEM NO	ITEM NAME	MEASUREMENT	QUANTITY
	<b>MACHINERY &amp; EQUIPMENT</b>		
	<b>PARTICULARS</b>	<b>Unit</b>	
1	Field Hydro Distillation Unit with Accessories.	Pieces	1
2	Leaf plucking machines with accessories	Pieces	12
3	Pruning Machines with accessories	Pieces	12
4	Chain saws with accessories	Pieces	
	<b>OPERATING &amp; AUXILLIARY EQUIPMENT</b>		
5	Sim Tank 10,000 litres	Pieces	2
6	Sim Tank 5,000 litres	Pieces	6
7	Water Pump with accessories	Pieces	1
8	HDPE Water Pipe 4"	metres	500
9	HDPE Water Pipe 2"	metres	10,000
	<b>MOTOR VEHICLES</b>		
10	4 x 4 Double Cabin X	Pieces	2
11	Mitsubishi Fuso Tipper 4 tonnes X	Pieces	2
12	Motorbikes (Fekon) X	Pieces	1

Printed from Copy  
of The Original  
Signature: *[Signature]*  
Date: 27/01/2012



00218414

Part: Executive Director  
Tanzania Investment Centre

THE UNITED REPUBLIC OF TANZANIA

# Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: .....042162.....

## This is to certify that

SONS OF SEGOMA LIMITED

of address ..... P.O. BOX 6125

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, ~~rehabilitation~~ ~~expansion~~ ~~XXXXXX~~ enterprise known as

SONS OF SEGOMA LIMITED

Which is located at ..... PLOT NO. 1259 KISATANGOO VILLAGE

MUHEZA \_ TANGA

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

.....  
Ag. Executive Director

Tanzania Investment Centre  
P.O. Box 938, Dar es Salaam

Dated ..... 26TH JANUARY 2011



This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1. Shareholders
 

Shareholders	Nationality	Shareholding (%)
Michael S. Karata	Tanzanian	33.33
Alnoor A. Hassain	Tanzanian	33.33
Ismail O. Kasama	Tanzanian	33.34
  
2. Proposed Activities : Manufacturing of essential oils for foods
  
3. Sector: Manufacturing Subsector Agro Processing - Essential Oils
  
4. Investment cost: Foreign - Local USD 0.5m. Total USD 0.5m.
  
5. Project Financing:
 

Equity	<u>USD 0.248m.</u>	Loans	<u>USD 0.252m.</u>	Total	<u>USD 0.5m.</u>
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6. Source, terms and conditions of loan.....
  
7. Assets to be invested:
 

Capital items:	Foreign	Local	Total
	<u>-</u>	<u>USD 0.5m.</u>	<u>USD 0.5m</u>
  
8. Technology Agreement None
  
9. Date of TIC Registration: 20th January 2012
  
10. Implementation period January 2012 - December 2014
  
11. Operative date..... January 2015
  
12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997
  - (i) Applicable Import Duty And VAT as per Customs Tariff Act, 1976 & VAT Act, 97
  - (ii) Applicable with-holding Tax As per Income Tax Act, 2004 (as amended)
  - (iii) Eligibility of Capital Allowances As per Income Tax Act, 2004 (as amended)
  
13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.
  
14. Conditions attached to this Certificate of Incentives
  - (i) Date of Commencement of investment has to be notified to the Centre.
  - (ii) Certificate not to be transferred, assigned or amended
  - (iii) Failure to commence implementation within two years invalidates Certificate
  - (iv) Failure to operate investment must be notified to the Centre
  - (v) Changes in shareholding, project activities and level of invested capital must be notified to the centre
  
15. Additional conditions attached to Certificate
 

Finished goods are not allowed under this Certificate

Signed   
Ag. Executive Director

CTIN.: 1086660

ISO 9001:2008 Certified



# TANZANIA REVENUE AUTHORITY

## CERTIFICATE OF REGISTRATION FOR TAXPAYER IDENTIFICATION NUMBER (TIN)

(ISSUED UNDER SECTION 133 OF THE INCOME TAX ACT NO. 11 OF 2004)

### THIS IS TO CERTIFY THAT

SONS OF SEGOMA LIMITED

.....

has been registered with the Tanzania Revenue  
Authority and assigned the Taxpayer  
Identification Number

112-789-790

.....  
26-Apr-2011

with effect from .....

  
**P. N. Kassera**

OFFICIAL SEAL

COMMISSIONER FOR DOMESTIC REVENUE

NOTE: THE REQUIREMENTS UNDER WHICH THIS CERTIFICATE IS ISSUED ARE STATED OVERLEAF



00218414

THE UNITED REPUBLIC OF TANZANIA

# Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: ..... 042162 .....

## This is to certify that

SONS OF SEGOMA LIMITED

of address ..... P.O. BOX 6125

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, ~~rehabilitation expansion~~  
~~XXXXXX of the~~ enterprise known as

SONS OF SEGOMA LIMITED

Which is located at ..... PLOT NO. 1259 KISATANGOO VILLAGE

MUHEZA \_ TANGA

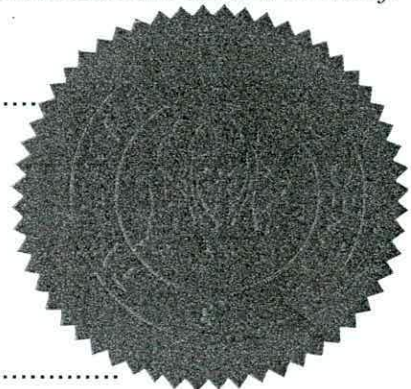
Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

.....

Ag . Executive Director

**Tanzania Investment Centre**  
P.O. Box 938, Dar es Salaam

Dated ..... 26TH JANUARY 2011 .....



This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1. Shareholders
 

Shareholders	Nationality	Shareholding (%)
Michael S. Karata	Tanzanian	33.33
Alnoor A. Hassain	Tanzanian	33.33
Ismail O. Kasama	Tanzanian	33.34
  
2. Proposed Activities : **Manufacturing of essential oils for foods**
  
3. Sector: **Manufacturing** Subsector **Agro Processing - Essential Oils**
  
4. Investment cost: Foreign **-** Local **USD 0.5m.** Total **USD 0.5m.**
  
5. Project Financing:
 

Equity	<b>USD 0.248m.</b>	Loans	<b>USD 0.252m.</b>	Total	<b>USD 0.5m.</b>
--------	--------------------	-------	--------------------	-------	------------------
  
6. Source, terms and conditions of loan
  
7. Assets to be invested:
 

Capital items:	Foreign	Local	Total
	<b>-</b>	<b>USD 0.5m.</b>	<b>USD 0.5m</b>
  
8. Technology Agreement **None**
  
9. Date of TIC Registration: **20th January 2012**
  
10. Implementation period **January 2012 - December 2014**
  
11. Operative date **January 2015**
  
12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997
  - (i) Applicable Import Duty **And VAT as per Customs Tariff Act, 1976 & VAT Act, 1997**
  - (ii) Applicable with-holding Tax **As per Income Tax Act, 2004 (as amended)**
  - (iii) Eligibility of Capital Allowances **As per Income Tax Act, 2004 (as amended)**
  
13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.
  
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  - (iv) Failure to operate investment must be notified to the Centre
  - (v) Changes in shareholding, project activities and level of invested capital must be notified to the centre
  
15. Additional conditions attached to Certificate  
**Finished goods are not allowed under this Certificate**

Signed   
Ag. Executive Director

**TICC/PP.10/042162/6**

**13/02/2012**

Commissioner for Customs & Excise,  
Tanzania Revenue Authority,  
P.O. Box 9053,  
**DAR ES SALAAM**

Dear Sir,

**RE: DUTY/ VAT REMISSIONS ON CAPITAL/ DEEMED CAPITAL  
GOODS – CERTIFICATE OF INCENTIVES No: 042162**

**M/S Sons of Segoma Limited** is a TIC registered company with certificate of incentives **No. 042162** which is valid up to **December 2014**

The company has been registered with objectives of manufacturing of essential oils for foods.

Attached herewith please find a list of Capital/ Deemed Capital Goods for Duty/ VAT remissions approval.

Yours sincerely

**TANZANIA INVESTMENT CENTRE**

  
N.A. Senzia

**FOR: EXECUTIVE DIRECTOR**



# TANZANIA INVESTMENT CENTRE

## REGISTRATION FORM

FOR

## CERTIFICATE OF INCENTIVES

(Tanzania Investment Act 1997, Section 17 and 18,  
and the Investment Regulations:  
Regulation 42, Government Notice No. 318A of 2002)

Tanzania Investment Centre  
9A & B Shaaban Robert Street  
P. O. Box 938  
DAR ES SALAAM  
Tel. 022 2116328  
Fax. 022 2118253  
e-mail: [information@tic.co.tz](mailto:information@tic.co.tz)  
Website: [www.tic.co.tz](http://www.tic.co.tz)

(Please fill the form in duplicate)

UNITED REPUBLIC OF TANZANIA

THE TANZANIA INVESTMENT ACT  
(No. 26 of 1997)

APPLICATION FOR REGISTRATION  
(Made under Regulation 42)

To: The Executive Director  
Tanzania Investment Centre  
P. O. Box 938  
DAR ES SALAAM  
Tanzania

1. I/We AL NOOR HUSSEIN  
(director/directors/agent of JOHN OF SEGOMA LIMITED ESSENTIAL  
(name of business enterprise) apply for registration of MANUFACTURE OF ESSENTIAL  
OILS  
under Section 17 of the Act and Part IV of the Investment Regulations, 2002.
2. The registered office of the company will be situated at PLOT 1259  
AT KWATANGO VILLAGE MUHEZA DISTRICT

Copies of the following documents are attached to this application:

- (i) The Memorandum and Articles of Association/or partnership agreement
- (ii) Certificate of Incorporation/Registration
- (iii) A copy of the Project Profile or Feasibility Study showing the implementation period, programme of implementation and operative date
- (iv) Evidence of financing and evidence of land ownership for the project

3. The Head Office of the Company will be situated at .....
4. The Principal Officers of the Company are ISMAIL O. WASOMU,  
ALNOOR A. HUSSEIN & MICHAEL S. KARATA
5. Auditors of the Company are SHEBRILLA & CO. LTD  
TANGA
6. The authorized share capital of the Company is Tshs./US\$ 30,000,000/- divided  
into 10,000 shares of Tshs. 3,000/- each,

7. The intended capital investment of the Company in terms of Section 2(2) of the Act

is Tshs./US\$ 500,000

8. The month and day of the financial year end is 1st January to 31st December

Note: *failure to provide all the required information will result in the return of the application by the Centre.*

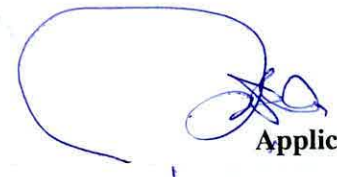
I/We enclose a cheque/cash made payable to the **Tanzania Investment Centre** for Tshs./US\$ 100 Being the Registration Fees. *In the event this application is unsuccessful we understand that this fee will not be refunded.*

I, Abdullah Francis G. MSHAKO of Post Office Number 76565 Dar es Salaam


do solemnly and sincerely declare that I am a director/duly authorized agent of SONS OF SECURITY LIMITED

AND that all the requirements of the Tanzania Investment Act, 1997 in respect of matters precedent to the registration of the business enterprise under the Act and incidental thereto have been complied with, AND I make this solemn declaration conscientiously believing the same to be true.

Declared at Dar es Salaam }  
The 10<sup>th</sup> day of January 2012 }

  
Applicant

Before me:

  
Commissioner for Oaths



APPLICATION SUMMARY

Company Name: SONS OF SEGOMA LIMITED

Certificate of Incorporation Number: 01631 Status: PRIVATE

Certificate of Incorporation Date: 22nd February 2011

Post Box: 6125

Town: Tanga

Sector: MANUFACTURING Sub-Sector: AGROPROCESSING - ESSENTIAL OILS

Investment Financing Plan in Million US\$/Tshs.

Foreign Equity	Local Equity	Foreign Loan	Local Loan
<u>247,800</u>			<u>252,200</u>

Project Objectives: MANUFACTURE OF ESSENTIAL OILS FOR FOODS & OTHER INDUSTRIAL INGREDIENTS

Capacity: 60 MT @ ANNUUM

Employment: Foreign: 3 Local: 11 Total: 14

Implementation Period: 26 months March 2012 to Feb 2015

Project Location

Site/Plot/Block No.: 1259

Street: KWATANGO VILLAGE District: MUHEZA Region: TANGA  
(Attach sketch map showing project location)

Shareholders	Nationality	%
<u>Ismael O. Kasama</u>	<u>Tanzania</u>	<u>33.33</u>
<u>Aluor A. Hussein</u>	<u>Tanzania</u>	<u>33.33</u>
<u>Michael S. Karata</u>	<u>Tanzania</u>	<u>33.33</u>
.....	.....	.....
.....	.....	.....

**Investment Breakdown US\$/Tshs.M**

Land/Building	..... 200,000
Plant	..... 60,000
Vehicles	..... 50,000
Furniture & Fittings	.....
Pre-expenses	..... 60,000
Others	..... 50,000
Working Capital	..... 80,000
<b>TOTAL</b>	..... 500,000

**Contact Details:**

Name: Alnoor Hussain Title: Director  
Telephone: 077 60511 Fax: .....  
Email: .....

**Payments to be made payable to:**

TANZANIA INVESTMENT CENTRE  
STANDARD CHARTERED BANK TANZANIA LTD.  
SWIFT ADDRESS: **SCBLTZTX**  
ACCOUNT NO.: **8702006002000**



# TANZANIA INVESTMENT CENTRE

## REGISTRATION FORM

FOR

## CERTIFICATE OF INCENTIVES

**(Tanzania Investment Act 1997, Section 17 and 18,  
and the Investment Regulations:  
Regulation 42, Government Notice No. 318A of 2002)**

**Tanzania Investment Centre**

9A & B Shaaban Robert Street

P. O. Box 938

**DAR ES SALAAM**

Tel. 022 2116328

Fax. 022 2118253

e-mail: [information@tic.co.tz](mailto:information@tic.co.tz)

Website: [www.tic.co.tz](http://www.tic.co.tz)

**(Please fill the form in duplicate)**

09:39

UNITED REPUBLIC OF TANZANIA  
THE TANZANIA INVESTMENT ACT  
(No. 26 of 1997)

APPLICATION FOR REGISTRATION  
(Made under Regulation 42)

To: The Executive Director  
Tanzania Investment Centre  
P. O. Box 938  
DAR ES SALAAM  
Tanzania

- I/We AL NOOR HUSSEIN  
(director/directors/agent of JOHN OF SEGOMA LIMITED ESSENTIAL  
(name of business enterprise) apply for registration of MANUFACTURE OF ESSENTIAL  
OILS  
under Section 17 of the Act and Part IV of the Investment Regulations, 2002.
- The registered office of the company will be situated at PLOT 1259  
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- Auditors of the Company are SHEBRILLA & CO. LTD  
TANGA
- The authorized share capital of the Company is Tshs./US\$ 30,000,000/= divided  
into 10,000 shares of Tshs. 3,000/= each,

7. The intended capital investment of the Company in terms of Section 2(2) of the Act

is Tshs./US\$ 500,000

8. The month and day of the financial year end is 31st January to 31st December

Note: *failure to provide all the required information will result in the return of the application by the Centre.*

I/We enclose a cheque/cash made payable to the **Tanzania Investment Centre** for Tshs./US\$

100

..... Being the Registration Fees. *In the event this application is unsuccessful we understand that this fee will not be refunded.*

I, Adolph Francis G. MSHAKO of Post Office Number 76565 Dar es Salaam

..... do solemnly and sincerely declare that I am a director/duly

authorized agent of SONS OF SECURITY LIMITED


AND that all the requirements of the Tanzania Investment Act, 1997 in respect of matters precedent to the registration of the business enterprise under the Act and incidental thereto have been complied with, AND I make this solemn declaration conscientiously believing the same to be true.

Declared at Dar es Salaam }  
..... }

The 10th day of JANUARY 2012 }

  
Applicant

Before me:

  
.....  
Commissioner for Oaths

APPLICATION SUMMARY

Company Name: SONS OF SEGOMA LIMITED

Certificate of Incorporation Number: 01631 Status: PRIVATE

Certificate of Incorporation Date: 24th February 2011

Post Box: 6125

Town: Tanga

Sector: MANUFACTURING Sub-Sector: AGROPROCESSING - ESSENTIAL OILS

Investment Financing Plan in Million US\$/Tshs.

Foreign Equity	Local Equity	Foreign Loan	Local Loan
<u>247,800</u>	.....	.....	<u>252,200</u>

Project Objectives: MANUFACTURE OF ESSENTIAL OILS FOR FOODS & OTHER INDUSTRIAL INGREDIENTS

Capacity: 60 MT @ ANNUUM

Employment: Foreign: 3 Local: 11 Total: 14

Implementation Period: 26 months March 2012 to Feb 2015

Project Location

Site/Plot/Block No.: 1259

Street: KWATANGO VILLAGE District: MUHEZA Region: TANGA  
(Attach sketch map showing project location)

Shareholders	Nationality	%
<u>Ismael O. Kasano</u>	<u>Tanzania</u>	<u>33.33</u>
<u>Alnoor A. Hussein</u>	<u>Tanzania</u>	<u>33.33</u>
<u>Michael S. Karata</u>	<u>Tanzania</u>	<u>33.33</u>
.....	.....	.....
.....	.....	.....

**Investment Breakdown**      **US\$/Tsh.M**

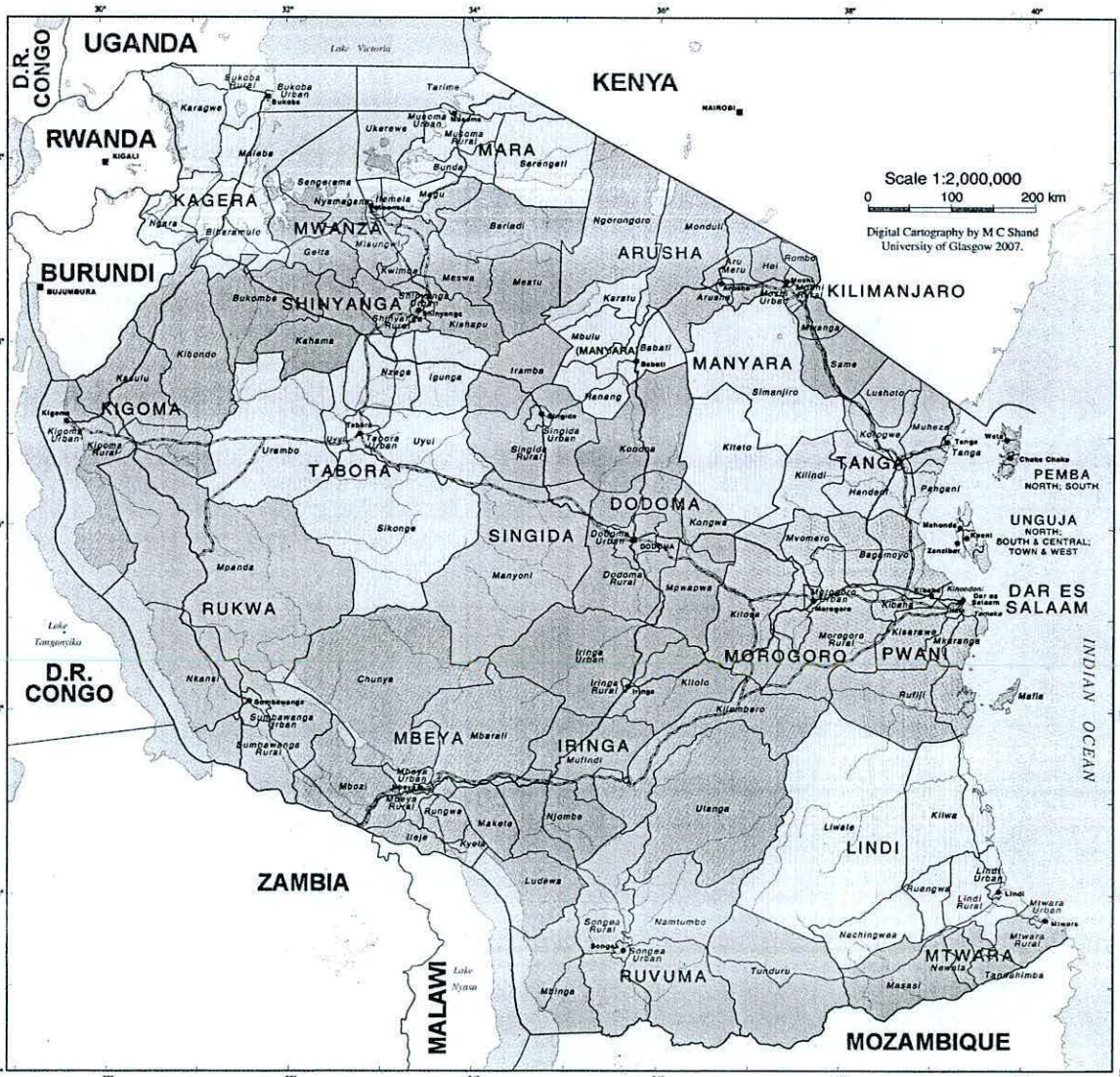
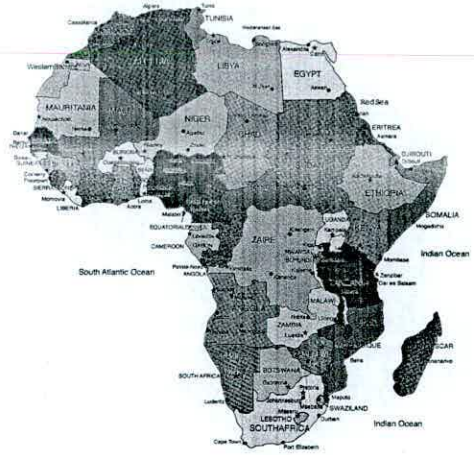
Land/Building ..... 200,000  
Plant ..... 60,000  
Vehicles ..... 50,000  
Furniture & Fittings .....  
Pre-expenses ..... 60,000  
Others ..... 50,000  
Working Capital ..... 80,000  
**TOTAL** ..... 500,000

**Contact Details:**

Name: Alnoor Hussein ..... Title: Director .....  
Telephone: 077 60511 ..... Fax: .....  
Email: .....

**Payments to be made payable to:**

TANZANIA INVESTMENT CENTRE  
STANDARD CHARTERED BANK TANZANIA LTD.  
SWIFT ADDRESS:      **SCBLTZTX**  
ACCOUNT NO.:      **8702006002000**



TANZANIA



Certificate of Incorporation

Section 15

No **81631**

I HEREBY CERTIFY THAT

**SONS OF SEGOMA LIMITED =====**

is this day incorporated under the Companies Act 2002 and that the Company is Limited

Given under my hand at Dar es salaam

this **22ND** day of **FEBRUARY**

**TWO THOUSAND AND ELEVEN**

CERTIFIED TRUE COPY OF THE ORIGINAL

*[Signature]*  
ADVOCATE

W/3/2011



*[Signature]*

Asst. Registrar of Companies

# SON OF SEGOMA LIMITED

P. O. BOX 6125  
Tanga

## BOARD RESOLUTION

### EXTRACTS FROM AN EXTRAORDINARY BOARD MEETING

#### ESTABLISHING AN ESSENTIALS OILS PROCESSING PROJECT IN MUHEZA – TANGA REGION

**Present:**

**Name:**

Ismail Oari Kasomo  
Alnoor Abdulmomhamed Huseein  
Michael Simon Karata

**Title/Designation**

Director/Chairperson  
Director  
Director

**In Attendance:**

Anthony de Melo

Secretary

The Board of Directors of SONS OF SEGOMA held an extra-ordinary Board Meeting on 12<sup>th</sup> May 2011 to deliberate on the establishment of an essential oils processing plant at Kwatango Village – Muheza District, Tanga Region, the cost of which should not exceed **US Dollars 500,000**.

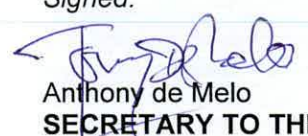
The Board also directed that the implementation of the same should not exceed 36 months starting March 2012. The Board agreed unanimously on the above decision and the management was directed to make an application for a Certificate of Incentives from the Tanzania Investment Centre so that the project can benefit from the incentives thereof.

Signed:

  
Ismail Omari Kasomo  
**CHAIRMAN OF THE BOARD**

Date: 12<sup>th</sup> May 2011

Signed:

  
Anthony de Melo  
**SECRETARY TO THE BOARD**

Date: 12<sup>th</sup> May 2011.

**LEASE AGREEMENT**

This AGREEMENT is made this 6<sup>th</sup> Day of December, 2011

BETWEEN

MR. ALNOOR A. HUSSEIN & MR. ISMAIL. O. KASOMO OF PO.BOX 5224 TANGA AREA 0.25 PLOT FARM NO 1259 BLOCK: KWATANGO VILLAGE MUHEZA DISTRICT (hereinafter called the LEASORS)

AND

M/S SONS OF SEGOMA LIMITED, AREA 0.25 PLOT FARM NO 1259 BLOCK: KWATANGO VILLAGE MUHEZA DISTRICT (hereinafter LEASEE)

WHEREAS, the LEASORS are the Lawful owners of the Land situated at KWATANGO VILLAGE MUHEZA DISTRICT (hereinafter referred as Land) and the Landlord is desirous to lease the said Land for Agricultural purposes,

AND

WHEREAS, The LEASEE is desirous to take the Land upon the terms and conditions hereinafter appearing:

NOW THIS AGREEMENT WITNESSETH as Follows

- 1) In consideration of monthly rent of Tsh 50,000/= (Fifty thousands only). Payable to the LEASORS, the leasor leases the said Land to the Leasee.
- 2) The aforesaid rent shall be paid annually.
- 3) This lease will be of three years commencing from the date of signing and can be renewed.

Signed and Delivered by the said

ALNOOR. A. HUSSEIN & ISMAIL O KASOMO

in my presence this 06<sup>th</sup> day Dec 2011

ALNOOR .A.HUSSEIN

ISMAIL O KASOMO

- 1. Name: J.M. Msaliman
- Postal Address: P.O. Box 1690 Tanga
- Qualification: ADVOCATE
- Signature:

06 DEC 2011



Delivered at Tanga under the common seal of the said

SONS OF SEGOMA LIMITED in our presence this <sup>th</sup> 06 day Dec 2011

1. Name ALNOOR HUSSEIN  
Postal Address 5224 TANGA  
Title DIRECTOR  
Signature *Alnoor*

**SONS OF SEGOMA LTD.**  
**P. O. Box 6125 TANGA**  
**CELL: 0655777150**

2. Name MICHAEL KARATA  
Postal Address 5224 TANGA  
Title DIRECTOR  
Signature *Michael*

# **SONS OF SEGOMA LIMITED**

**P. O. BOX 6125  
TANGA**

## **BUSINESS PLAN ON THE ESTABLISHMENT OF ESSENTIAL OILS FOR FOOD AND INGREDIENTS INDUSTRY IN TANZANIA**

*Consultant: A. F. G. Mshana - TACO, FEAC/(FECA)*

*UNDP/UNIDO National EXPERT;*

*Associate Consultant: ERNST & YOUNG*

*P. O. BOX 76565 - Dar es Salaam*

*Phones: 0713 33 72 55; 022 2129 631; 022 2119 000;*

*Facsimile: 022 2129 001*

*E-mail: [issltd@kangarootz.com](mailto:issltd@kangarootz.com)*

**OCTOBER 2011**

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# ESSENTIAL OILS MANUFACTURING AT TANGA, IN MUHEZA & MKINGA DISTRICTS

## 1.0 PERSPECTIVE

### 1.1 Kwatango Farm: Development Strategy

Kwatango farm is in between two villages i.e. Misozwe and Kwatango. The area is very fertile. The villagers are active in subsistence farming but their skills are inadequate when it comes to sustainability. Without a specific appropriate crop in mind it would just lead to land degradation in the long term. The tendency of planting short term commercial crops on the slopes will lead the community back to poverty accompanied with infertile land.

Misozwe village has electrical power and is 6 kms away from the farm. In order to make investments cheaper it is thought to acquire a small piece of land at an appropriate site where power and water can be easily obtained. This small place will be appropriate for:

- a) Distillery shed to house distillery equipment and store.
- b) A permanent Nursery to multiply bitter orange seedlings.
- c) A shallow well and appropriate pump.

The whole project is based on the fact that the company will grow 100 acres of bitter oranges while the surrounding villagers will be given free seedlings to grow on a contract farm basis viz-a-viz the Company. Initially the villagers will be asked to develop and maintain at least  $\frac{1}{4}$  acre on bitter orange (550 seedlings). This will be expanded as per their need. There are already 120 families interested in this project. To distil oil from leaves and twigs will mean leaving a huge biomass behind of which a part will be utilized as a thin mulch on the farm and the remaining waste will be dried, ground and turned into briquettes. Part of the briquettes will be used as firewood for the distillery and the other part will be given back to the farmers who have supplied the distillery with the leaves. This project will give the villagers direct economic gains, a permanent cover crop to halt land degradation and constant supply of briquettes as an alternative to their domestic firewood.

### 1.2 Challenges:

To accomplish such a project means long term investments in basic farm machinery, simple sheds, a distillation equipment and nursery establishment. It normally takes 6 – 8 months for seedlings in a nursery to mature and another 3 years in the field to make the bush productive. Considering the time factor it is not feasible to use Tanzanian bank money to develop a long term agricultural farm. Since the farms have title deed and offer, this can easily be used as collateral. Bitter Orange tree growing means initial heavy investments in terms of bush clearing and planting. Once the trees are in the ground then there is very light maintenance required over the years. The plants being of permanent nature do not need to be replanted again. In summary the plantation is expensive to establish but very cheap to maintain. Hence to start the plantation is a challenge with borrowed money of high interest rates.

plantation is expensive to establish but very cheap to maintain. Hence to start the plantation is a challenge with borrowed money of high interest rates.

Another critical part is the distillery. There is a lot of distillery equipment on the market. India is an ideal country on this. One has to choose and see which one would fit in our local situation. Fortunately the buyers of our oil also have a distillery in Nairobi and are willing to assist us in technical specs before we buy anything.

There is a local company in Tanga which has also acquired a proven briquette plant and is willing to share its technology. The plant was purchased from Europe and intended to produce briquettes from saw dust.

### **1.3 Mavovo Farm Development Strategy**

#### **Mavovo Farm:**

Mavovo farm is near Maramba town and in the proximity of Mavovo village. The villagers are active in subsistence farming and many of them grow cashew as their commercial crop. Cashew crop over the years has been a low value crop but it still entices the villagers to grow. Hesperidium is almost twice as valuable as cashew. In anticipation of this the villagers could be enticed to plant these as their alternative commercial crop.

Mavovo Farm itself will be producing the oil from the green bitter orange peel and during lean seasons will pick immature oranges for hesperidium use. Normally there are two fruiting seasons in Mavovo where the main season will be reserved for the bitter orange peel oil. Before fruits mature very young fruits drop off and this can be collected for hesperidium use. In Feb 2011, about 500 kgs were exported to South Africa where the requirement was 6 tonnes. The 500 kgs were readily accepted in the market.

Mavovo is planned to have an orchard of bitter orange trees. It is envisaged that the total 180 acres will be planted with the trees. Once the seedlings are planted and maintained for the first few years then only slashing is required to keep the plantation clean. Once the harvest season is over then the plantation has to be pruned and all these pruning (leaves and twigs) will be taken to Kwatango to feed the distillery for petitgrain production.

Mavovo has no power or water. Using simple technology oil from the peel will be extracted. Presently it is being done manually through labour. The presence of a bore hole with simple watering facilities will even make the plantation more productive. To date all the trees have withstood drought conditions and recoup during the rains in the normal way.

At some stage, when the management is in place it is thought to keep modern beehives to raise either local aggressive African bees vs. stingless bees. The main idea is to facilitate pollination to get more fruit production. As a secondary product, there is a ready market for bulk honey produced for commercial use but limited niche market for medicinal honey which has higher economic returns, but limited storage

span of 6 months. More thought has to be given as the farm should not encourage aggressive bees within the plantation area.

### **Challenges:**

To plant bitter orange trees in an orchard farm needs at least 6 years to growth. The trees are very handy and can withstand adverse conditions. Apart from time, at this moment there is no fully developed extraction method of peel oil. All the peel oil produced in the world is done through water washings where the mixed oil and water is then separated through centrifuge. This gives the oil a tainted colour which results in low priced oil. In Tanzania (Mavovo) the peel oil is directly extracted without water and gives rich golden coloured oil which is very pure and expensive. The challenge here lies in the development of an appropriate technology for golden oil extraction. The present extraction method is very slow while the market demands much more than what is extracted. At this moment only 200 to 400 kgs per annum are extracted while the standing order demand stands at 6,000 kgs. One needs at 2,000 kgs per annum to get the oil branded for different uses.

Not many can come forward to invest in plantation which has no technological solutions. Some solutions have to be developed for it to become a reality. Fortunately the tree is very versatile and can change its products from one to another. To date a copy of DVD of extraction process have been sent out to India and to the Sokoine University of Agriculture where there is hope to get a simple machine fabricated.

Sons of Sagoma have realized that development in a third world country has more chances of success if it starts from bottom going upwards. To bring about economic agricultural growth in an underdeveloped country, the agro processing industries should be concentrated around the villages which will in return improve the community's economy through money circulation. What is needed is the right crop which is sustainable for the people to improve their lives.

1.4 BITTER ORANGE TREE (*Citrus aruantium*)



KWATANGO FARM



MAVOVO FARM

*"A wild potential tree which, when tamed can produce 7 different types of products with different properties and economic values".*

- 1) Leaves & Twigs: (Petitgrain Oil)

	<b>KWATANGO FARM</b>	<b>MAVOVO FARM</b>
		
<b>PLACE:</b>	Situated in Tanga Region, Mkinga District in the proximity of Muheza Town	Situated in Tanga Region, Muheza District proximity of Maramba Town
<b>ACREAGE:</b>	A total area of 100 Acres	A total Area of 180 Acres
<b>LEGALITY:</b>	With Title Deeds	With Offer Deeds
<b>RAINFALL:</b>	1,400 - 1,700 mm. Well distributed and reliable	900 to 1,200 mm. Sometimes drought is visible in bad years
<b>TERRAIN:</b>	Mild to Steep slopes as in Tea Plantation	Almost flat land
<b>VEGETATION:</b>	Thick vegetation of indigenous species and Mvule (Chlorophora	The prominent species of the area is Brachylaena hutinsii

	proximity of Muheza Town	proximity of Maramba Town
<b>ACREAGE:</b>	A total area of 100 Acres	A total Area of 180 Acres
<b>LEGALITY:</b>	With Title Deeds	With Offer Deeds
<b>RAINFALL:</b>	1,400 – 1,700 mm. Well distributed and reliable	900 to 1,200 mm. Sometimes drought is visible in bad years
<b>TERRAIN:</b>	Mild to Steep slopes as in Tea Plantation	Almost flat land
<b>VEGETATION:</b>	Thick vegetation of indigenous species and Mvule (Chlorophora spp) grows very well. The Govt teak plantation neighbours the farm on one side.	The prominent species of the area is Brachylaena hutinsii (muhuhu). Almost all Muhuhu has been logged leaving bushy land behind.
<b>SOILS:</b>	Well drained deep loamy soils	Deep, well drained red soils
<b>LAST OFFICIAL VALUATION OF THE FARMS IN DEC 2007 (Ex rate 1,450 = 1 usd)</b>	USD 275,862	USD 64,827
<b>DEVELOPMENT TODATE AS ON FEB 2011</b>	11 Acres comprising of 22,000 bushes, 4 yrs Old. The bushes are spaced at 2 mtr rows x 1 mtr between plants.	80 Acres, comprising of 4,000 trees between 4 to 6yrs. The trees are spaced at 8 x 8mtrs and 6 x 6 mtrs
<b>TYPE OF PLANTATION:</b>	Hedge type	Orchard type
	<b>KWATANGO CONT'D</b>	<b>MAVOVO CONT'D</b>
<b>FINAL PRODUCTS:</b>	a) Petitgrain oil from leaves & twigs. b) Neroli oil from flowers c) briquettes from biomass produced.	a) hesperidium b) bitter orange peel oil c) Ripe orange dried peel

<b>MARKETS:</b>	There is pending request from R.C.TREATTS for the oil. The briquettes produced will be complementary payment to the farmers for their energy use.	There is a pending request for hesperidium from South Africa and the bitter orange peel oil is an ongoing commodity to R.C TREATTS.
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## **KWATANGO FARM DEVELOPMENT STRATEGY**

### **2.0 SUMMARY FINDINGS AND RECOMMENDATIONS**

Project Promoter : SONS OF SEGOMA LIMITED  
Address : Box 6125, TANGA  
TELEPHONE : +255 767 677 151  
Contact Person : Ismail O Kasomo

Messrs Ismail Kasomo, Michael Karata and Alnoor Hussein have jointly opened up a company incorporated in Tanzania with the objectives of extracting essential oils for export markets. The plans are to produce essential oils from Bitter Orange Trees planted in Muheza and Mkinga Districts. Plans are also to supply the surrounding community with appropriate seedlings so that there is a lucrative agricultural activity in the villages while protecting the land from erosion and general ecological and environmental degradation.

**Tanzania's Essential Oil Industry** is still at the infant stage. Some production of essential oil from the oil plants obtained from Tanzania's forests appears to have been carried out in the past. Thus, it is reported that production of *Mhuhu* oil from the wood of *B. hutchinsii* has been carried out along side the sawing industry. The only known plant is Pemba distillery, which produces oil from clove stems. However, there is a massive export of botanical species for producing the oils in other countries. The proposed plant will create value added to these local species.

Essential oils are volatile aromatic substances obtained from plants either by distillation or solvent extraction. The project envisages establishment of a plant with capacity to produce about 20 tonnes of essential oils per annum from Bitter Orange Trees. The oils and other products obtained would be:

- a) Small unripe fruits for hesperidium production.
- b) Bitter Orange Peel Oil from peel of unripe fruits.
- c) Petitgrain Oil from leaves
- d) Neroli Oil from Flowers.
- e) Dried peel from ripe oranges for candied production.

All products will be for the export market and orders from UK, Spain and South Africa have already been received.

The benefits of this project are numerous. It will increase value to locally available trees which has been discarded for a long time. The villagers will enter into contract scheme where they will also produce for the company. Direct Employment will be created from the local villagers which will be regular and more or less consistent. The project will also pay relevant taxes to the Government while increasing monetary deposits in the financial institutions.

The project will be supervised by a Competent Manager while the production activities will be supervised by technical personnel. Implementation has started and is under the supervision of an experienced of local engineer.

The project's capital investments are about **US DOLLARS 500,000** with the following components:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

The financing of capital costs is planned to be covered by the equity from investor's own resources and a fair amount from the financial institutions.

The initial working capital amounting to **USDOLLARS 80,000** will be source from a bank as a short term loan.

### **3.0 THE PROJECT AND SPONSOR**

#### **3.1 The Project and Study Objective**

M/S Sons of Segoma Ltd. after researching adequately for over 8 years have realized that there is a big untapped economic potential in agro forestry especially in Tanga Region where bad agronomic practices can make land barren and leaving the local community in poverty. The company has also discovered that there is a big world demand for essential oils and other related products from local trees for the food and ingredient industry.

Tanzania a country of about 1.0 million square kilometers is endowed with large numbers of botanical species with high medicinal and economic uses. About 60% of

the country is under tropical forests. Currently the forests are being harvested mainly for lumbering and in some cases for local charcoal production.

This project envisages the exploitation of specific local tree species, i.e. Bitter Orange Tree which many different products can be produced including charcoal from biomass produced after extraction. This tree if commercialized will protect land in terms of cover crop, produce high value products and from leftovers for the production of charcoal for local use.

The objectives of the project are:

- Improved price competitiveness through value addition;
- Better rational use of natural resources;
- Provide economic returns to participating farmers within the community.

The business plan is aimed at enabling M/S Sons of Segoma Ltd. to seek a financial loan to realize this project idea.

### **3.2 Project Promoter**

- Name of the Company : SONS OF SEGOMA LTD
- Address : P.O. Box 6125, Tanga. Tanzania
- Telephone : +255 767 677 151
- Legal Status : Registered in Tanzania under the Companies Ordinance (Cap. 212) with certificate of incorporation No. 81631
- Shareholders: Mr. Ismail O Kasomo  
Mr. Michael A Karata  
Mr. Alnoor A Hussein
- Company Background : The company has been registered to deal with the Business of farming by production of essential oils for food ingredients industry.

## 4.0 MARKETS FOR ESSENTIAL OILS

### 4.1 The Product: Essential Oils

Essential Oils are volatile aromatic substances obtained from plant either by distillation, solvent or through clod press expression. They are used for various applications for thousand of years in incenses, perfumes, pharmaceuticals, cosmetics and in food and ingredient industries. Essential oils are also known for their medicinal and culinary application. Their ritual use constituted an integral part of cultural traditions in most early cultures where the religious and therapeutic role of essential oils was inextricably intertwined (Lawless, 1922). This type of relationship continues to survive in some societies where traditional medicines are used and ancient social culture is still conserved. Presently, the uses of essential oils have intensified, whereby the oils are used in areas such as food preservation, food flavouring, spices and flavouring drinks. In perfumery, the oils and their constituents are used as fragrances, in cosmetics, in soaps and after-wash preparation. Medicinally, essential oils play an important role, and aromatherapy has been established as a special branch of herbal medicines.

Essential oils are volatile and odourous oils which occur in certain plants or specified parts of plants. They are recovered by accepted procedures such as that the nature and composition of the product is, as nearly as practicable unchanged by such procedures. Essential oils have been extracted from over 3,000 plants, of which 200 or 300 commonly traded in the world markets.

### 4.2 Uses of Essential Oils

Essential oils are widely known for their scents and flavours, making flavouring and fragrance industries among the biggest users. They are put into a variety of uses on account of their odour and high volatility. They are extensively used in the manufacture of perfumes, soaps, and other toiletries as deodorants. Various essential oils find use as flavouring materials in toothpaste, tobacco, candy, ice cream, liqueurs and non-alcoholic beverages. Many have therapeutic and antiseptic properties and are valuable in medicine. Due to their volatility, some essential oils are used as solvents in the paint and vanish industries. Some are used as insecticides. They are also used for the manufacture of various synthetic odours and flavours.

Common uses for some selected essential oils are as follows:

Sandalwood	Perfume, distillation base for other floral essences
Camphor	Cold remedies, perfumes, insecticides, liniments
Eucalyptus	Cough/cold remedies, solvents, cleaning agents, flavouring
Citrus	Industrial solvents, fragrance for cleaning products and flavouring

Spearmint		Toothpaste, mouthwash, confectionery flavouring
Peppermint:		Toothpaste, mouthwash, chewing gum, food flavouring, cosmetics, Tobacco flavouring
Tea Plant		Toiletries, insect repellent, germicides, cosmetics
Blackcurrant Bud	:	Food and Beverage Flavouring

### 4.3 World Trade in Essential Oils

There is no reliable published information on the size of the market for essential oils. However, since they are put into other products as perfumes and flavours, the trend in this market is an indication of the market size of the oils.

In 1998 the world trade for essential oils was put at US\$4.50 billion of which three quarters were exported (UN). In 1994 it was US\$5.0 billion showing a fast increase in world demand.

The major exporters are the USA, EU and a number of developing countries mainly China, Indonesia, India and Brazil. The developed countries are the major producers and importers.

The traditional view of essential oil production is that of simple farming or collection followed by oil distillation or extraction. Both intrinsic factors (genotype, state of maturity, part of the plant harvested) and extrinsic factors (light, temperate, water, nutrients) will strongly influence the oil yield and composition (Bemath 1986); Lawrence 1986). Within a single clone, the intrinsic factors can be fixed whereas the extrinsic factors cannot.

Table 3.1 The World's 20 Top Essential Oils

Essential Oil	Species	Volume (t)	Value (\$m)
Orange	Citrus sinensis (L) Osbeck	26,000	58.5
Eucalyptus	Eucalyptus globules Labili., E. polybrachea	3,728	29.8
Citronella	Cymbopogon winterianus Jowit and C nardus (L.)Rendle	2,830	10.8
Peppermint	Mentha xpiperita L.	2,367	28.4
Lemon	Citrus limon (L.) N.L Burm	2,156	21.6
Eucalyptus	Eucalyptus ciltriadora Hook	2,092	21.6
Clove Leaf	Syzyglum aromaticum (L.) Merr. and L. M Perry	1,915	7.7
Cedarwood (US)	Juniperus virginiana L, and J. ashel Buchholz	1,640	9.8
Lavandin	Lavandula intermedia Emeric ex Loisel	768	6.1
Camphor	Cinammomum camphora (L.) J. Presl	725	3.0
Coriander	Coriandrum sativum L	710	49.7
Grapefruit	Citrus paradise Macfady	694	13.9
Patchouli	Pogostemon cabin (Blanco) Benth	563	6.8

#### 4.4 Essential Oils Industry in Africa

Africa is one of the world's greatest producers of essential oils. Many countries produce the oils. For example, the North African countries of Egypt, Morocco and Tunisia are known to be exporters of essential oil, aromatic and medicinal oils from peppermint, eucalyptus, lemon, rosemary, myrtle, chamomile etc. Madagascar exports cinnamon bark and leaves oil, black pepper, clove, Cote d'Ivoire produces for export green coffee beans, ginger, fresh coconut, sesame etc.

#### 4.5 Essential Oils Industry in Tanzania

Though endowed with a wide diversity of flora Tanzania is a very insignificant player in the production of essential oils. However, most of its flora is exported raw.

In Tanzania essential oils are presently produced in Pemba Island. Among the oils produced are clove, lemongrass, sweet basil, cinnamon leaf, Eucalyptus citriodora, vetiver oils etc. The average value of the oils produced is about US Dollars 300,000 per annum.

Some production of essential oil from wild plants obtained from Tanzania forests appear to have been carried out in the past. Thus, it is reported that production of *Mhuhu* oil from the wood of *B. hutchinsii* has been carried out along side the sawing industry, whereby sawdust from *Mhuhu* wood was used as a raw material. Though the production was at a small-scale level, the oil obtained was supplied to the world market.

The East African sandalwood (*Osyris tenuifolia*) is well known as a good source of essential oil although it is not distilled locally. The wood from the plant has a long time been exported to India where it is distilled for its essential oil.

Other aromatics include camphorwood oil, clove oil, cedar oil (extracted from *Juniperus procera* wood) and a cassie oil (obtained from flowers of *Acacia farnesiana*, a tree whose distribution is restricted to Morogoro region only. For many aromatics, the maximum concentration within the plant is to be found in those plant inhabiting drier sites.

The only known producer is Pemba Distilleries Ltd. producing the oils from clove stems. A small-scale producer is said to operate from Usa River in Arusha but unreliable information shows that the plant is now closed.

One of the reasons could be the market. A successful production of essential oils requires that a reliable market for the oils be established first. Buyers require a quality consistency and security of supply.

## 5.0 RAW MATERIALS FOR ESSENTIAL OILS

### 5.1 Introduction

The topographical diversity of Tanzania allows the proliferation of rich floral biodiversity that is estimated to reach 10,000 plant species. More than a quarter of are considered to be endemic and some species restricted to Tanzania miombo, montane, tropical and for coastal evergreen forests (Mwasumbi, 1986). Among plant species occurring in Tanzania are those that produce commercially important essential oils, such as the clove tree (*Eugenia caryophyllata*), yiang yiang (*Cananga odorata*), lemongrass (*Cymbopogon citrates*), vanilla (*Vanilla planifolia*), Mhuhu (*Brachylaena hutchisil*), sandalwood (*Osyris tenuifolia*), etc.

It is recommended that the proposed project for essential oils and agro forestry products use the following parts /products from the Bitter Orange Tree species which are namely:

- a) Hesperidium;
- b) Bitter Orange peel Oil;
- c) Dried Peels
- d) Leaf Oil (Pettigrain Oil)
- e) Flower Oil (Neroli Oil)
- f) Briquettes

#### ***Hesperidium:***

It is normal for any trees to drop of the small unripe fruits (the size of a 50 cent coin.) In case of bitter Orange tree, these unripe fruits which drop off are shade dried bagged and exported. This is basically a by product. Price is USD 1.5 per kg.

#### **5.2 Bitter Orange Peel Oil:**

Unripe large oranges are collected, pressed where oil from the skin is extracted. From one tree one can get between 500 to 2,000 oranges. 2,000 oranges can yield 1 kg of oil. This oil is stored in lacquered drum and exported to UK. USD 29 per kg

#### **5.3 Dried Peels:**

Due to weather changes not all unripe oranges can be used for peel oil production. Many of the fruits ripen on the trees. These oranges are picked, and sliced. The peels are sun dried and bagged for export. USD 2 per kg. 80 oranges give 1 kg of dried peels.

#### **5.4 Leaf Oil (Petitgrain Oil):**

The bushes of the bitter Orange tree are trimmed into a bushy growth. Three times a year these bushes are trimmed whereby leaves are harvested. From one bush one can get 15 kgs of leaves per cutting (3 cuts in a year) with an oil percentage of 0.3 %. The current price of oil stands at USD 30 per kg.

#### **5.5 Flower Oil (Neroli Oil):**

The bush before fruiting gives out flowers. Part of the flowers are collected early in the morning and distilled. This is a very high value product whose price ranges up to USD 200 per kg. One bush can give up to 20 kgs of flower per tree. 1 kg is produced from 850 kgs of flowers.

#### **5.6 Briquettes:**

During the process of distillation there is a lot of biomass produced which is again used as a mulch to increase production and some of it can also be turned into briquettes, to be used for boiling water for steam purpose.

## 5.0 PROJECT ENGINEERING

The present sponsors are capable in engaging in this business using the present technology and available space. However, the financial analyses have focused on a larger scale production and hopefully using more sophisticated technology and adequate finances.

For the present production the following description is given:

### 5.1 Background

Essential oils, also called "volatile" oils, are volatile, odouriferous substances, widely distributed through the plant kingdom. These oils are distinguished from fatty oil by the fact that they evaporate and volatilize when in contact with air. They consist of a variety of organic substances. They are typically liquids and possess a pleasant taste and strong aromatic odour.

The utility of essential oil to the plant itself is obscure. They appear largely to be by-products of carbohydrates and metabolism. They occur as a rule in small concentrations in special cells glands, and duct either in one particular organ of the plant or distributed over many parts of the plant.

### 5.2 Methods of Producing Essential Oils

Generally, with few exceptions, the plant material in most cases determines the method of choice.

The extraction method adopted for a particular essential oil is one of the key points which determine the quality of the oil that is used, since a wrong or wrongly executed extraction, can damage the oil, and alter the chemical properties of the essential oil.

Essential oils are extracted from plant tissue in many different ways depending on the quality and stability of the compound. Some use delicate techniques since they are unstable and become altered under drastic treatment. Here below is a list and short explanation of the different extraction methods used in the manufacture of essential oils:

- i. Expression: This is squeezing the material by hand or machinery and is applicable especially to fruits;
- ii. Extraction – by volatile solvent, applicable to hot oils, fats (maceration) and cold neutral fats (effleurage);
- iii. Distillation: Distillation converts the volatile liquid (the essential oils) into a vapour and then condenses the vapour into a liquid – it is the most popular and cost effective method in use today in producing essential oils. It is applicable to a wide range of materials in which the aroma is not injured by hot water or steam.

The above extraction methods are further elaborated below:

**a) Expression Method**

Expression is resorted to in cases where heat would destroy the odours, such as in the production of citrus oils from the juices and waste rinds from citrus fruits in canning factories.

Expression usually involves squeezing the material at great pressures in order to press out the oils. The process is carried out either in manual presses or crushers in cottage-industries or in huge mechanized presses in large industries.

The material is placed in an iron cylinder with perforations in its sides. The ram of the hydraulic press filling the cylinder, compresses the material and the volatile fluid escapes through the perforations (holes) and the residue which forms a compact cake, is further freed from oil by extraction using solvents. The resulting oil is then purified and packed ready for the market.

**b) Extraction by Solvent**

This is a very ancient method which involves using non-volatile solvents like fats or oils to absorb the odours and yield pomades. There are two main types: effleurage and maceration.

Both volatile and non-volatile solvents are used in this process.

Effleurage is the process of extraction at ordinary temperatures which is much practiced in Southern France. This method is especially suitable for flowers that do not yield appreciable amount of essential oil by steam or water distillation. It is also applied to flowers that are too delicate to withstand exposure to heat and steam.

During effleurage, the fatty grassy base is smeared on glass plates arranged in tiers one above the other. The fat will absorb the perfumed oil present in and exhaled by the flowers. The fat with the flowers adhering to it is left for one to three days. The exhausted flowers are then replaced by another batch of fresh flowers. After repeated treatment in this fashion the perfume-saturated fat is removed. This is called Pomade. The Pomade is washed with alcohol which extracts its perfume.

Maceration is among the oldest extraction known. It is allied to effleurage and is commonly used for flowers of violet, rose, etc. In this method the brushed flowers are immersed in a bath of pure natural fat, such as tallow or olive oil, which is maintained at a temperature of

between 5-70 Degrees Centigrade by means of a water bath. The spent flowers are removed while fresh flower are added on to the perfumes of a previous charge which is exhausted until the desired concentration of perfume is attained.

Solvent extraction by volatile solvent is a comparatively recent process, dating from about 1889. The process generally employs petroleum ether. After the flowers have been exhausted, the solvent is recovered leaving a semi-solid residue, which consists of the oils and insoluble plant waxes. Alcohol is then eliminated.

### c) **Distillation**

The oldest and simplest method of distillation is boiling in water distillation. The plant material is allowed to stand in steel water then heated to the boiling point. Heat is generally supplied through a steam jacket.

In the case of direct-fire stls arrangement there is the risk of the plant material getting burnt through direct contact with the metal plate of the stil. In many direct-fired stls, there is a grid supporting the plant material which does not come in contact with the bottom of the stil. It is some what similar to water and steam distillation in which steam is blown into the mixture of the water with the plant material. The essential oil vaporizes, and together with the steam passes to the condenser where it is cooled. Upon cooling the oil essence collects on the surface of the water. Here it is removed by gravity separation and filtered. In steam distillation, the steam is produced in a separated boiler. The steam which is usually at atmospheric pressure is led through piping to the bottom of the stil from where it is blows through the essential oil plant materials lying on the grill of trays.

A more recent technique involves steam distillation under practical vacuum i.e. a pressure - 100% 200 mm of mercury. This method gives quick distillation with minimum hydrolytic decomposition of the oil.

Steam at a pressure higher than that of the atmosphere is applied whenever the plant material and the essential oils are sufficiently heat resistant and non-hydrolysable. This method is by far the quickest way of distilling essential oils materials with high boiling points such as camphor and sandalwood. The slightly increased temperature appreciably reduces the time required for distillation.

We recommend this extraction method for proposed essential oil extraction from sandalwood and camphor project – namely steam at pressure higher than atmospheric.

## 6.0 PROJECT ENGINEERING

The present sponsors are capable in engaging in this business using the present technology and available space. However, the financial analyses have focused on a larger scale production and hopefully using more sophisticated technology and adequate finances.

For the present production the following description is given:

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We recommend this extraction method for proposed essential oil extraction from sandalwood and camphor project – namely steam at pressure higher than atmospheric.

## 6.3 PROPOSED PRODUCTION PROCESS

### 6.3.1 Process Flow

The production process for producing essential oils in the proposed Sons of Segoma Project is described as below:

- a) The leaves and young green twigs of the plants will be harvested. This will be bagged and delivered to the distillation unit where it will be weighed for records purpose.
- b) The leaves are then transferred into the stil and where the lid is shut down.
- c) Steam from the boiler will then be directed into the stil
- d) The oil produced will be filled into 200kg lacquered steel drums (180 kgs net.)
- e) The product will then be clarified and ready for export.

### 6.3.2 Time for Distillation (Number of Batches) and Extraction Rates

The time for distillation will depend on the condition of Bitter Orange leaf material (for petitgrain oil) and weather conditions. Saturated steam at low pressure Bitter Orange leaves will take approximately 4 - 6 hours to distill. The extraction rate is around 0.3 % thus a yield of around 3 kgs of oil per ton of leaves is common.

Bitter Orange Flowers (for Neroli Oil) approximately takes 3 hours yielding oil equivalent of 0.2% of material weight.

It is evident from the above that for Petitgrain oil at least 3 charges can be planned per day while 4 charges per day (24 hours) can be planned for Neroli Oil.

## 6.4 PRODCUTION MACHINERY AND EQUIPMENT

### 6.4.1 Main Production Equipment

The steam distillation process for essential oils from Leaves will require the following machinery:

- a) **Leaf Plucking Machine**

The leaf plucking machine will be used to trim the bushes and harvest the leaves. These will be bagged and transported to the still.

**b) Distillation Equipment**

There are ready made units which are called as Field Hydro Distillation Unit. Wood will initially be used as fuel while in the second phase briquettes from the leftover will be used as fuel. The distillation of leaves and flowers only uses the material as all unused woody material will be used as firewood.

**c) Pruning Machines**

In order to have regular growth of at least 2 to 3 times a year on the same bush, it is necessary to prune the bushes to acceptable levels for continuous production of leaves and flowers. Through use of pruning machines speed is crucial and leaves the bushes in proper condition compared machetes / pangas.

**d) Platform Weigh Scales**

Two platform weigh scales of 500kgs capacity each will also be required. One will be for the raw material yard and the other for the finished products drum/S

#### **6.4.2 Auxiliary Equipment**

**a) Laboratory Equipment**

There is a strong need for a well-equipped laboratory to monitor rate of recovery of oil and ensure quality of the product especially since this is an export product.

For essential oils a laboratory which possesses the capacity of running laboratory scale distillations, physico-chemical parameter measurements, and gas chromatographic analyses should be in place as well as a commercial scale steam distillation facility.

It must be remembered that essential oils, which are natural mixtures of secondary plant products, are raw materials used in the flavours and fragrance industries. Their quality plays a part of another consumer product.

Products for human consumption must meet the food and hygienic standards of that country and have to be approved and

registered. A provision has been recommended for cost of these laboratory facilities.

**b) Workshop**

A small workshop to service and maintain the plant machinery and equipment is recommended. It will be equipped with relevant instruments and service tools.

**c) Water Storage**

Taking into consideration that most activities will be handled on the farm it will be necessary to have a bore hole with necessary pump to carry water to a 10,000 litres storage tank. This is needed on the continuous basis to cool the condensate to obtain the final oil. The farm already has abundant underground water which has to be tapped. .

**d) Motor Vehicles**

One double cabin pickup will be needed to look after the farming activities together with one motor cycle.

## **6.5 PLANT LOCATION, SITE AND INFRASTRUCTURE**

### **6.5.1 Location and Site**

The distillery plant will be located on Kwatango Farm, Muheza District , 20 kms from Muheza Town. The farm is 100 acres in area. The production of hesperidum and bitter Orange Peel oil will take place at Mavovo with an area of 180 acres.

### **6.5.2 Infrastructure**

**a) Water Supply**

Water obtained from the borehole where with the help of a pump and this water will be pumped into a a 10,000 litres storage tank.. The borehole and the tank will be at a distance of 0.5 kms from the site. 4-inch HDPE pipe will be used.

**b) Waste Disposal**

There is no any liquid waste in the project except for the biomass produced which will partly used for mulching purpose and in the second phase of the project will be used for briquettes production.

### **6.5.3 Firebreaks**

In order to protect the planted plots from fire there is already a regularly planned activity of maintaining the firebreaks. This is to avoid any bush fires into the plantation.

#### **6.5.4 Access Road**

The access road to the site is an all weather road of about half a kilometer long, from the main road going to Kwatango village.

### **6.6 BUILDINGS**

#### **6.6.1 Distillation Shed**

Since the distillation equipment is of field type there is only a large shed required for housing the distillery. The shed for distillation and drying is size 27 x 9 metres, which has to be erected. The distillation/ drying section will be partitioned for storage of final product..

The building would require CIC roofing; Only one part will be enclosed as room for storage.

#### **6.6.2 Staff Housing**

Both the farms are located near to the villages and hence there would be no need to build permanent housing but rather private housing can be rented.

## **7.0 MANPOWER REQUIREMENTS AND ORGANIZATION**

As stated in 5.0 above the pilot project as envisaged by the present promoters envisaged the manpower peculiarities:-

### **7.1 Manpower Requirements**

The manpower required to operate the distillery plant in three shifts is estimated at 12 people as follows:

One technician;

One loader;

Two assisting with charging and recharging the still.

One accountant cum administrator will be stationed in the city.

One project manager who will shuttle between two farm/S

Two farm supervisors; one for each farm.

The Farms will mostly practices contractual labour and buying raw material from outgrowers farmers scheme..

The company owners and other relevant business will form the Board of Directors and main duty is to formulate company policies.

### **7.2 Recruitment and Training**

The Chief Executive Officer of the Company will be Managing Director who will be appointed among the shareholders. One project manager who will be assisted by supervisors at each farm level.

## 8.0 INVESTMENT AND FINANCING

The following assumptions are based on a bigger investment as opposed to the pilot project concept described in Sections 5.0 & 6.0 above.

### 8.1 ASSUMPTIONS

- The estimates of investment costs are based on 2011 prices which are assumed to remain constant over the ten year period of the project life;
- Plant is expected to commence production in the second half of 2012;
- The conversion rates of Tanzania Shilling to the US Dollar of 1,700 have been adopted

### 8.2 SUMMARY OF TOTAL INVESTMENT COST

The initial investment is estimated at **USDOLLARS 500,000** as shown below:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

## 9.0 FINANCIAL ANALYSIS

### 9.1 Financial Viability

The analysis of the proposed Sons of Segoma Limited project shows that the project can generate a fairly good profit and that it generates sufficient cash to meet both short- and long-term financial obligations. The review is given below under the following sub-sections: -

- Fundamental Assumptions;
- Capital Expenditure and Financing;
- Operating Costs;
- Working Capital Requirements;
- Projected Profitability;
- Projected Balance Sheets;
- Projected Cashflow;
- Projected Sheets;
- Discounted Cashflow
- Net Present Value; and
- Pay Back Period.

### 9.2 Fundamental Assumptions

The preparation of the financial projections took into account the following main assumptions: -

- 9.2.1 The operating period under which the viability of the project is being evaluated is 10 years;
- 9.2.2 The capital cost of the proposed project is USDOLLARS 420,000 and an initial working capital of USDOLLARS 80,000.
- 9.2.3 All the calculations throughout the economic life time of the project are constant with October 2011 being the base date;
- 9.2.4 The The projected operational cost are shown in **Appendix VII "PROJECTED INCOME STATEMENT"**

The main revenue sources are from the sale of essential oils made from sandalwood, orange leaves. The sales prices for the same are USDOLLARS 30.

The capacity of the orange leaves production is 18,000 kg; 12,152 kg for mhuhu and 89,000 kg for camphor essential oil per annum respectively

The plant starts at 53% capacity utilization and the same grows at 25% reaching an optimal capacity in the third year of operation at 83%.

9.2.5 Capital Expenditure has been assumed to be incurred for a continuous period of 3 to 6 months. The Capital Cost Summary is as follows:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
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Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

9.2.6 Economic depreciation rates based on useful lifetimes of the various capital items have been adopted. The following facts apply for the depreciation rates in this project:-

- Farm expansion – these are depreciated at 4%;
- Buildings Shades: - these are depreciated at 4%per annum;
- Machinery and Equipment will be depreciated at 10%;
- Motor Vehicles are depreciated at 25% and therefore replacements are due in the 5<sup>th</sup> and 9<sup>th</sup> year of operation;
- Furniture and Fittings are depreciated at 10% and are due for replacement in the 9<sup>th</sup> year; and
- Pre-Operational Expenses are amortised and written off after 5 years the write off is therefore 20%.

The computations for depreciation are shown in **Appendix II** while **Appendix III** in the **Investment and Re-Investment Schedule**.

<b>DEPRECIATION SECHEDULE - VLUES US DOLLARS</b>						
<b>YEAR</b>	<b>Value</b>	<b>Rate</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4 - 10</b>
Expansion of farms	200,000	4.00%	8,000	8,000	8,000	8,000
Machinery and Equipment	60,000	10.00%	6,000	6,000	6,000	6,000
Production Shades	50,000	4.00%	2,000	2,000	2,000	2,000
Motor Vehicles	50,000	25.00%	12,500	12,500	12,500	12,500
Pre-Operational Expenses	60,000	20.00%	12,000	12,000	12,000	12,000
<b>TOTAL</b>	<b>420,000</b>		<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>

### 9.3 Projected Income Statement

This is depicted at Appendix VII and is reproduced below for ease of reference.

PROJECTED INCOME STATEMENT - VALUES IN US DOLLARS					
	YEAR	1	2	3	4 - 10
<b>VITAL STATISTICS</b>					
		Production			
Raw Materials	Kilogrames	60,000	Per Annum		
CAPACITY UTILIZATION		53%	67%	83%	83%
<b>REVENUE:</b>					
	Price/Kg				
Orange Leaves	30	959,994	1,199,993	1,499,991	1,499,991
<b>Total Revenue</b>		<b>959,994</b>	<b>1,199,993</b>	<b>1,499,991</b>	<b>1,499,991</b>
<b>Cost of Sales:</b>					
	Cost of Sales				
Raw Materials	72%	691,196	863,995	1,079,993	1,079,993
Additives	6%	57,600	72,000	89,999	89,999
Packing Materials	2.5%	24,000	30,000	37,500	37,500
<b>Total Cost of Sales</b>		<b>772,795</b>	<b>965,994</b>	<b>1,207,492</b>	<b>1,207,492</b>
Contribution Margin		187,199	233,999	292,498	292,498
<b>Fixed/Semi fixed Costs</b>					
Salaries & Wages		41	41	41	41
Administrative O'Heads		93,027	93,027	93,027	93,027
<b>Total Fixed Costs</b>		<b>93,068</b>	<b>93,068</b>	<b>93,068</b>	<b>93,068</b>
<b>Operating Surplus</b>		<b>94,131</b>	<b>140,930</b>	<b>199,430</b>	<b>199,430</b>

### 9.4 Working Capital Requirements

The calculations for the working capital requirements are shown in **Appendix VII**. Ideally, working capital requirements are dictated by the volume and business tempo. In this respect the requirements are as follows:

<b>Current Assets</b>	<b>Period</b>
Debtors	12 Months
Stocks	12 Months
Cash-Hand	12 Months
<b>Current Liabilities</b>	
Sundry Creditors	12 Months

PROJECTED WORKING CAPITAL REQUIREMENTS - VALUES IN US DOLLARS					
YEARS	1	2	3	4	5
<b>CURRENT ASSETS</b>					
Debtors	80,000	99,999	124,999	124,999	124,999
Stocks	61,200	76,500	95,624	95,624	95,624
Cash in Hand	61,200	76,500	95,624	95,624	95,624
<b>TOTAL CUR. ASSETS</b>	<b>202,399</b>	<b>252,998</b>	<b>316,248</b>	<b>316,248</b>	<b>316,248</b>
<b>CURRENT LAIBILITIES</b>					
Sundry Creditors	122,399	152,999	191,249	191,249	191,249
<b>NET W/CAPITAL</b>	<b>80,000</b>	<b>99,999</b>	<b>124,999</b>	<b>124,999</b>	<b>124,999</b>
<b>CHANGES IN W/C</b>	<b>80,000</b>	<b>20,000</b>	<b>25,000</b>	<b>0</b>	<b>0</b>

On the basis of the above assumptions therefore the working capital levels over the years (in USDOLLARS) are as follows: -

1<sup>st</sup> year 80,000 2<sup>nd</sup> year 99,999 3<sup>rd</sup> and subsequent years 124,999.

### 9.5 Projected Profitability

The projected Profit and Loss Account is shown in **Appendix IX**. On the basis of the operating assumptions and costs the operations of the proposed investment are expected to be profitable throughout the projected period of 10 years. The **after tax profits** (USDOLLARS) are as follows: -

YEAR	1	2	3	4	5
Sales Revenue	959,994	1,199,993	1,499,991	1,499,991	1,499,991
Less: Cost of Sales	772,795	965,994	1,207,492	1,207,492	1,207,492
Contribution Margin	187,199	233,999	292,498	292,498	292,498
Less: Fixed Costs	93,068	93,068	93,068	93,068	93,068
Operating Surplus	94,131	140,930	199,430	199,430	199,430
Capital Cost:					
Depreciation	40,500	40,500	40,500	40,500	40,500
Interest	20,160	20,160	15,120	10,080	5,040
Total Capital Cost	60,660	60,660	55,620	50,580	45,540
Profit Before/(Loss) Tax	33,471	80,270	143,810	148,850	153,890
Taxation 30%	10,041	24,081	43,143	44,655	46,167
Net Profit/(Loss)	23,429	56,189	100,667	104,195	107,723
Revenue Reserves	23,429	79,619	180,286	284,481	392,204

The cumulative effect over the projected period of 10 years is **USDOLLARS 990,459**.

## 9.6 Liquidity Projections

The liquidity performance of the project is shown in **Appendix X**. The projections take into account the assumed sources and applications of funds over the planned period and show the ability of the project to meet loan commitments and capital expenditure requirements. The analysis shows that a healthy cashflow position develops right from the very beginning of the operations and the annual performance (USDOLLARS million) is as follows: -

PROJECTED CASHFLOW - VALUES IN US DOLLARS					
YEAR	0	1	2	3	4 - 10
<b>INFLOWS</b>					
Share Capital	168,000	0	0	0	0
Long-Term Loan	252,000	0	0	0	0
Depreciation	0	40,500	40,500	40,500	40,500
Net Profit/(Loss)	0	23,429	56,189	100,667	104,195
<b>TOTAL INFLOW</b>	<b>420,000</b>	<b>63,929</b>	<b>96,689</b>	<b>141,167</b>	<b>144,695</b>
<b>OUTFLOWS</b>					
Investments	420,000	0	0	0	0
Changes in W/Cap.	0	80,000	20,000	25,000	0
Repayments					
Loan	0	0	63,000	63,000	63,000
<b>TOTAL OUTFLOW</b>	<b>420,000</b>	<b>80,000</b>	<b>83,000</b>	<b>88,000</b>	<b>63,000</b>
<b>NET CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>13,689</b>	<b>53,167</b>	<b>81,695</b>
<b>CUMULATIVE CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>(2,381)</b>	<b>50,786</b>	<b>132,481</b>

During the first year of operation there is a cash deficit of UD Dollars 16,070 due to teething troubles and the relatively initially high working capital requirements.

However, over the projected period of 10 year the cumulative cashflow is **US Dollars 688,459**.

## 9.7 Discounted Cashflow

The cashflow has been discounted and the resultant **Internal Rate of Return - IRR is 19.38%** as shown in **Appendix XII**. Current bank borrowing rate is 8%.

DISCOUNTED CASHFLOW - VALUES IN US DOLLARS					
YEAR	0	1	2	3	4 - 10
<b>INFLOWS</b>					
Net Profit	0	23,429	56,189	100,667	104,195
Capital Charges	0	60,660	60,660	55,620	50,580
Recovery of W/Cap	0	0	0	0	0
Salvage Value	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>84,089</b>	<b>116,849</b>	<b>156,287</b>	<b>154,775</b>
<b>OUTFLOWS</b>					
Investments	420,000	0	0	0	0
Changes in W/Cap.	0	80,000	20,000	25,000	0
<b>TOTAL</b>	<b>420,000</b>	<b>80,000</b>	<b>20,000</b>	<b>25,000</b>	<b>0</b>
<b>NET CASHFLOW</b>	<b>(420,000)</b>	<b>4090</b>	<b>96,849</b>	<b>131,287</b>	<b>154,775</b>
<b>NET PRESENT VALUE DF 8%</b>		<b>275193</b>			
<b>INTERNAL RATE OF RETURN</b>		<b>19.38%</b>			

## 9.8 Net Present Value

The Net Present Value is - **NPV, US DOLLARS 275,193** when the **Discount Factor - DF, is 8%** and this is manifested in **Appendix XII** as well just as the IRR above.

## 9.9 Pay Back Period

The computations of the **Pay Back Period** are shown in **Appendix XIII**. In this schedule is manifested that the **pay back of the investment is within 4 years of operation**. The initial investment of USDOLLARS 500,000 is wholly recovered before the fifth year as in the fifth year the cumulative cashflow is in excess of **US DOLLARS 594,704**.

PAY BACK PERIOD - VALUES IN US DOLLARS				
YEAR	NET PROFITS	DEPRECIATION	TOTAL CASHFLOW	CUMULATIVE CASHFLOW
1	23,429	40,500	63,929	63,929
2	56,189	40,500	96,689	160,619
3	100,667	40,500	141,167	301,786
<b>4</b>	<b>104,195</b>	<b>40,500</b>	<b>144,695</b>	<b>446,481** PAY BACK</b>
<b>5</b>	<b>107,723</b>	<b>40,500</b>	<b>148,223</b>	<b>594,704** PERIOD</b>
6	119,651	28,500	148,151	742,855
7	119,651	28,500	148,151	891,006
8	119,651	28,500	148,151	1,039,157
9	119,651	28,500	148,151	1,187,308
10	119,651	28,500	148,151	1,335,459

## 9.10 Financial Review

The financial review of the proposed that Sons of Segoma **project** shows that: -

9.10.1 The project is profitable;

9.10.2 The liquidity position is sound and that it should be able to meet its financial commitments without any undue difficulty;

9.10.3 The operations are financially viable;

9.10.4 The key ratios are acceptable.

It is therefore recommended that the project should go ahead as conceived in this report.

## **10.0 DEVELOPMENTAL ASPECTS**

The following are the major economic and social benefits which will be generated by the proposed project: -

- 10.1 Revenue to the Government Treasury and other organs;
- 10.2 Increase in employment opportunities and enhance the income distribution effects.
- 10.3 This is an export-oriented project geared to bringing in foreign exchange.

## **11.0 CONCLUSION AND RECOMMENDATIONS**

The foregoing presentation indicates that the proposed project will be economically and socially viable when implemented. The proposed project has a strong bearing on the recovery of the economy and the enabling environment which is created by the current open market economic policies should enable the project to achieve a sound take-off and sustain a positive growth of its activities in the coming future.

In view of the above it is recommended that the shareholders of Sons Of Segoma be accorded the necessary assistance so as to enable them establish the proposed project products as elaborated here in.

<b>SONS OF SEGOMA LIMITED</b>				
<b>CAPITAL COST SUMMARY</b>				<b>APPENDIX I</b>
<b><u>US DOLLARS</u></b>				
		<b>FOREIGN</b>	<b>LOCAL</b>	<b><u>TOTAL</u></b>
Expansion of farms		180,000	20000	200,000
Machinery and Equipment		48,000	12000	60,000
Production Shades		5,000	45000	50,000
Motor Vehicles		10,000	40000	50,000
Pre-Operational Expenses		4,800	55200	<u>60,000</u>
=====	=====	=====	=====	=====
<b>Fixed Investments</b>		<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital		0	80,000	80,000
<b>Total Initial Investment</b>		<b>247,800</b>	<b>252,200</b>	<b>500,000</b>
=====	=====	=====	=====	=====

<b>MACHINERY &amp; EQUIPMENT</b>				<b>APPENDIX IA</b>	
<b>PARTICULARS</b>	<b>HS CODES</b>	<b>UNIT</b>	<b>QTY</b>	<b>UNIT PRICE</b>	<b>TOTAL PRICE</b>
Field Hydro Distillation Unit with A		unit	1	30,000	30,000
Leaf plucking machines with acce		unit	12	2,000	24,000
Prunning Machines with accessor		unit	12	1,500	18,000
Sim Tank 10,000 ltrs		unit	2	1,500	3,000
Sim Tank 5,000 ltrs		pcs	6	800	4,800
Chain saws with accessories		pcs	5	1,500	7,500
4 x 4 Double Cabin		pcs	1	30,000	30,000
Motorbikes (Fekon)		pcs	10	1,000	10,000
Water Pump with accessories		pcs	1	3,000	3,000
HDPE Water Pipe 4"		mtrs	500	5	2,500
HDPE Water Pipe 2"		mtrs	1000	1	1,000
Mitsubishi Fuso Tipper 4 tonnes		units	1	40,000	40,000

DEPRECIATION SCHEDULE				US DOLLARS										APPENDIX II
YEAR	Value	Rate	1	2	3	4	5	6	7	8	9	10		
Expansion of farms	200,000	4.00%	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000		
Machinery and Equipment	60,000	10.00%	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000		
Production Shades	50,000	4.00%	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000		
Motor Vehicles	50,000	25.00%	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500		
Pre-Operational Expenses	60,000	20.00%	12,000	12,000	12,000	12,000	12,000	0	0	0	0	0		
<b>TOTAL</b>	<b>420,000</b>		<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>28,500</b>	<b>28,500</b>	<b>28,500</b>	<b>28,500</b>	<b>28,500</b>		

INVESTMENT & REINVESTMENT SCHEDULE		US DOLLARS. '000										APPENDIX III
YEAR	0	1	2	3	4	5	6	7	8	9	10	
Expansion of farms	200,000	0	0	0	0	0	0	0	0	0	0	
Machinery and Equipment	60,000	0	0	0	0	60,000	0	0	0	60,000	0	
Production Shades	50,000	0	0	0	0	0	50,000	0	0	50,000	0	
Motor Vehicles	50,000	0	0	0	0	0	0	0	0	50,000	0	
Pre-Operational Expenses	60,000	0	0	0	0	0	0	0	0	0	0	
<b>TOTAL</b>	<b>420,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,000</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	

					<b>APPENDIX IV</b>
<b>LONG TERM LOAN</b>					
<b>US DOLLARS</b>					
Total Project Cost					420,000
Principal Amount					252,000
Equity Capital					168,000
Repayment Period in Years					5
Interest					8.00%
Grace Period Years					1
Annual Repayment Instalments					4
=====	=====	=====	=====	=====	=====
					<b>TOTAL</b>
<b>YEAR</b>	<b>PRINCIPAL</b>	<b>REPAYMENT</b>	<b>BALANCE</b>	<b>INTEREST</b>	<b>CASHFLOW</b>
=====	=====	=====	=====	=====	=====
1	252,000	0	252,000	20,160	20,160
2	252,000	63,000	189,000	20,160	83,160
3	189,000	63,000	126,000	15,120	78,120
4	126,000	63,000	63,000	10,080	73,080
5	63,000	63,000	0	5,040	68,040
=====	=====	=====	=====	=====	=====

SCHEDULE OF STAFF AND THEIR REMUNERATION						
			<u>US DOLLARS</u>			APPENDIX V
SECTION			STRENGTH	MONTHLY RATE	SALARY @ MONTH	SALARY @ ANNUM
<b>Managerial/Administration</b>						
Directors			3	1000	3,000	36,000
Accountant/Administrator			1	800	800	9,600
Plant Manager			1	500	500	6,000
Supervisors			2	300	600	7,200
Stil Chargers			2	150	300	3,600
Stil Loader			1	150	150	1,800
Laboratory Technician			1	200	200	2,400
Purchase, Sales and Stores Clerk			1	175	175	2,100
Secretary			1	173	173	2,076
Messenger			1	100	100	1,200
Motor Vehicle Driver			1	200	200	2,400
Watchmen			3	100	300	3,600
<b>Sub-Total</b>			<b>14</b>		<b>2,698</b>	<b>32,376</b>
<b>Add: 27.5% Fringe benefits</b>					<b>742</b>	<b>8,903</b>
<b>Total Annual Bill</b>					<b>3,440</b>	<b>41,279</b>
=====						

<b>SCHEDULE OF ADMINISTRATIVE OVERHEADS</b>				<b>APPENDIX VI</b>
				<b><u>US DOLLARS</u></b>
Insurance @ 0.5% Fixed Assets				1,050
Vehicle Running @ 30% Initial Value				15,000
Audit Fees				3,600
Water				2,400
Electricity				26,880
Repair and Maintenance				4,200
Telecommunications				7,500
Legal Fees				2,340
Travelling				9,600
Sales Promotion				12,000
Miscellaneous				8,457
=====	=====	=====	=====	=====
<b>TOTAL ADMINISTRATIVE OVERHEADS</b>				<b>93,027</b>
=====	=====	=====	=====	=====





PROJECTED PROFIT AND LOSS ACCOUNT	US DOLLARS										APPENDIX IX
	YEAR	1	2	3	4	5	6	7	8	9	
Sales Revenue	959,994	1,199,993	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991
Less: Cost of Sales	772,795	965,994	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492
Contribution Margin	187,199	233,999	292,498	292,498	292,498	292,498	292,498	292,498	292,498	292,498	292,498
Less: Fixed Costs	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068
Operating Surplus	94,131	140,930	199,430	199,430	199,430	199,430	199,430	199,430	199,430	199,430	199,430
Capital Cost:											
Depreciation	40,500	40,500	40,500	40,500	40,500	28,500	28,500	28,500	28,500	28,500	28,500
Interest	20,160	20,160	15,120	10,080	5,040	0	0	0	0	0	0
Total Capital Cost	60,660	60,660	55,620	50,580	45,540	28,500	28,500	28,500	28,500	28,500	28,500
Profit Before/(Loss) Tax	33,471	80,270	143,810	148,850	153,890	170,930	170,930	170,930	170,930	170,930	170,930
Taxation 30%	10,041	24,081	43,143	44,655	46,167	51,279	51,279	51,279	51,279	51,279	51,279
Net Profit/(Loss)	23,429	56,189	100,667	104,195	107,723	119,651	119,651	119,651	119,651	119,651	119,651
Revenue Reserves	23,429	79,619	180,286	284,481	392,204	511,855	631,506	751,157	870,808	990,459	

PROJECTED CASHFLOW											US DOLLARS		APPENDIX X
YEAR	0	1	2	3	4	5	6	7	8	9	10		
<b>INFLOWS</b>													
Share Capital	168,000	0	0	0	0	0	0	0	0	0	0	0	
Long-Term Loan	252,000	0	0	0	0	0	0	0	0	0	0	0	
Depreciation	0	40,500	40,500	40,500	40,500	40,500	28,500	28,500	28,500	28,500	28,500	28,500	
Net Profit/(Loss)	0	23,429	56,189	100,667	104,195	107,723	119,651	119,651	119,651	119,651	119,651	119,651	
<b>TOTAL INFLOW</b>	<b>420,000</b>	<b>63,929</b>	<b>96,689</b>	<b>141,167</b>	<b>144,695</b>	<b>148,223</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	
<b>OUTFLOWS</b>													
Investments	420,000	0	0	0	0	60,000	50,000	0	0	160,000	0	0	
Changes in W/Cap.	0	80,000	20,000	25,000	0	0	0	0	0	0	0	0	
Repayments Loan	0	0	63,000	63,000	63,000	63,000	0	0	0	0	0	0	
<b>TOTAL OUTFLOW</b>	<b>420,000</b>	<b>80,000</b>	<b>83,000</b>	<b>88,000</b>	<b>63,000</b>	<b>123,000</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	<b>0</b>	
<b>NET CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>13,689</b>	<b>53,167</b>	<b>81,695</b>	<b>25,223</b>	<b>98,151</b>	<b>148,151</b>	<b>148,151</b>	<b>-11,849</b>	<b>148,151</b>	<b>148,151</b>	
<b>CUMULATIVE CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>(2,381)</b>	<b>50,786</b>	<b>132,481</b>	<b>157,704</b>	<b>255,855</b>	<b>404,006</b>	<b>552,157</b>	<b>540,308</b>	<b>688,459</b>	<b>688,459</b>	

PROJECTED BALANCE SHEETS										US DOLLARS		APPENDIX XI
YEARS	0	1	2	3	4	5	6	7	8	9	10	
<b>ASSETS</b>												
Fixed Assets	360,000	360,000	360,000	360,000	360,000	420,000	410,000	410,000	410,000	570,000	570,000	
Depreciation	0	28,500	57,000	85,500	114,000	142,500	171,000	199,500	228,000	256,500	285,000	
Net Fixed Assets	360,000	331,500	303,000	274,500	246,000	277,500	239,000	210,500	182,000	313,500	285,000	
<b>CURRENT ASSETS</b>												
Cash	0	(16,070)	(2,381)	50,786	132,481	157,704	255,855	404,006	552,157	540,308	688,459	
Other Cur. Assets	0	208,799	260,998	326,248	326,248	326,248	326,248	326,248	326,248	326,248	326,248	
Total Current Assets	0	192,729	258,618	377,034	458,729	483,952	582,103	730,254	878,405	866,556	1,014,707	
<b>TOTAL ASSETS</b>	<b>360,000</b>	<b>524,229</b>	<b>561,618</b>	<b>651,534</b>	<b>704,729</b>	<b>761,452</b>	<b>821,103</b>	<b>940,754</b>	<b>1,060,405</b>	<b>1,180,056</b>	<b>1,299,707</b>	
<b>LIABILITIES</b>												
<b>Current Liabilities</b>												
Sundry Creditors	0	128,799	160,999	201,249	201,249	201,249	201,249	201,249	201,249	201,249	201,249	
<b>Long Term Liabilities</b>												
Long Term Loan	252,000	252,000	189,000	126,000	63,000	0	0	0	0	0	0	
<b>TOTAL LIABILITIES</b>	<b>252,000</b>	<b>380,799</b>	<b>349,999</b>	<b>327,249</b>	<b>264,249</b>	<b>201,249</b>	<b>201,249</b>	<b>201,249</b>	<b>201,249</b>	<b>201,249</b>	<b>201,249</b>	
<b>TOTAL NET ASSETS</b>	<b>108,000</b>	<b>143,429</b>	<b>211,619</b>	<b>324,286</b>	<b>440,481</b>	<b>560,204</b>	<b>619,855</b>	<b>739,506</b>	<b>859,157</b>	<b>978,808</b>	<b>1,098,459</b>	
AMORTIZATION	60,000	48,000	36,000	24,000	12,000	0	0	0	0	0	0	
<b>TOTAL NET ASSETS</b>	<b>168,000</b>	<b>191,429</b>	<b>247,619</b>	<b>348,286</b>	<b>452,481</b>	<b>560,204</b>	<b>619,855</b>	<b>739,506</b>	<b>859,157</b>	<b>978,808</b>	<b>1,098,459</b>	
<b>REPRESENTED BY:</b>												
Share Capital	168,000	168,000	168,000	168,000	168,000	168,000	168,000	168,000	168,000	168,000	168,000	
Revenue Reserves	0	23,429	79,619	180,286	284,481	392,204	511,855	631,506	751,157	870,808	990,459	
<b>TOTAL EQUITY</b>	<b>168,000</b>	<b>191,429</b>	<b>247,619</b>	<b>348,286</b>	<b>452,481</b>	<b>560,204</b>	<b>679,855</b>	<b>799,506</b>	<b>919,157</b>	<b>1,038,808</b>	<b>1,158,459</b>	
<b>DEBT/EQUITY RATIO</b>	<b>1.50</b>	<b>1.99</b>	<b>1.41</b>	<b>0.94</b>	<b>0.58</b>	<b>0.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	



PAYBACK PERIOD		US DOLLARS			APPENDIX XIII
YEAR	NET PROFITS	DEPRECIATION	TOTAL CASHFLOW	CUMULATIVE CASHFLOW	
1	23,429	40,500	63,929	63,929	
2	56,189	40,500	96,689	160,619	
3	100,667	40,500	141,167	301,786	
<b>4</b>	<b><u>104,195</u></b>	<b><u>40,500</u></b>	<b><u>144,695</u></b>	<b><u>446,481</u></b>	<b>** PAY BACK</b>
<b>5</b>	<b><u>107,723</u></b>	<b><u>40,500</u></b>	<b><u>148,223</u></b>	<b><u>594,704</u></b>	<b>** PERIOD</b>
6	119,651	28,500	148,151	742,855	
7	119,651	28,500	148,151	891,006	
8	119,651	28,500	148,151	1,039,157	
9	119,651	28,500	148,151	1,187,308	
10	119,651	28,500	148,151	1,335,459	

# **SONS OF SEGOMA LIMITED**

**P. O. BOX 6125  
TANGA**

## **BUSINESS PLAN ON THE ESTABLISHMENT OF ESSENTIAL OILS FOR FOOD AND INGREDIENTS INDUSTRY IN TANZANIA**

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# ESSENTIAL OILS MANUFACTURING AT TANGA, IN MUHEZA & MKINGA DISTRICTS

## 1.0 PERSPECTIVE

### 1.1 Kwatango Farm: Development Strategy

Kwatango farm is in between two villages i.e. Misozwe and Kwatango. The area is very fertile. The villagers are active in subsistence farming but their skills are inadequate when it comes to sustainability. Without a specific appropriate crop in mind it would just lead to land degradation in the long term. The tendency of planting short term commercial crops on the slopes will lead the community back to poverty accompanied with infertile land.

Misozwe village has electrical power and is 6 kms away from the farm. In order to make investments cheaper it is thought to acquire a small piece of land at an appropriate site where power and water can be easily obtained. This small place will be appropriate for:

- a) Distillery shed to house distillery equipment and store.
- b) A permanent Nursery to multiply bitter orange seedlings.
- c) A shallow well and appropriate pump.

The whole project is based on the fact that the company will grow 100 acres of bitter oranges while the surrounding villagers will be given free seedlings to grow on a contract farm basis viz-a-viz the Company. Initially the villagers will be asked to develop and maintain at least  $\frac{1}{4}$  acre on bitter orange (550 seedlings). This will be expanded as per their need. There are already 120 families interested in this project. To distil oil from leaves and twigs will mean leaving a huge biomass behind of which a part will be utilized as a thin mulch on the farm and the remaining waste will be dried, ground and turned into briquettes. Part of the briquettes will be used as firewood for the distillery and the other part will be given back to the farmers who have supplied the distillery with the leaves. This project will give the villagers direct economic gains, a permanent cover crop to halt land degradation and constant supply of briquettes as an alternative to their domestic firewood.

### 1.2 Challenges:

To accomplish such a project means long term investments in basic farm machinery, simple sheds, a distillation equipment and nursery establishment. It normally takes 6 – 8 months for seedlings in a nursery to mature and another 3 years in the field to make the bush productive. Considering the time factor it is not feasible to use Tanzanian bank money to develop a long term agricultural farm. Since the farms have title deed and offer, this can easily be used as collateral. Bitter Orange tree growing means initial heavy investments in terms of bush clearing and planting. Once the trees are in the ground then there is very light maintenance required over the years. The plants being of permanent nature do not need to be replanted again. In summary the plantation is expensive to establish but very cheap to maintain. Hence to start the plantation is a challenge with borrowed money of high interest rates.

plantation is expensive to establish but very cheap to maintain. Hence to start the plantation is a challenge with borrowed money of high interest rates.

Another critical part is the distillery. There is a lot of distillery equipment on the market. India is an ideal country on this. One has to choose and see which one would fit in our local situation. Fortunately the buyers of our oil also have a distillery in Nairobi and are willing to assist us in technical specs before we buy anything.

There is a local company in Tanga which has also acquired a proven briquette plant and is willing to share its technology. The plant was purchased from Europe and intended to produce briquettes from saw dust.

### **1.3 Mavovo Farm Development Strategy**

#### **Mavovo Farm:**

Mavovo farm is near Maramba town and in the proximity of Mavovo village. The villagers are active in subsistence farming and many of them grow cashew as their commercial crop. Cashew crop over the years has been a low value crop but it still entices the villagers to grow. Hesperidium is almost twice as valuable as cashew. In anticipation of this the villagers could be enticed to plant these as their alternative commercial crop.

Mavovo Farm itself will be producing the oil from the green bitter orange peel and during lean seasons will pick immature oranges for hesperidium use. Normally there are two fruiting seasons in Mavovo where the main season will be reserved for the bitter orange peel oil. Before fruits mature very young fruits drop off and this can be collected for hesperidium use. In Feb 2011, about 500 kgs were exported to South Africa where the requirement was 6 tonnes. The 500 kgs were readily accepted in the market.

Mavovo is planned to have an orchard of bitter orange trees. It is envisaged that the total 180 acres will be planted with the trees. Once the seedlings are planted and maintained for the first few years then only slashing is required to keep the plantation clean. Once the harvest season is over then the plantation has to be pruned and all these pruning (leaves and twigs) will be taken to Kwatango to feed the distillery for petitgrain production.

Mavovo has no power or water. Using simple technology oil from the peel will be extracted. Presently it is being done manually through labour. The presence of a bore hole with simple watering facilities will even make the plantation more productive. To date all the trees have withstood drought conditions and recoup during the rains in the normal way.

At some stage, when the management is in place it is thought to keep modern beehives to raise either local aggressive African bees vs. stingless bees. The main idea is to facilitate pollination to get more fruit production. As a secondary product, there is a ready market for bulk honey produced for commercial use but limited niche market for medicinal honey which has higher economic returns, but limited storage

span of 6 months. More thought has to be given as the farm should not encourage aggressive bees within the plantation area.

### **Challenges:**

To plant bitter orange trees in an orchard farm needs at least 6 years to growth. The trees are very handy and can withstand adverse conditions. Apart from time, at this moment there is no fully developed extraction method of peel oil. All the peel oil produced in the world is done through water washings where the mixed oil and water is then separated through centrifuge. This gives the oil a tainted colour which results in low priced oil. In Tanzania (Mavovo) the peel oil is directly extracted without water and gives rich golden coloured oil which is very pure and expensive. The challenge here lies in the development of an appropriate technology for golden oil extraction. The present extraction method is very slow while the market demands much more than what is extracted. At this moment only 200 to 400 kgs per annum are extracted while the standing order demand stands at 6,000 kgs. One needs at 2,000 kgs per annum to get the oil branded for different uses.

Not many can come forward to invest in plantation which has no technological solutions. Some solutions have to be developed for it to become a reality. Fortunately the tree is very versatile and can change its products from one to another. To date a copy of DVD of extraction process have been sent out to India and to the Sokoine University of Agriculture where there is hope to get a simple machine fabricated.

Sons of Sagoma have realized that development in a third world country has more chances of success if it starts from bottom going upwards. To bring about economic agricultural growth in an underdeveloped country, the agro processing industries should be concentrated around the villages which will in return improve the community's economy through money circulation. What is needed is the right crop which is sustainable for the people to improve their lives.

1.4 BITTER ORANGE TREE (*Citrus aurantium*)



KWATANGO FARM



MAVOVO FARM

*"A wild potential tree which, when tamed can produce 7 different types of products with different properties and economic values".*

- 1) Leaves & Twigs: (Petitgrain Oil)

	<b>KWATANGO FARM</b>	<b>MAVOVO FARM</b>
		
<b>PLACE:</b>	Situated in Tanga Region, Mkinga District in the proximity of Muheza Town	Situated in Tanga Region, Muheza District proximity of Maramba Town
<b>ACREAGE:</b>	A total area of 100 Acres	A total Area of 180 Acres
<b>LEGALITY:</b>	With Title Deeds	With Offer Deeds
<b>RAINFALL:</b>	1,400 - 1,700 mm. Well distributed and reliable	900 to 1,200 mm. Sometimes drought is visible in bad years
<b>TERRAIN:</b>	Mild to Steep slopes as in Tea Plantation	Almost flat land
<b>VEGETATION:</b>	Thick vegetation of indigenous species and Mvule (Chlorophora	The prominent species of the area is Brachylaena hutinsii

	proximity of Muheza Town	proximity of Maramba Town
<b>ACREAGE:</b>	A total area of 100 Acres	A total Area of 180 Acres
<b>LEGALITY:</b>	With Title Deeds	With Offer Deeds
<b>RAINFALL:</b>	1,400 – 1,700 mm. Well distributed and reliable	900 to 1,200 mm. Sometimes drought is visible in bad years
<b>TERRAIN:</b>	Mild to Steep slopes as in Tea Plantation	Almost flat land
<b>VEGETATION:</b>	Thick vegetation of indigenous species and Mvule (Chlorophora spp) grows very well. The Govt teak plantation neighbours the farm on one side.	The prominent species of the area is Brachylaena hutinsii (muhuhu). Almost all Muhuhu has been logged leaving bushy land behind.
<b>SOILS:</b>	Well drained deep loamy soils	Deep, well drained red soils
<b>LAST OFFICIAL VALUATION OF THE FARMS IN DEC 2007 (Ex rate 1,450 = 1 usd)</b>	USD 275,862	USD 64,827
<b>DEVELOPMENT TODATE AS ON FEB 2011</b>	11 Acres comprising of 22,000 bushes, 4 yrs Old. The bushes are spaced at 2 mtr rows x 1 mtr between plants.	80 Acres, comprising of 4,000 trees between 4 to 6yrs. The trees are spaced at 8 x 8mtrs and 6 x 6 mtrs
<b>TYPE OF PLANTATION:</b>	Hedge type	Orchard type
	<b>KWATANGO CONT'D</b>	<b>MAVOVO CONT'D</b>
<b>FINAL PRODUCTS:</b>	a) Petitgrain oil from leaves & twigs. b) Neroli oil from flowers c) briquettes from biomass produced.	a) hesperidium b) bitter orange peel oil c) Ripe orange dried peel

<b>MARKETS:</b>	There is pending request from R.C.TREATTS for the oil. The briquettes produced will be complementary payment to the farmers for their energy use.	There is a pending request for hesperidium from South Africa and the bitter orange peel oil is an ongoing commodity to R.C TREATTS.
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## KWATANGO FARM DEVELOPMENT STRATEGY

### 2.0 SUMMARY FINDINGS AND RECOMMENDATIONS

Project Promoter : SONS OF SEGOMA LIMITED

Address : Box 6125, TANGA

TELEPHONE : +255 767 677 151

Contact Person : Ismail O Kasomo

Messrs Ismail Kasomo, Michael Karata and Alnoor Hussein have jointly opened up a company incorporated in Tanzania with the objectives of extracting essential oils for export markets. The plans are to produce essential oils from Bitter Orange Trees planted in Muheza and Mkinga Districts. Plans are also to supply the surrounding community with appropriate seedlings so that there is a lucrative agricultural activity in the villages while protecting the land from erosion and general ecological and environmental degradation.

Tanzania's Essential Oil Industry is still at the infant stage. Some production of essential oil from the oil plants obtained from Tanzania's forests appears to have been carried out in the past. Thus, it is reported that production of *Mhuhu* oil from the wood of *B. hutchinsii* has been carried out along side the sawing industry. The only known plant is Pemba distillery, which produces oil from clove stems. However, there is a massive export of botanical species for producing the oils in other countries. The proposed plant will create value added to these local species.

Essential oils are volatile aromatic substances obtained from plants either by distillation or solvent extraction. The project envisages establishment of a plant with capacity to produce about 20 tonnes of essential oils per annum from Bitter Orange Trees. The oils and other products obtained would be:

- a) Small unripe fruits for hesperidium production.
- b) Bitter Orange Peel Oil from peel of unripe fruits.
- c) Petitgrain Oil from leaves
- d) Neroli Oil from Flowers.
- e) Dried peel from ripe oranges for candied production.

All products will be for the export market and orders from UK, Spain and South Africa have already been received.

The benefits of this project are numerous. It will increase value to locally available trees which has been discarded for a long time. The villagers will enter into contract scheme where they will also produce for the company. Direct Employment will be created from the local villagers which will be regular and more or less consistent. The project will also pay relevant taxes to the Government while increasing monetary deposits in the financial institutions.

The project will be supervised by a Competent Manager while the production activities will be supervised by technical personnel. Implementation has started and is under the supervision of an experienced of local engineer.

The project's capital investments are about **US DOLLARS 500,000** with the following components:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

The financing of capital costs is planned to be covered by the equity from investor's own resources and a fair amount from the financial institutions.

The initial working capital amounting to **USDOLLARS 80,000** will be source from a bank as a short term loan.

### **3.0 THE PROJECT AND SPONSOR**

#### **3.1 The Project and Study Objective**

M/S Sons of Segoma Ltd. after researching adequately for over 8 years have realized that there is a big untapped economic potential in agro forestry especially in Tanga Region where bad agronomic practices can make land barren and leaving the local community in poverty. The company has also discovered that there is a big world demand for essential oils and other related products from local trees for the food and ingredient industry.

Tanzania a country of about 1.0 million square kilometers is endowed with large numbers of botanical species with high medicinal and economic uses. About 60% of

the country is under tropical forests. Currently the forests are being harvested mainly for lumbering and in some cases for local charcoal production.

This project envisages the exploitation of specific local tree species, i.e. Bitter Orange Tree which many different products can be produced including charcoal from biomass produced after extraction. This tree if commercialized will protect land in terms of cover crop, produce high value products and from leftovers for the production of charcoal for local use.

The objectives of the project are:

- Improved price competitiveness through value addition;
- Better rational use of natural resources;
- Provide economic returns to participating farmers within the community.

The business plan is aimed at enabling M/S Sons of Segoma Ltd. to seek a financial loan to realize this project idea.

### **3.2 Project Promoter**

- Name of the Company : SONS OF SEGOMA LTD
- Address : P.O. Box 6125, Tanga. Tanzania
- Telephone : +255 767 677 151
- Legal Status : Registered in Tanzania under the Companies Ordinance (Cap. 212) with certificate of incorporation No. 81631
- Shareholders: Mr. Ismail O Kasomo  
Mr. Michael A Karata  
Mr. Alnoor A Hussein
- Company Background : The company has been registered to deal with the Business of farming by production of essential oils for food Ingredients Industry.

## 4.0 MARKETS FOR ESSENTIAL OILS

### 4.1 The Product: Essential Oils

Essential Oils are volatile aromatic substances obtained from plant either by distillation, solvent or through clod press expression. They are used for various applications for thousand of years in incenses, perfumes, pharmaceuticals, cosmetics and in food and ingredient industries. Essential oils are also known for their medicinal and culinary application. Their ritual use constituted an integral part of cultural traditions in most early cultures where the religious and therapeutic role of essential oils was inextricably intertwined (Lawless, 1922). This type of relationship continues to survive in some societies where traditional medicines are used and ancient social culture is still conserved. Presently, the uses of essential oils have intensified, whereby the oils are used in areas such as food preservation, food flavouring, spices and flavouring drinks. In perfumery, the oils and their constituents are used as fragrances, in cosmetics, in soaps and after-wash preparation. Medicinally, essential oils play an important role, and aromatherapy has been established as a special branch of herbal medicines.

Essential oils are volatile and odourous oils which occur in certain plants or specified parts of plants. They are recovered by accepted procedures such as that the nature and composition of the product is, as nearly as practicable unchanged by such procedures. Essential oils have been extracted from over 3,000 plants, of which 200 or 300 commonly traded in the world markets.

### 4.2 Uses of Essential Oils

Essential oils are widely known for their scents and flavours, making flavouring and fragrance industries among the biggest users. They are put into a variety of uses on account of their odour and high volatility. They are extensively used in the manufacture of perfumes, soaps, and other toiletries as deodorants. Various essential oils find use as flavouring materials in toothpaste, tobacco, candy, ice cream, liqueurs and non-alcoholic beverages. Many have therapeutic and antiseptic properties and are valuable in medicine. Due to their volatility, some essential oils are used as solvents in the paint and vanish industries. Some are used as insecticides. They are also used for the manufacture of various synthetic odours and flavours.

Common uses for some selected essential oils are as follows:

Sandalwood	Perfume, distillation base for other floral essences
Camphor :	Cold remedies, perfumes, insecticides, liniments
Eucalyptus	Cough/cold remedies, solvents, cleaning agents, flavouring
Citrus	Industrial solvents, fragrance for cleaning products and flavouring

Spearmint	Toothpaste, mouthwash, confectionery flavouring
Peppermint:	Toothpaste, mouthwash, chewing gum, food flavouring, cosmetics, Tobacco flavouring
Tea Plant	Toiletries, insect repellent, germicides, cosmetics
Blackcurrant Bud	: Food and Beverage Flavouring

### 4.3 World Trade in Essential Oils

There is no reliable published information on the size of the market for essential oils. However, since they are put into other products as perfumes and flavours, the trend in this market is an indication of the market size of the oils.

In 1998 the world trade for essential oils was put at US\$4.50 billion of which three quarters were exported (UN). In 1994 it was US\$5.0 billion showing a fast increase in world demand.

The major exporters are the USA, EU and a number of developing countries mainly China, Indonesia, India and Brazil. The developed countries are the major producers and importers.

The traditional view of essential oil production is that of simple farming or collection followed by oil distillation or extraction. Both intrinsic factors (genotype, state of maturity, part of the plant harvested) and extrinsic factors (light, temperate, water, nutrients) will strongly influence the oil yield and composition (Bemath 1986); Lawrence 1986). Within a single clone, the intrinsic factors can be fixed whereas the extrinsic factors cannot.

Table 3.1 The World's 20 Top Essential Oils

Essential Oil	Species	Volume (t)	Value (\$m)
Orange	Citrus sinensis (L) Osbeck	26,000	58.5
Eucalyptus	Eucalyptus globules Labili., E. polybrachea	3,728	29.8
Citronella	Cymbopogon winterianus Jowit and C nardus (L.)Rendle	2,830	10.8
Peppermint	Mentha xpiperita L.	2,367	28.4
Lemon	Citrus limon (L.) N.L Burm	2,156	21.6
Eucalyptus	Eucalyptus ciltriodora Hook	2,092	21.6
Clove Leaf	Syzyglum aromaticum (L.) Merr. and L. M Perry	1,915	7.7
Cedarwood (US)	Juniperus virginiana L, and J. ashel Buchholz	1,640	9.8
Lavandin	Lavandula intermedia Emeric ex Loisel	768	6.1
Camphor	Cinammomum camphora (L.) J. Presl	725	3.0
Coriander	Coriandrum sativum L	710	49.7
Grapefruit	Citrus paradise Macfady	694	13.9
Patchouli	Pogostemon cabin (Blanco) Benth	563	6.8

#### 4.4 Essential Oils Industry in Africa

Africa is one of the world's greatest producers of essential oils. Many countries produce the oils. For example, the North African countries of Egypt, Morocco and Tunisia are known to be exporters of essential oil, aromatic and medicinal oils from peppermint, eucalyptus, lemon, rosmarius, myrtus, chamomile etc. Madagascar exports cinnamon bark and leaves oil, black pepper, clove, Cote d'Ivoire produces for export green coffee beans, ginger, fresh coconut, sesame etc.

#### 4.5 Essential Oils Industry in Tanzania

Though endowed with a wide diversity of flora Tanzania is a very insignificant player in the production of essential oils. However, most of its flora is exported raw.

In Tanzania essential oils are presently produced in Pemba Island. Among the oils produced are clove, lemongrass, sweet basil, cinnamon leaf, *Eucalyptus citriodora*, vetiver oils etc. The average value of the oils produced is about US Dollars 300,000 per annum.

Some production of essential oil from wild plants obtained from Tanzania forests appear to have been carried out in the past. Thus, it is reported that production of *Mhuhu* oil from the wood of *B. hutchinsil* has been carried out along side the sawing industry, whereby sawdust from *Mhuhu* wood was used as a raw material. Though the production was at a small-scale level, the oil obtained was supplied to the world market.

The East African sandalwood (*Osyris tenuifolia*) is well known as a good source of essential oil although it is not distilled locally. The wood from the plant has a long time been exported to India where it is distilled for its essential oil.

Other aromatics include camphorwood oil, clove oil, cedar oil (extracted from *Juniperus procera* wood) and a cassie oil (obtained from flowers of *Acacia farnesiana*, a tree whose distribution is restricted to Morogoro region only. For many aromatics, the maximum concentration within the plant is to be found in those plant inhabiting drier sites.

The only known producer is Pemba Distilleries Ltd. producing the oils from clove stems. A small-scale producer is said to operate from Usa River in Arusha but unreliable information shows that the plant is now closed.

One of the reasons could be the market. A successful production of essential oils requires that a reliable market for the oils be established first. Buyers require a quality consistency and security of supply.

## 5.0 RAW MATERIALS FOR ESSENTIAL OILS

### 5.1 Introduction

The topographical diversity of Tanzania allows the proliferation of rich floral biodiversity that is estimated to reach 10,000 plant species. More than a quarter of are considered to be endemic and some species restricted to Tanzania miombo, montane, tropical and for coastal evergreen forests (Mwasumbi, 1986). Among plant species occurring in Tanzania are those that produce commercially important essential oils, such as the clove tree (*Eugenia caryophyllata*), yiang yiang (*Cananga odorata*), lemongrass (*Cymbopogon citrates*), vanilla (*Vanilla planifolia*), Mhuhu (*Brachylaena hutchisil*), sandalwood (*Osyris tenuifolia*), etc.

It is recommended that the proposed project for essential oils and agro forestry products use the following parts /products from the Bitter Orange Tree species which are namely:

- a) Hesperidium;
- b) Bitter Orange peel Oil;
- c) Dried Peels
- d) Leaf Oil (Pettigrain Oil)
- e) Flower Oil (Neroli Oil)
- f) Briquettes

#### ***Hesperidium:***

It is normal for any trees to drop of the small unripe fruits (the size of a 50 cent coin.) In case of bitter Orange tree, these unripe fruits which drop off are shade dried bagged and exported. This is basically a by product. Price is USD 1.5 per kg.

#### **5.2 Bitter Orange Peel Oil:**

Unripe large oranges are collected, pressed where oil from the skin is extracted. From one tree one can get between 500 to 2,000 oranges.. 2,000 oranges can yield 1 kg of oil. This oil is stored in lacquered drum and exported to UK. USD 29 per kg

#### **5.3 Dried Peels:**

Due to weather changes not all unripe oranges can be used for peel oil production. Many of the fruits ripen on the trees. These oranges are picked, and sliced. The peels are sun dried and bagged for export. USD 2 per kg. 80 oranges give 1 kg of dried peels.

#### **5.4 Leaf Oil (Petitgrain Oil):**

The bushes of the bitter Orange tree are trimmed into a bushy growth. Three times a year these bushes are trimmed whereby leaves are harvested. From one bush one can get 15 kgs of leaves per cutting (3 cuts in a year) with an oil percentage of 0.3 %. The current price of oil stands at USD 30 per kg.

#### **5.5 Flower Oil (Neroli Oil):**

The bush before fruiting gives out flowers. Part of the flowers are collected early in the morning and distilled. This is a very high value product whose price ranges up to USD 200 per kg. One bush can give up to 20 kgs of flower per tree. 1 kg is produced from 850 kgs of flowers.

#### **5.6 Briquettes:**

During the process of distillation there is a lot of biomass produced which is again used as a mulch to increase production and some of it can also be turned into briquettes, to be used for boiling water for steam purpose.

## 6.0 PROJECT ENGINEERING

The present sponsors are capable in engaging in this business using the present technology and available space. However, the financial analyses have focused on a larger scale production and hopefully using more sophisticated technology and adequate finances.

For the present production the following description is given:

### 6.1 Background

Essential oils, also called "volatile" oils, are volatile, odouriferous substances, widely distributed through the plant kingdom. These oils are distinguished from fatty oil by the fact that they evaporate and volatilize when in contact with air. They consist of a variety of organic substances. They are typically liquids and possess a pleasant taste and strong aromatic odour.

The utility of essential oil to the plant itself is obscure. They appear largely to be by-products of carbohydrates and metabolism. They occur as a rule in small concentrations in special cells, glands, and ducts either in one particular organ of the plant or distributed over many parts of the plant.

### 6.2 Methods of Producing Essential Oils

Generally, with few exceptions, the plant material in most cases determines the method of choice.

The extraction method adopted for a particular essential oil is one of the key points which determine the quality of the oil that is used, since a wrong or wrongly executed extraction, can damage the oil, and alter the chemical properties of the essential oil.

Essential oils are extracted from plant tissue in many different ways depending on the quality and stability of the compound. Some use delicate techniques since they are unstable and become altered under drastic treatment. Here below is a list and short explanation of the different extraction methods used in the manufacture of essential oils:

- i. Expression: This is squeezing the material by hand or machinery and is applicable especially to fruits;
- ii. Extraction – by volatile solvent, applicable to hot oils, fats (maceration) and cold neutral fats (effleurage);
- iii. Distillation: Distillation converts the volatile liquid (the essential oils) into a vapour and then condenses the vapour into a liquid – it is the most popular and cost effective method in use today in producing essential oils. It is applicable to a wide range of materials in which the aroma is not injured by hot water or steam.

The above extraction methods are further elaborated below:

**a) Expression Method**

Expression is resorted to in cases where heat would destroy the odours, such as in the production of citrus oils from the juices and waste rinds from citrus fruits in canning factories.

Expression usually involves squeezing the material at great pressures in order to press out the oils. The process is carried out either in manual presses or crushers in cottage-industries or in huge mechanized presses in large industries.

The material is placed in an iron cylinder with perforations in its sides. The ram of the hydraulic press filling the cylinder, compresses the material and the volatile fluid escapes through the perforations (holes) and the residue which forms a compact cake, is further freed from oil by extraction using solvents. The resulting oil is then purified and packed ready for the market.

**b) Extraction by Solvent**

This is a very ancient method which involves using non-volatile solvents like fats or oils to absorb the odours and yield pomades. There are two main types: effleurage and maceration.

Both volatile and non-volatile solvents are used in this process.

Effleurage is the process of extraction at ordinary temperatures which is much practiced in Southern France. This method is especially suitable for flowers that do not yield appreciable amount of essential oil by steam or water distillation. It is also applied to flowers that are too delicate to withstand exposure to heat and steam.

During effleurage, the fatty grassy base is smeared on glass plates arranged in tiers one above the other. The fat will absorb the perfumed oil present in and exhaled by the flowers. The fat with the flowers adhering to it is left for one to three days. The exhausted flowers are then replaced by another batch of fresh flowers. After repeated treatment in this fashion the perfume-saturated fat is removed. This is called Pomade. The Pomade is washed with alcohol which extracts its perfume.

Maceration is among the oldest extraction known. It is allied to effleurage and is commonly used for flowers of violet, rose, etc. In this method the brushed flowers are immersed in a bath of pure natural fat, such as tallow or olive oil, which is maintained at a temperature of

between 5-70 Degrees Centigrade by means of a water bath. The spent flowers are removed while fresh flower are added on to the perfumes of a previous charge which is exhausted until the desired concentration of perfume is attained.

Solvent extraction by volatile solvent is a comparatively recent process, dating from about 1889. The process generally employs petroleum ether. After the flowers have been exhausted, the solvent is recovered leaving a semi-solid residue, which consists of the oils and insoluble plant waxes. Alcohol is then eliminated.

### c) **Distillation**

The oldest and simplest method of distillation is boiling in water distillation. The plant material is allowed to stand in steel water then heated to the boiling point. Heat is generally supplied through a steam jacket.

In the case of direct-fire stls arrangement there is the risk of the plant material getting burnt through direct contact with the metal plate of the stil. In many direct-fired stls, there is a grid supporting the plant material which does not come in contact with the bottom of the stil. It is some what similar to water and steam distillation in which steam is blown into the mixture of the water with the plant material. The essential oil vaporizes, and together with the steam passes to the condenser where it is cooled. Upon cooling the oil essence collects on the surface of the water. Here it is removed by gravity separation and filtered. In steam distillation, the steam is produced in a separated boiler. The steam which is usually at atmospheric pressure is led through piping to the bottom of the stil from where it is blows through the essential oil plant materials lying on the grill of trays.

A more recent technique involves steam distillation under practical vacuum i.e. a pressure - 100% 200 mm of mercury. This method gives quick distillation with minimum hydrolytic decomposition of the oil.

Steam at a pressure higher than that of the atmosphere is applied whenever the plant material and the essential oils are sufficiently heat resistant and non-hydrolysable. This method is by far the quickest way of distilling essential oils materials with high boiling points such as camphor and sandalwood. The slightly increased temperature appreciably reduces the time required for distillation.

We recommend this extraction method for proposed essential oil extraction from sandalwood and camphor project – namely steam at pressure higher than atmospheric.

## **6.3 PROPOSED PRODUCTION PROCESS**

### **6.3.1 Process Flow**

The production process for producing essential oils in the proposed Sons of Segoma Project is described as below:

- a) The leaves and young green twigs of the plants will be harvested. This will be bagged and delivered to the distillation unit where it will be weighed for records purpose.
- b) The leaves are then transferred into the stil and where the lid is shut down.
- c) Steam from the boiler will then be directed into the stil
- d) The oil produced will be filled into 200kg lacquered steel drums (180 kgs net.)
- e) The product will then be clarified and ready for export.

### **6.3.2 Time for Distillation (Number of Batches) and Extraction Rates**

The time for distillation will depend on the condition of Bitter Orange leaf material (for petitgrain oil) and weather conditions. Saturated steam at low pressure Bitter Orange leaves will take approximately 4 - 6 hours to distill. The extraction rate is around 0.3 % thus a yield of around 3 kgs of oil per ton of leaves is common.

Bitter Orange Flowers (for Neroli Oil) approximately takes 3 hours yielding oil equivalent of 0.2% of material weight.

It is evident from the above that for Petitgrain oil at least 3 charges can be planned per day while 4 charges per day (24 hours) can be planned for Neroli Oil.

## **6.4 PRODCUTION MACHINERY AND EQUIPMENT**

### **6.4.1 Main Production Equipment**

The steam distillation process for essential oils from Leaves will require the following machinery:

- a) **Leaf Plucking Machine**

The leaf plucking machine will be used to trim the bushes and harvest the leaves. These will be bagged and transported to the still.

**b) Distillation Equipment**

There are ready made units which are called as Field Hydro Distillation Unit. Wood will initially be used as fuel while in the second phase briquettes from the leftover will be used as fuel. The distillation of leaves and flowers only uses the material as all unused woody material will be used as firewood.

**c) Pruning Machines**

In order to have regular growth of at least 2 to 3 times a year on the same bush, it is necessary to prune the bushes to acceptable levels for continuous production of leaves and flowers. Through use of pruning machines speed is crucial and leaves the bushes in proper condition compared machetes / pangas.

**d) Platform Weigh Scales**

Two platform weigh scales of 500kgs capacity each will also required. One will be for the raw material yard and the other for the finished products drum/S

**6.4.2 Auxiliary Equipment**

**a) Laboratory Equipment**

There is a strong need for a well-equipped laboratory to monitor rate of recovery of oil and ensure quality of the product especially since this is an export product.

For essential oils a laboratory which possesses the capacity of running laboratory scale distillations, physico-chemical parameter measurements, and gas chromatographic analyses should be in place as well as a commercial scale steam distillation facility.

It must be remembered that essential oils, which are natural mixtures of secondary plant products, are raw materials used in the flavours and fragrance industries. Their quality plays a part of another consumer product.

Products for human consumption must meet the food and hygienic standards of that country and have to approved and

registered. A provision has been recommended for cost of these laboratory facilities.

**b) Workshop**

A small workshop to service and maintain the plant machinery and equipment is recommended. It will be equipped with relevant instruments and service tools.

**c) Water Storage**

Taking into consideration that most activities will be handled on the farm it will be necessary to have a bore hole with necessary pump to carry water to a 10,000 litres storage tank. This is needed on the continuous basis to cool the condensate to obtain the final oil. The farm already has abundant underground water which has to be tapped. .

**d) Motor Vehicles**

One double cabin pickup will be needed to look after the farming activities together with one motor cycle.

## **6.5 PLANT LOCATION, SITE AND INFRASTRUCTURE**

### **6.5.1 Location and Site**

The distillery plant will be located on Kwatango Farm, Muheza District , 20 kms from Muheza Town. The farm is 100 acres in area. The production of hesperidum and bitter Orange Peel oil will take place at Mavovo with an area of 180 acres.

### **6.5.2 Infrastructure**

**a) Water Supply**

Water obtained from the borehole where with the help of a pump and this water will be pumped into a a 10,000 litres storage tank.. The borehole and the tank will be at a distance of 0.5 kms from the site. 4-inch HDPE pipe will be used.

**b) Waste Disposal**

There is no any liquid waste in the project except for the biomass produced which will partly used for mulching purpose and in the second phase of the project will be used for briquettes production.

### **6.5.3 Firebreaks**

In order to protect the planted plots from fire there is already a regularly planned activity of maintaining the firebreaks. This is to avoid any bush fires into the plantation.

#### **6.5.4 Access Road**

The access road to the site is an all weather road of about half a kilometer long, from the main road going to Kwatango village.

### **6.6 BUILDINGS**

#### **6.6.1 Distillation Shed**

Since the distillation equipment is of field type there is only a large shed required for housing the distillery. The shed for distillation and drying is size 27 x 9 metres, which has to be erected. The distillation/ drying section will be partitioned for storage of final product..

The building would require CIC roofing; Only one part will be enclosed as room for storage.

#### **6.6.2 Staff Housing**

Both the farms are located near to the villages and hence there would be no need to build permanent housing but rather private housing can be rented.

## **7.0 MANPOWER REQUIREMENTS AND ORGANIZATION**

As stated in 5.0 above the pilot project as envisaged by the present promoters envisaged the manpower peculiarities:-

### **7.1 Manpower Requirements**

The manpower required to operate the distillery plant in three shifts is estimated at 12 people as follows:

One technician;

One loader;

Two assisting with charging and recharging the still.

One accountant cum administrator will be stationed in the city.

One project manager who will shuttle between two farm/S

Two farm supervisors; one for each farm.

The Farms will mostly practices contractual labour and buying raw material from outgrowers farmers scheme..

The company owners and other relevant business will form the Board of Directors and main duty is to formulate company policies.

### **7.2 Recruitment and Training**

The Chief Executive Officer of the Company will be Managing Director who will be appointed among the shareholders. One project manager who will be assisted by supervisors at each farm level.

## 8.0 INVESTMENT AND FINANCING

The following assumptions are based on a bigger investment as opposed to the pilot project concept described in Sections 5.0 & 6.0 above.

### 8.1 ASSUMPTIONS

- The estimates of investment costs are based on 2011 prices which are assumed to remain constant over the ten year period of the project life;
- Plant is expected to commence production in the second half of 2012;
- The conversion rates of Tanzania Shilling to the US Dollar of 1,700 have been adopted

### 8.2 SUMMARY OF TOTAL INVESTMENT COST

The initial investment is estimated at **USDOLLARS 500,000** as shown below:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

## 9.0 FINANCIAL ANALYSIS

### 9.1 Financial Viability

The analysis of the proposed Sons of Segoma Limited project shows that the project can generate a fairly good profit and that it generates sufficient cash to meet both short- and long-term financial obligations. The review is given below under the following sub-sections: -

- Fundamental Assumptions;
- Capital Expenditure and Financing;
- Operating Costs;
- Working Capital Requirements;
- Projected Profitability;
- Projected Balance Sheets;
- Projected Cashflow;
- Projected Sheets;
- Discounted Cashflow
- Net Present Value; and
- Pay Back Period.

### 9.2 Fundamental Assumptions

The preparation of the financial projections took into account the following main assumptions: -

- 9.2.1 The operating period under which the viability of the project is being evaluated is 10 years;
- 9.2.2 The capital cost of the proposed project is USDOLLARS 420,000 and an initial working capital of USDOLLARS 80,000.
- 9.2.3 All the calculations throughout the economic life time of the project are constant with October 2011 being the base date;
- 9.2.4 The The projected operational cost are shown in **Appendix VII "PROJECTED INCOME STATEMENT"**

The main revenue sources are from the sale of essential oils made from sandalwood, orange leaves. The sales prices for the same are USDOLLARS 30.

The capacity of the orange leaves production is 18,000 kg; 12,152 kg for mhuhu and 89,000 kg for camphor essential oil per annum respectively

The plant starts at 53% capacity utilization and the same grows at 25% reaching an optimal capacity in the third year of operation at 83%.

9.2.5 Capital Expenditure has been assumed to be incurred for a continuous period of 3 to 6 months. The Capital Cost Summary is as follows:

<b>CAPITAL COST SUMMARY</b>			
	<b>US DOLLARS</b>		
	<b>FOREIGN</b>	<b>LOCAL</b>	<b>TOTAL</b>
Expansion of farms	180,000	20000	200,000
Machinery and Equipment	48,000	12000	60,000
Production Shades	5,000	45000	50,000
Motor Vehicles	10,000	40000	50,000
Pre-Operational Expenses	4,800	55200	60,000
<b>Fixed Investments</b>	<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital	0	80,000	80,000
<b>Total Initial Investment</b>	<b>247,800</b>	<b>252,200</b>	<b>500,000</b>

9.2.6 Economic depreciation rates based on useful lifetimes of the various capital items have been adopted. The following facts apply for the depreciation rates in this project:-

- Farm expansion – these are depreciated at 4%;
- Buildings Shades: - these are depreciated at 4%per annum;
- Machinery and Equipment will be depreciated at 10%;
- Motor Vehicles are depreciated at 25% and therefore replacements are due in the 5<sup>th</sup> and 9<sup>th</sup> year of operation;
- Furniture and Fittings are depreciated at 10% and are due for replacement in the 9<sup>th</sup> year; and
- Pre-Operational Expenses are amortised and written off after 5 years the write off is therefore 20%.

The computations for depreciation are shown in **Appendix II** while **Appendix III** in the **Investment and Re-Investment Schedule**.

<b>DEPRECIATION SECHEDULE - VLUES US DOLLARS</b>						
<b>YEAR</b>	<b>Value</b>	<b>Rate</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4 - 10</b>
Expansion of farms	200,000	4.00%	8,000	8,000	8,000	8,000
Machinery and Equipment	60,000	10.00%	6,000	6,000	6,000	6,000
Production Shades	50,000	4.00%	2,000	2,000	2,000	2,000
Motor Vehicles	50,000	25.00%	12,500	12,500	12,500	12,500
Pre-Operational Expenses	60,000	20.00%	12,000	12,000	12,000	12,000
<b>TOTAL</b>	<b>420,000</b>		<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>

### 9.3 Projected Income Statement

This is depicted at Appendix VII and is reproduced below for ease of reference.

PROJECTED INCOME STATEMENT - VALUES IN US DOLLARS					
	YEAR	1	2	3	4 - 10
<b>VITAL STATISTICS</b>					
		Production			
Raw Materials	Kilogrammes	60,000	Per Annum		
CAPACITY UTILIZATION		53%	67%	83%	83%
<b>REVENUE:</b>					
	Price/Kg				
Orange Leaves	30	959,994	1,199,993	1,499,991	1,499,991
<b>Total Revenue</b>		<b>959,994</b>	<b>1,199,993</b>	<b>1,499,991</b>	<b>1,499,991</b>
<b>Cost of Sales:</b>					
	Cost of Sales				
Raw Materials	72%	691,196	863,995	1,079,993	1,079,993
Additives	6%	57,600	72,000	89,999	89,999
Packing Materials	2.5%	24,000	30,000	37,500	37,500
<b>Total Cost of Sales</b>		<b>772,795</b>	<b>965,994</b>	<b>1,207,492</b>	<b>1,207,492</b>
Contribution Margin		187,199	233,999	292,498	292,498
<b>Fixed/Semi fixed Costs</b>					
Salaries & Wages		41	41	41	41
Administrative O'Heads		93,027	93,027	93,027	93,027
<b>Total Fixed Costs</b>		<b>93,068</b>	<b>93,068</b>	<b>93,068</b>	<b>93,068</b>
<b>Operating Surplus</b>		<b>94,131</b>	<b>140,930</b>	<b>199,430</b>	<b>199,430</b>

### 9.4 Working Capital Requirements

The calculations for the working capital requirements are shown in **Appendix VII**. Ideally, working capital requirements are dictated by the volume and business tempo. In this respect the requirements are as follows:

<b>Current Assets</b>	<b>Period</b>
Debtors	12 Months
Stocks	12 Months
Cash-Hand	12 Months
<b>Current Liabilities</b>	
Sundry Creditors	12 Months

PROJECTED WORKING CAPITAL REQUIREMENTS - VALUES IN US DOLLARS					
YEARS	1	2	3	4	5
<b>CURRENT ASSETS</b>					
Debtors	80,000	99,999	124,999	124,999	124,999
Stocks	61,200	76,500	95,624	95,624	95,624
Cash in Hand	61,200	76,500	95,624	95,624	95,624
<b>TOTAL CUR. ASSETS</b>	<b>202,399</b>	<b>252,998</b>	<b>316,248</b>	<b>316,248</b>	<b>316,248</b>
<b>CURRENT LAIBILITIES</b>					
Sundry Creditors	122,399	152,999	191,249	191,249	191,249
<b>NET W/CAPITAL</b>	<b>80,000</b>	<b>99,999</b>	<b>124,999</b>	<b>124,999</b>	<b>124,999</b>
<b>CHANGES IN W/C</b>	<b>80,000</b>	<b>20,000</b>	<b>25,000</b>	<b>0</b>	<b>0</b>

On the basis of the above assumptions therefore the working capital levels over the years (in USDOLLARS) are as follows: -

1<sup>st</sup> year 80,000 2<sup>nd</sup> year 99,999 3<sup>rd</sup> and subsequent years 124,999.

### 9.5 Projected Profitability

The projected Profit and Loss Account is shown in **Appendix IX**. On the basis of the operating assumptions and costs the operations of the proposed investment are expected to be profitable throughout the projected period of 10 years. The **after tax profits** (USDOLLARS) are as follows: -

YEAR	1	2	3	4	5
Sales Revenue	959,994	1,199,993	1,499,991	1,499,991	1,499,991
Less: Cost of Sales	772,795	965,994	1,207,492	1,207,492	1,207,492
Contribution Margin	187,199	233,999	292,498	292,498	292,498
Less: Fixed Costs	93,068	93,068	93,068	93,068	93,068
Operating Surplus	94,131	140,930	199,430	199,430	199,430
Capital Cost:					
Depreciation	40,500	40,500	40,500	40,500	40,500
Interest	20,160	20,160	15,120	10,080	5,040
Total Capital Cost	60,660	60,660	55,620	50,580	45,540
Profit Before/(Loss) Tax	33,471	80,270	143,810	148,850	153,890
Taxation 30%	10,041	24,081	43,143	44,655	46,167
Net Profit/(Loss)	23,429	56,189	100,667	104,195	107,723
Revenue Reserves	23,429	79,619	180,286	284,481	392,204

The cumulative effect over the projected period of 10 years is **USDOLLARS 990,459**.

## 9.6 Liquidity Projections

The liquidity performance of the project is shown in **Appendix X**. The projections take into account the assumed sources and applications of funds over the planned period and show the ability of the project to meet loan commitments and capital expenditure requirements. The analysis shows that a healthy cashflow position develops right from the very beginning of the operations and the annual performance (USDOLLARS million) is as follows: -

PROJECTED CASHFLOW - VALUES IN US DOLLARS					
YEAR	0	1	2	3	4 - 10
<b>INFLOWS</b>					
Share Capital	168,000	0	0	0	0
Long-Term Loan	252,000	0	0	0	0
Depreciation	0	40,500	40,500	40,500	40,500
Net Profit/(Loss)	0	23,429	56,189	100,667	104,195
<b>TOTAL INFLOW</b>	<b>420,000</b>	<b>63,929</b>	<b>96,689</b>	<b>141,167</b>	<b>144,695</b>
<b>OUTFLOWS</b>					
Investments	420,000	0	0	0	0
Changes in W/Cap.	0	80,000	20,000	25,000	0
Repayments					
Loan	0	0	63,000	63,000	63,000
<b>TOTAL OUTFLOW</b>	<b>420,000</b>	<b>80,000</b>	<b>83,000</b>	<b>88,000</b>	<b>63,000</b>
<b>NET CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>13,689</b>	<b>53,167</b>	<b>81,695</b>
<b>CUMULATIVE CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>(2,381)</b>	<b>50,786</b>	<b>132,481</b>

During the first year of operation there is a cash deficit of UD Dollars 16,070 due to teething troubles and the relatively initially high working capital requirements.

However, over the projected period of 10 year the cumulative cashflow is **US Dollars 688,459**.

## 9.7 Discounted Cashflow

The cashflow has been discounted and the resultant **Internal Rate of Return - IRR is 19.38%** as shown in **Appendix XII**. Current bank borrowing rate is 8%.

DISCOUNTED CASHFLOW - VALUES IN US DOLLARS					
YEAR	0	1	2	3	4 - 10
<b>INFLOWS</b>					
Net Profit	0	23,429	56,189	100,667	104,195
Capital Charges	0	60,660	60,660	55,620	50,580
Recovery of W/Cap	0	0	0	0	0
Salvage Value	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>84,089</b>	<b>116,849</b>	<b>156,287</b>	<b>154,775</b>
<b>OUTFLOWS</b>					
Investments	420,000	0	0	0	0
Changes in W/Cap.	0	80,000	20,000	25,000	0
<b>TOTAL</b>	<b>420,000</b>	<b>80,000</b>	<b>20,000</b>	<b>25,000</b>	<b>0</b>
<b>NET CASHFLOW</b>	<b>(420,000)</b>	<b>4090</b>	<b>96,849</b>	<b>131,287</b>	<b>154,775</b>
<b>NET PRESENT VALUE DF 8%</b>		<b>275193</b>			
<b>INTERNAL RATE OF RETURN</b>		<b>19.38%</b>			

## 9.8 Net Present Value

The Net Present Value is - **NPV, US DOLLARS 275,193** when the **Discount Factor - DF, is 8%** and this is manifested in **Appendix XII** as well just as the IRR above.

## 9.9 Pay Back Period

The computations of the **Pay Back Period** are shown in **Appendix XIII**. In this schedule is manifested that the **pay back of the investment is within 4 years of operation**. The initial investment of USDOLLARS 500,000 is wholly recovered before the fifth year as in the fifth year the cumulative cashflow is in excess of **US DOLLARS 594,704**.

PAY BACK PERIOD - VALUES IN US DOLLARS					
YEAR	NET PROFITS	DEPRECIATION	TOTAL CASHFLOW	CUMULATIVE CASHFLOW	
1	23,429	40,500	63,929	63,929	
2	56,189	40,500	96,689	160,619	
3	100,667	40,500	141,167	301,786	
<b>4</b>	<b>104,195</b>	<b>40,500</b>	<b>144,695</b>	<b>446,481</b>	<b>** PAY BACK</b>
<b>5</b>	<b>107,723</b>	<b>40,500</b>	<b>148,223</b>	<b>594,704</b>	<b>** PERIOD</b>
6	119,651	28,500	148,151	742,855	
7	119,651	28,500	148,151	891,006	
8	119,651	28,500	148,151	1,039,157	
9	119,651	28,500	148,151	1,187,308	
10	119,651	28,500	148,151	1,335,459	

## 9.10 Financial Review

The financial review of the proposed that Sons of Segoma **project** shows that: -

9.10.1 The project is profitable;

9.10.2 The liquidity position is sound and that it should be able to meet its financial commitments without any undue difficulty;

9.10.3 The operations are financially viable;

9.10.4 The key ratios are acceptable.

It is therefore recommended that the project should go ahead as conceived in this report.

## **10.0 DEVELOPMENTAL ASPECTS**

The following are the major economic and social benefits which will be generated by the proposed project: -

- 10.1 Revenue to the Government Treasury and other organs;
- 10.2 Increase in employment opportunities and enhance the income distribution effects.
- 10.3 This is an export-oriented project geared to bringing in foreign exchange.

## **11.0 CONCLUSION AND RECOMMENDATIONS**

The foregoing presentation indicates that the proposed project will be economically and socially viable when implemented. The proposed project has a strong bearing on the recovery of the economy and the enabling environment which is created by the current open market economic policies should enable the project to achieve a sound take-off and sustain a positive growth of its activities in the coming future.

In view of the above it is recommended that the shareholders of Sons Of Segoma be accorded the necessary assistance so as to enable them establish the proposed project products as elaborated here in.

<b>SONS OF SEGOMA LIMITED</b>				
<b>CAPITAL COST SUMMARY</b>			<b>APPENDIX I</b>	
<b><u>US DOLLARS</u></b>				
		<b>FOREIGN</b>	<b>LOCAL</b>	<b><u>TOTAL</u></b>
Expansion of farms		180,000	20000	200,000
Machinery and Equipment		48,000	12000	60,000
Production Shades		5,000	45000	50,000
Motor Vehicles		10,000	40000	50,000
Pre-Operational Expenses		4,800	55200	<u>60,000</u>
=====	=====	=====	=====	=====
<b>Fixed Investments</b>		<b>247,800</b>	<b>172,200</b>	<b>420,000</b>
Working Capital		0	80,000	80,000
<b>Total Initial Investment</b>		<b>247,800</b>	<b>252,200</b>	<b>500,000</b>
=====	=====	=====	=====	=====

<b>MACHINERY &amp; EQUIPMENT</b>				<b>APPENDIX IA</b>	
<b>PARTICULARS</b>	<b>HS CODES</b>	<b>UNIT</b>	<b>QTY</b>	<b>UNIT PRICE</b>	<b>TOTAL PRICE</b>
Field Hydro Distillation Unit with A		unit	1	30,000	30,000
Leaf plucking machines with acce		unit	12	2,000	24,000
Pruning Machines with accessor		unit	12	1,500	18,000
Sim Tank 10,000 ltrs		unit	2	1,500	3,000
Sim Tank 5,000 ltrs		pcs	6	800	4,800
Chain saws with accessories		pcs	5	1,500	7,500
4 x 4 Double Cabin		pcs	1	30,000	30,000
Motorbikes (Fekon)		pcs	10	1,000	10,000
Water Pump with accessories		pcs	1	3,000	3,000
HDPE Water Pipe 4"		mtrs	500	5	2,500
HDPE Water Pipe 2"		mtrs	1000	1	1,000
Mitsubishi Fuso Tipper 4 tonnes		units	1	40,000	40,000

DEPRECIATION SCHEDULE				US DOLLARS										APPENDIX II
YEAR	Value	Rate	1	2	3	4	5	6	7	8	9	10		
Expansion of farms	200,000	4.00%	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000		
Machinery and Equipment	60,000	10.00%	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000		
Production Shades	50,000	4.00%	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000		
Motor Vehicles	50,000	25.00%	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500		
Pre-Operational Expenses	60,000	20.00%	12,000	12,000	12,000	12,000	12,000	12,000	0	0	0	0		
<b>TOTAL</b>	<b>420,000</b>		<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>40,500</b>	<b>28,500</b>	<b>28,500</b>	<b>28,500</b>	<b>28,500</b>		

INVESTMENT & REINVESTMENT SCHEDULE		US DOLLARS. '000										APPENDIX III
YEAR	0	1	2	3	4	5	6	7	8	9	10	
Expansion of farms	200,000	0	0	0	0	0	0	0	0	0	0	
Machinery and Equipment	60,000	0	0	0	0	60,000	0	0	0	0	60,000	
Production Shades	50,000	0	0	0	0	0	50,000	0	0	0	50,000	
Motor Vehicles	50,000	0	0	0	0	0	0	0	0	0	50,000	
Pre-Operational Expenses	60,000	0	0	0	0	0	0	0	0	0	0	
<b>TOTAL</b>	<b>420,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,000</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	

**APPENDIX IV**

**LONG TERM LOAN**

**US DOLLARS**

Total Project Cost	420,000
Principal Amount	252,000
Equity Capital	168,000
Repayment Period in Years	5
Interest	8.00%
Grace Period Years	1
Annual Repayment Instalments	4

					<b>TOTAL</b>
<b>YEAR</b>	<b>PRINCIPAL</b>	<b>REPAYMENT</b>	<b>BALANCE</b>	<b>INTEREST</b>	<b>CASHFLOW</b>
1	252,000	0	252,000	20,160	20,160
2	252,000	63,000	189,000	20,160	83,160
3	189,000	63,000	126,000	15,120	78,120
4	126,000	63,000	63,000	10,080	73,080
5	63,000	63,000	0	5,040	68,040

SCHEDULE OF STAFF AND THEIR REMUNERATION						
			<u>US DOLLARS</u>			APPENDIX V
SECTION			STRENGTH	MONTHLY RATE	SALARY @ MONTH	SALARY @ ANNUM
<b>Managerial/Administration</b>						
Directors			3	1000	3,000	36,000
Accountant/Administrator			1	800	800	9,600
Plant Manager			1	500	500	6,000
Supervisors			2	300	600	7,200
Stil Chargers			2	150	300	3,600
Stil Loader			1	150	150	1,800
Laboratory Technician			1	200	200	2,400
Purchase, Sales and Stores Clerk			1	175	175	2,100
Secretary			1	173	173	2,076
Messenger			1	100	100	1,200
Motor Vehicle Driver			1	200	200	2,400
Watchmen			3	100	300	3,600
<b>Sub-Total</b>			<b>14</b>		<b>2,698</b>	<b>32,376</b>
<b>Add: 27.5% Fringe benefits</b>					<b>742</b>	<b>8,903</b>
<b>Total Annual Bill</b>					<b>3,440</b>	<b>41,279</b>
=====						

<b>SCHEDULE OF ADMINISTRATIVE OVERHEADS</b>				<b>APPENDIX VI</b>
				<b><u>US DOLLARS</u></b>
Insurance @ 0.5% Fixed Assets				1,050
Vehicle Running @ 30% Initial Value				15,000
Audit Fees				3,600
Water				2,400
Electricity				26,880
Repair and Maintenance				4,200
Telecommunications				7,500
Legal Fees				2,340
Travelling				9,600
Sales Promotion				12,000
Miscellaneous				8,457
=====	=====	=====	=====	=====
<b>TOTAL ADMINISTRATIVE OVERHEADS</b>				<b>93,027</b>
=====	=====	=====	=====	=====





PROJECTED PROFIT AND LOSS ACCOUNT						US DOLLARS					APPENDIX IX
YEAR	1	2	3	4	5	6	7	8	9	10	
Sales Revenue	959,994	1,199,993	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991	1,499,991
Less: Cost of Sales	772,795	965,994	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492	1,207,492
Contribution Margin	187,199	233,999	292,498	292,498	292,498	292,498	292,498	292,498	292,498	292,498	292,498
Less: Fixed Costs	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068	93,068
Operating Surplus	94,131	140,930	199,430	199,430	199,430	199,430	199,430	199,430	199,430	199,430	199,430
Capital Cost:											
Depreciation	40,500	40,500	40,500	40,500	40,500	28,500	28,500	28,500	28,500	28,500	28,500
Interest	20,160	20,160	15,120	10,080	5,040	0	0	0	0	0	0
Total Capital Cost	60,660	60,660	55,620	50,580	45,540	28,500	28,500	28,500	28,500	28,500	28,500
Profit Before/(Loss) Tax	33,471	80,270	143,810	148,850	153,890	170,930	170,930	170,930	170,930	170,930	170,930
Taxation 30%	10,041	24,081	43,143	44,655	46,167	51,279	51,279	51,279	51,279	51,279	51,279
Net Profit/(Loss)	23,429	56,189	100,667	104,195	107,723	119,651	119,651	119,651	119,651	119,651	119,651
Revenue Reserves	23,429	79,619	180,286	284,481	392,204	511,855	631,506	751,157	870,808	990,459	

PROJECTED CASHFLOW											US DOLLARS		APPENDIX X
YEAR	0	1	2	3	4	5	6	7	8	9	10		
<b>INFLOWS</b>													
Share Capital	168,000	0	0	0	0	0	0	0	0	0	0	0	
Long-Term Loan	252,000	0	0	0	0	0	0	0	0	0	0	0	
Depreciation	0	40,500	40,500	40,500	40,500	40,500	28,500	28,500	28,500	28,500	28,500	28,500	
Net Profit/(Loss)	0	23,429	56,189	100,667	104,195	107,723	119,651	119,651	119,651	119,651	119,651	119,651	
<b>TOTAL INFLOW</b>	<b>420,000</b>	<b>63,929</b>	<b>96,689</b>	<b>141,167</b>	<b>144,695</b>	<b>148,223</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	<b>148,151</b>	
<b>OUTFLOWS</b>													
Investments	420,000	0	0	0	0	60,000	50,000	0	0	160,000	0	0	
Changes in W/Cap.	0	80,000	20,000	25,000	0	0	0	0	0	0	0	0	
Repayments Loan	0	0	63,000	63,000	63,000	63,000	0	0	0	0	0	0	
<b>TOTAL OUTFLOW</b>	<b>420,000</b>	<b>80,000</b>	<b>83,000</b>	<b>88,000</b>	<b>63,000</b>	<b>123,000</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	<b>0</b>	
<b>NET CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>13,689</b>	<b>53,167</b>	<b>81,695</b>	<b>25,223</b>	<b>98,151</b>	<b>148,151</b>	<b>148,151</b>	<b>-11,849</b>	<b>148,151</b>	<b>148,151</b>	
<b>CUMULATIVE CASHFLOW</b>	<b>0</b>	<b>(16,070)</b>	<b>(2,381)</b>	<b>50,786</b>	<b>132,481</b>	<b>157,704</b>	<b>255,855</b>	<b>404,006</b>	<b>552,157</b>	<b>540,308</b>	<b>688,459</b>	<b>688,459</b>	





PAYBACK PERIOD			US DOLLARS	APPENDIX XIII	
YEAR	NET PROFITS	DEPRECIATION	TOTAL CASHFLOW	CUMULATIVE CASHFLOW	
1	23,429	40,500	63,929	63,929	
2	56,189	40,500	96,689	160,619	
3	100,667	40,500	141,167	301,786	
<b>4</b>	<b><u>104,195</u></b>	<b><u>40,500</u></b>	<b><u>144,695</u></b>	<b><u>446,481</u></b>	<b>** PAY BACK</b>
<b>5</b>	<b><u>107,723</u></b>	<b><u>40,500</u></b>	<b><u>148,223</u></b>	<b><u>594,704</u></b>	<b>** PERIOD</b>
6	119,651	28,500	148,151	742,855	
7	119,651	28,500	148,151	891,006	
8	119,651	28,500	148,151	1,039,157	
9	119,651	28,500	148,151	1,187,308	
10	119,651	28,500	148,151	1,335,459	

**THE COMPANIES ACT 2002**

**COMPANY LIMITED BY SHARES**

**MEMORANDUM**

**AND**

**ARTICLES OF ASSOCIATION**

**OF**

**SONS OF SEGOMA LIMITED**

Incorporated this.....day of..... 2011

CERTIFIED TRUE COPY  
OF THE ORIGINAL

  
.....  
**ADVOCATE**

9/3/11



DRAWN BY:

ISMAIL. O. KASOMO  
(SUBSCRIBER),  
P.O. BOX 6125  
TANGA

THE UNITED REPUBLIC OF TANZANIA



**Certificate of Incorporation**

No \_\_\_\_\_

**I hereby certify that**

**SONS OF SEGOMA LIMITED**

**is this day incorporated under the Companies Act, 2002 and that Company is Limited.**

**GIVEN under my hand at Dar es Salaam**

**this.....day of .....Two**

**Thousand and Eleven**

CERTIFIED TRUE COPY  
OF THE ORIGINAL

*A. J. Akaro*  
.....  
**ADVOCATE**  
9/5/11



.....  
Asst. Registrar of Companies

THE COMPANIES ACT 2002  
COMPANY LIMITED BY SHARES  
MEMORANDUM OF ASSOCIATION  
OF  
SONS OF SEGOMA LIMITED

1. The name of the Company is "SONS OF SEGOMA LIMITED".
2. The registered office of the company will be situated in the United Republic of Tanzania.
3. The objectives for which the Company is established are: -
  - a) To cultivate, grow, buy, sell and prepare any kind of fruit such as pineapple, bitter and sweet orange, lime, lemon, grapefruit, passion fruit, guava and all types of fruits and vegetables and to dispose of, sell and deal in any such product either in its raw form or its processed form.
  - b) To plant, grow, import, manufacture, sell and deal in fruits and/or vegetables in the form of juices, concentrates, nectars, pulps, piece/and or slices, jams, marmalades, pickles, chutney, oil, animal, poultry feeds and to promote out grower producer's.
  - c) To carry on the business of manufacturing, importers, buyers sellers and dealers in all kinds of wood carvings handicrafts, paintings, live birds, animals, fishes, sea products all kinds of agricultural products, coffee, cotton, seed cakes, millet, sisal ropes, grain, green peas, vegetables, fruits, spices and foodstuff animal produce, game products, forest products and all other produce and merchandise.
  - d) To carry on business of animal husbandry butchery, poultry, agro mechanics hatchery, pest control and fumigation, flour milling, soap manufacturing, carpentry, forestry, confectioners, manure and artificial fertilizers, exporters of horticulture seeds and seedling, hoteliers and guesthouses.
  - e) To carry on the business of general merchandise of stationeries, office supplies, office equipments, school materials, process blocks, printers rollers, printing ink and any other printing inputs to own schools, nursery schools, primary schools, secondary schools, teachers colleges, production and distribution of all school and office materials.

CERTIFIED TRUE COPY  
OF THE ORIGINAL

  
.....  
ADVOCATE  
9/3/11



- f) To promote, establish and carry on the business of group and individual tour operators, car rental, self driven or chauffeur driven, local and international travel agency, hunting safari, and game reserve, air charter, transporters, carriers of passengers and goods, hires of motor cars motor vans, motor lorries, motor cycles, motor omnibus, motor boats, air crafts and carriers of any other type of description which can be used to promote the business of tour operators.
- g) To carry on the business of general supplies, agents, provide Customs clearance services to companies, individual, government, institutions and clearing and forwarding and other bodies corporate or unincorporated, general carries and transporters of goods, and passengers and to construct, equip, let out on hire, commission agents or otherwise and trade in any part of the world with vehicles, vessels or air craft, brokers, sales representatives and any kind of agencies.
- h) To search for ores and minerals, mine, dam, wells construction and carry on generally the business of mining company and to crush, wash, smelt, reduce or otherwise treat and render marketable sell or dispose of the produce of any mines.
- i) To Search for marketing of any products, as marketing consultancy, to make marketing research, Advertising and training of marketing, to own road shop promotions, to conduct promotion show and to own *mobile Cinema*.
- j) To carry on all or any of the business of the manufacturers of and dealers in lime, cement, plasters, whiting, clay, graver, sand, stones, tiles, pipes, pottery, earthenware, chine and builders requisites and conveniences of all kind and as quarry owners builders, general contractors and carries.
- k) To carry on the trade or business of contractors of all computer science and engineering works; Electrical and Computer Engineering works. Buildings and Civil engineering works, mechanical engineering works, to render services as *Industrial maintenance* contractors, Surveyors, valuers of land, property or any other assets whatsoever.
- l) To acquire, build, construct, maintain, alter, enlarge, pull down and remove or replace any buildings, factories, mills, farms, offices, works, roads, railways, engines, walls, fences, banks, dams, canals, sites for the same and to join with any other person in doing any of the things aforesaid and to work, manage and control the same or join with others in so doing.

- m) To carry on the business building, residential house, apartment, building of offices, godown and any related structures for the purpose of renting and /or reselling. Decorations, plumbing, design, architecture planning, drainage, earth moving, landscaping, feasibility studies and general engineering construction
- n) To carry on the business of importers, exporters, provisional merchants, stockiest, wholesalers, retailers, buyers, sellers and dealers in all types of agricultural machinery, implements and equipments, plants and machinery, buses, motor cars, trucks spare parts, tires and tubes, tools and accessories for all types of automotive, motor vehicles and all kinds of industrial project machinery and equipments and industrial supplies, electrical goods, electronic goods, leather goods television sets, video cassettes, telefax, telex and accessories, computers, office equipments, and domestic appliances.
- o) To carry on the business of wholesale and retails shops of any kind, zoo owner and to inspect quality of any kind of plastic material and protecting environmental pollution.
- p) To manufacture, buy, sell, improve, treat, preserve, fine aerate, mineralizes, bottle, can and otherwise deal in mineral, aerated waters, juice and other liquids of every description.
- q) To sink wells, and shafts, and to make, build and construct, lay down, acquire and maintain factories, engines, machinery, tramways, docks, plant and appliances and to execute and to do all other works and things necessary or convenient for working, obtaining, storing, treating, preserving, fining, mineralizing bottling, canning and discharging any such fruit products or otherwise for the propose of the company.
- r) To carry on the business or trade and deal in the export of all wild like bird, live animals, live game and generally any kind of pets for sale and export within the country, neighboring countries and other foreign countries and improve prepare for export, import, deal and trade in carvings, paintings, curios, game skins potters, leather and leather goods, clothes batiks, wattle barks, cooking oils, charcoal, corn flower, clothes, cheese, and commodities from by-products of milk.
- s) To carry on and deal in the business of pharmaceuticals, medical preparation chemicals, Animal feeds, manufacturing, making and assembling, of machine equipment, plants, Vessels, devices of all descriptions using modern technology appropriate and applicable.
- t) To engage in, conduct in and between any and all the regions and districts in Tanzania, neighboring countries and other foreign

countries as agents or otherwise, the business of General trucking, forwarding, cartage, storage, warehousing, consolidating distributing Warfare, constructing loading, unloading and stevedore business and to conduct as general brokerage commission and customs house, brokerage service business and to handle and forward for transportation by air, highway, water and rail, road between cities, towns, villages and other places in various parts of the world person, bills, notes, packages, merchandise, luggage, goods, wares, parcels and other movable and personal property over and on such lines and routes as ay from time to time exist and generally to act as agents for land and estate, brokers, chatterers, auctioneers, clearing and forwarding agency in all its respective branches.

- u) To carry on the business of importers, exporters, manufacturers and dealers in stores and warehouse of pharmaceuticals and all or any other commodities and things which may be conveniently used or manufactured in conjunction with any of the above or similar business of manufacturers or which shall be capable of being used for the purpose of any business herein mentioned or likely to be required by customers or any business.
- v) To carry on the business as bakers and manufactures of and dealers in bread, flour, Biscuits confectionery, juice, squash, packing and farinaceous compounds and materials of every description and to construct, acquire, hire, hold, work, let and sell, mills, factories bake houses, shops, buildings, machinery and appliances suitable for such Baking manufacturing and dealing.
- w) To construct steamships, ships, trawlers, catchers, carriers, drifters fishing boats, boat or other vessels whatsoever, slaughterhouses, cold storage premises, warehouses, sheds and other building requisite useful for the business of the company.
- x) To carry on the business of petrol service station and deal in petrol, diesel, oil, kerosene, mineral oil, Crude oil, lubricating oil, grease and/or fuel oil of all kinds and all other kind of mineral and petroleum products as importers, dealer of distributors and servicing and repairing of vehicles of all types generally.
- y) To carry on the business of motor vehicle garage and repairing and servicing of all types of vehicles and machinery and the business as dealers, wholesalers, retailers, distributors, agents, importers and exporters of hardware, motor vehicles, bicycles and its spares, agriculture and industrial machinery and spares, electrical machinery, accessories and spares of all kinds.
- z) To acquire, take-over, promote, establish and carry on all or any of the business of seed crushers and manufactures and processors of

Soya beans, linseeds, cottonseeds, groundnuts, simsim, sunflowers and any other seeds and cakes, oil extractors by crushing, chemicals or any other process from the a fore-mentioned plants or other natural and oil substance and to prepare, manufacture, mill and render marketable any such oil and to sell, dispose of and deal in any such oil either in its prepared, manufactured or raw state.

- aa) To carry on the business of imports of motor vehicles, spare parts, electrical goods of various kinds, machinery, computers, calculators, metals, refrigerators, air-conditioners, cookers, textiles, building materials, industrial gingery spares, agricultural machinery, etc.
- bb) To enter into (partnership or into) any arrangements for sharing profits, union or interests, co-operation, joint venture, reciprocal, concession, or otherwise with any persons, firm or company carrying on or engaged in or about to carry on or engage in any business or transaction which this company is authorized to carry on, or engage in or any business or transaction which company is authorized to carry on, or engage in or any business or transaction capable of being conducted so as directly or indirectly to benefit this company and to lend money to, guarantee the contracts of, or otherwise assist, any such person, firm of company, and to take or otherwise acquire shares and securities of any such company, and to sell, hold, reissue with or without guarantee, or otherwise deal with the same.
- cc) To produce the registration of the company in the laws of any place out side Tanzania.
- dd) To carry on the business of selling, distribution of all products of any description, printers and Publishers, periodicals, maps, guides, news paper sellers, foreign correspondents and advertising Agents, exporters and importers and to by, sell, hire, manufacturer, barter trade and deal in property goods, produce articles and merchandise of all kinds and to transact and every description of agency commission commercial, industrial manufacturers, mercantile, insurance and financial business and manufacturers representatives, consultancy services.
- ee) To draw, make, accept, endorse, discount, negotiate, execute and issue, buy, sell and deal in bills of exchange, promissory notes and other negotiable or transferable instruments, amalgamate or enter into partnership or any joint venture or profit sharing arrangement with, and to co-operative in any way with or assist or subsidize any company, firm or person.
- ff) To promote or concur in the promotion of any company, the promotion of which shall be Considered desirable, to lend money to and guarantee the performance of the contracts, or obligations of and

the payment and repayment of the capital and principal of, and divides, interest or premiums payable on any stock, shares and securities of any company, firm, or person, whether having objects similar to those of this company or not, and to give all kinds of indemnities

- gg) To sell, lease, grant licenses, easements and other rights over and in any other manner deal with or dispose of the undertaking, property, assets, rights and effects of the company or any part thereof for such consideration as may be thought fit and, in particular, for stock, shares or securities of any other company, whether fully or partly paid up.
- hh) To acquire any such shares, stocks, debentures, debenture stock, bonds, obligations or securities by original subscription, tender, purchase, exchange or otherwise, and to subscribe for the same, either conditionally or otherwise and to guarantee the subscription thereof, and to exercise and enforce all rights and powers conferred by, or incidental to, the ownership thereof.
- ii) To issue debentures, debenture stock, bonds, obligations and securities of all kinds and to frame constitute and secure the same, as may seem expedient, with full power to make the same transferable by delivery or by instrument of transfer or otherwise, and either perpetual or terminable, and either redeemable or otherwise, and to charge or secure the same by trust deed or otherwise on the undertaking of the company or upon any specific property and rights, present and future, of the company (including, if thought fit, uncalled capital) or otherwise howsoever.
- jj) To carry on the business of meal manufacturers, grain, seed, cake, corn, hay-straw and Fodder merchants, varnish and paint makers, candle and stearin makers and Manufacturers of lard and margarine hydrogenated oils, glycerin and inks of all kinds.
- kk) To carry on the business of manufacturers and distributors of cattle, poultry feed and feeding and fattening preparation of every description, makers and manufacturers of artificial manure and fertilizers of every description, manufacturers of soaps of all kinds and be wholesalers and retail dealers thereof, flax, cotton oil, cake, corn, merchants and any branch or subsidiary business commonly carried in connection therewith and to carry on the business as agents, consultants or representatives of overseas or local manufacturers, industrialists or other like organization in any type of goods, products or commodities.
- ll) To transact any and every description of agency, commission, commercial, industrial, manufacturing, mercantile and financial business, and to carry on the business of clearing and forwarding

agents, shipping agents, commission agents, customs agents, provisional merchants, stockiest, importers, retail's and wholesalers, transporters of passengers and goods, motorcars, omnibuses and coach proprietors and carriers, boat owners, ship owners, amusement carriers and job masters.

- mm) To acquire and undertake the whole or any part of the business, property and liabilities of any person, firm or company carrying on any business which the company is authorized to carry on, or possess property suitable for the purpose of this company.
- nn) To invest and deal with moneys of the company not immediately required upon each security and in such manner as may from time to time be determined.
- oo) To purchase, lease, or otherwise acquire, and to hold, sell, improve, develop, exchange, mortgage or otherwise dispose of any lands, buildings, machinery or plants, mills, factories, warehouses or any here determents.
- pp) To adopt means of making known the products of the company as may seem expedient and in particular by advertising in the press, by circulars, by purchase and exhibition of works, art or interest, by publication of books and periodicals, and by granting prizes, rewards and donations.
- qq) To enter into arrangements with any Government or authorities (supreme, municipal, local or otherwise) or any corporations, companies or persons having objects that may seem conducive to the companies objects or any of them, and to obtain from any such government. Authority, corporation, company or person, any charters, contracts, decrees, rights, privileges and concessions which the company may think desirable, and to carry out, exercise and comply with any such charters, contracts, decrees, rights privileges and concessions.
- rr) To promote any other company for the purpose of acquiring all or any of the property, and undertaking, or any of the liabilities of this company, or of undertaking any business or operation which may appear likely to assist or benefit this company, or to enhance the value of the pròperty or business of this company, and to place or guarantee the placing of, underwrite, subscribe for or otherwise acquire all or any part of the shares or securities of each company as aforesaid.
- ss) To lend and advance money or give credit to such persons, firm or companies and on such terms as may seem expedient, and in particular to customers and others having dealings with the company,




and to give guarantee to become surety for any persons, firms or companies for the due payment of money for the performance of any obligations or liabilities.

- tt) To receive money or deposit or loan and borrow or raise money in such manner as the company shall think fit, and in particular by the issue of debentures, or debenture stock (Perpetual or otherwise) and to secure the repayment of money borrowed, raised or owing by mortgage) charge or lien upon all or any of the property or assets of the company (both present and future) including its uncalled capital and also by a similar mortgage charge or lien to secure and guarantee the performance by the company or any other person or company of any obligation undertaken by the company or any other person or company as the case may be.
- uu) To draw, make, accept, endorse, discount, execute and issue promissory notes, bills of exchange, bills of lading, warrants, debentures and other negotiable or transferable instruments.

The word "COMPANY" in this clause shall be deemed to include any partnership or other body of persons, whether incorporated, or unincorporated, and whether domiciled in East Africa or elsewhere and the intention is that the objects specified in each paragraph of this clause shall except otherwise expressed in such paragraph be independent main objects and shall in no wise be limited or restricted by a reference to or inference from the terms of any other paragraph or the name of the Company

- 4. The liability of the member is limited.
- 5. The initial capital of the Company is Tshs. 30,000,000/= divided into 10,000 shares of shillings 3,000/= each and the Company shall have the power to divide the original or any increase capital into several classes and to attach there to any preferential, deferred, qualified or other special rights, privileges, restrictions or conditions.

We the several persons whose names and addresses are subscribed are desirous of being formed into a company, in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company set apposite our respective names:

NAME, ADDRESS AND DESCRIPTIONS OF SUBSCRIBER	NUMBER OF SHARES TAKEN	SIGNATURE
1. ISMAIL OMARI KASOMO P.O. BOX 6125 TANGA	2,000	
2. ALNOOR ABDULMOHAMED HUSSEIN P.O. BOX 6125 TANGA	2,000	
3. MICHAEL SIMON KARATA P.O. BOX 6125 TANGA	2,000	

DATED at Dar es Salaam this 21<sup>st</sup> day of February, 2011

Witness to the above signatures:

Name: Hashim Hamza Mtanga

Signature: 

Postal Address: P.O. Box 15726  
Dar es Salaam

Qualifications: Advocate



CERTIFIED TRUE COPY OF THE ORIGINAL

  
ADVOCATE  
2/2/11



5000/-  
13388  
21/2/2011

2,500/-  
13388  
21/2/2011

THE COMPANIES ACT, 2002  
COMPANY LIMITED BY SHARES  
ARTICLES OF ASSOCIATION  
OF  
SONS OF SEGOMA LIMITED

**INTERPRETATION**

1. In these articles:-

“The Act” means the Companies Act;

“The articles” means the articles of the company;

“Clear days” in relation to the period of a notice means that period excluding the day where the notice is given or deemed to be given and the day for which it is given or on which it is to take effect;

“The seal” means any person appointed to perform the duties or the secretary of the company.

“Secretary” shall mean any person appointed to perform the duties of Secretary of the Company.

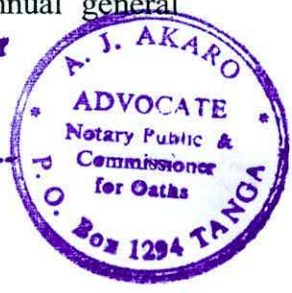
Expressions referring to writing shall, unless the contrary intention appears, be construed as including references to printing, lithography, photograph, and other modes of representing or reproducing words in a visible form.

Unless the context otherwise requires, words or expressions contained in these articles shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these articles become binding on the company.

**MEMBERS**

2. The number of members with which the company proposes to be registered is two but the directors may from time to time register as increase of members.
3. The subscribers to the memorandum of association and such other persons as the directors shall admit to membership shall be members of the company.
4. The Company shall in each year hold a general meeting as its annual general meeting in addition to any other meetings in that year, and shall specify the meeting as such in the notice calling it; and not more than fifteen months shall elapse between the date of one annual general meeting of the company and that of the next.

12  
CERTIFIED TRUE COPY  
OF THE ORIGINAL  
ADVOCATE  
9/3/11



Provided that so long as the company holds its first annual general meeting within eighteen months of its incorporation, it need not hold it in the year of its incorporation or in the following year. The annual general meeting shall be held at such time and place, as the directors shall appoint.

5. All general meetings other than annual general meetings shall be called extraordinary general meetings.
6. The directors may, whenever they think fit, convene an extraordinary general meeting, and extraordinary general meetings shall also be convened on such requisition, or in default, may be convened by such requisitionists, as provided by section 133 of the Act. If at any time there are not within the Tanzania sufficient directors capable of acting to form a quorum, any director or any two members of the company may convene as extraordinary general meeting in the same manner as nearly as possible as that in which meeting may be convened by the directors.

#### **NOTICE OF GENERAL MEETINGS**

7. Every general meeting shall be called by twenty one clear days' notice in writing at the least. The notice shall specify the place, the day and hour of meeting and, in case of special business, the general nature of that business:

Provided that a meeting of the company shall, notwithstanding that it is called by shorter notice than that specified in this article be deemed to have been duly called if it so agreed:-

- (a). In the case of a meeting called as the annual general meeting, by all the members entitled to attend and vote thereat; and
  - (b). In the case of any other meeting, by a majority in number of the members having a right to attend and vote at the meeting, being a majority together representation not less than ninety five percent of the total voting rights at that meeting of all the members.
8. Subject to the provisions of the articles, the notice shall be given to all the members, to all persons entitled to a share in consequence of the death or bankruptcy of a member and to the directors and auditors. The accidental omission to give notice of a meeting to, or the non receipt to notice of a meeting by, any person entitled to receive notice shall not invalidate the proceedings at that meeting.

## PROCEEDINGS AT GENERAL MEETINGS

9. All business shall be deemed special that is transacted at an extraordinary general meeting, and also all that is transacted at an annual general meeting with exception of declaring a dividend, the consideration of the accounts, balance sheets, and the reports of the directors and auditors, the election in the place of those retiring and the appointment of, and the fixing of the remuneration of the auditors.
10. No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business; two persons, entitled to vote on the business to be transacted, each being a member or a proxy for a member or a duly authorized representative of a corporation, shall be a quorum.
11. If within half an hour from the time appointed for the meeting quorum is not present, or if during the course of a meeting a quorum is not present, the meeting shall stand adjourned to the same day in the next week, at the same time and place, or to such other day and at such other time and place as the directors may determine.
12. The Chairman, if any, of the board of directors or in his absence some other director nominated by the directors shall preside as chairman of the general meeting, but if neither the chairman nor such other director (if any) be present within fifteen minutes after the time appointed for the holding of the meeting and willing to act, the directors present shall elect one of their member to be chairman of the meeting and, if there is only one director and willing to act, he shall be chairman.
13. If at any meeting no director is willing to act as chairman or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their member to be a chairman of the meeting.
14. The Chairman may, with the consent of any meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business which might properly have been transacted at the meeting had the adjournment not taken place. When a meeting is adjourned for fourteen days or more, at least seven clear days notice of the adjourned meeting shall be given specifying the time and place of the meeting and the general nature of the business to be transacted. Save as aforesaid it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

15. At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands demands:-
- (a). by the chairman; or
  - (b). by a least (three) members present in person or by proxy; or
  - (c) by any member or members present in person or by proxy and representing not less than one – tenth of the total voting rights of all the members having the right to vote at the meeting.

Unless a poll be so demanded a declaration by the chairman that a resolution has on a show of hands been carried or carried unanimously, or by a particular majority, or lost and an entry to the effect in the book containing the minutes of proceedings of the company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against such resolution.

*The demand for a poll may, before the poll is taken, be withdrawn.*

16. Except as provided in article 18, if a poll is duly demand it shall be taken in such manner as the chairman directs, and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demand.
17. In the case of an equality of votes, whether on a shoe of hands or on a poll, the chairman of the meeting shall be entitled to a second or casting vote.
18. A poll demanded on the election of a chairman, or on a question of adjournment, shall be taken immediately. A poll demanded on any other question shall be taken either immediately or at such time as the chairman of the meeting directs, and any business other than upon which a poll has been demanded may be proceeded with pending the taking of the poll.
19. A resolution in writing executed by or on behalf of each member who would have been entitled to vote upon it if it had been proposed at a general meeting at which he was present shall have effect as if it had been passed at a general meeting duly convened and held, and consist of several instruments in the like form each executed by or behalf of one or more member.

#### VOTE OF MEMBER

20. Every member shall have one vote
21. A member in respect of whose estate a manager has been appointed under section 26 of the Mental Diseases Ordinance, may vote, whether on a

show of hands or on a poll, by his said manager, and any such manager may, on a poll, vote by proxy.

- 22. No member shall be entitled to vote at any general meeting unless all moneys presently payable by him to the company have been paid.
- 23. On a poll votes may be given either personally or by proxy.
- 24. The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorized in writing, or, if the appointer is a corporation, either under sea) or under the hand of an officer or attorney duly authorized. A proxy need not be a member of the company.
- 25. The instrument appointing a proxy and the power of attorney of other authority, if any, under which it is signed or a notarially certified copy of that power or authority shall be deposited at the registered office of the company or at such other place within the Territory as is specified for that purpose in the notice convening the meeting, not less than 48 hours before the time for holding the meeting of adjourned meeting at which the person named in the instrument proposes to vote, or, in the case of a poll, not less than 24 hours before the time appointed for the taking of the poll, and in default the instrument of proxy shall not be treated as valid.
- 26. An instrument appointing a proxy shall be in the following form or a form as near hereto as circumstances admit:-

“.....Limited

I/We ..... of ....., being a member / members of the above – named company, hereby appoint..... of or failing him..... of ....., as my/our proxy to vote for me / us on my/or behalf at the (annual or extraordinary, as the case may be) general meeting of the company to be held on the ..... day of.....200....., and at any adjournment thereof.

Signed this.....day of,..... 200.....”

- 27. Where it is desired to afford members an opportunity of voting for or against a resolution the instrument appointing a proxy shall be in the following form or a form as near thereto as circumstances admit:-

“.....Limited

I/We ..... of..... Being a member / members of the above named company, hereby appoint of..... of ..... or failing him .....

of..... as my/our proxy to vote for me/ us on my/our behalf at the (annual or extraordinary, as the case may be) general meeting of the company to be held on the ..... day of ..... 200....., and at any adjournment thereof.

Signed.....this.....day of,.....200.....”

This form is to be used in favour of / against the resolution. Unless otherwise instructed, the proxy will vote as he thinks fit.

“Strike out which ever is not desire”

28. The instrument appointing a proxy shall be deemed to confer authority to demand or join in demanding a poll.
29. A vote given in accordance with the terms of an instrument of proxy, or poll demanded by proxy, or by the duly authorized representative of a corporation shall be valid notwithstanding the previous determination of the authority of the person voting or demanding a poll unless notice of the determination was received by the company at its registered office (or at such other place at which the instrument of proxy was duly deposited) before the commencement of the meeting or adjourned meeting at which the proxy is used.

#### **CORPORATIONS ACTING BY REPRESENTATION AT MEETINGS.**

30. Any corporation which is a member of the company may by resolution of its directors or other governing body authorize such person as it thinks fit so act as its representative at any meeting of the company, and the person so authorized shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual member of the company.

#### **DIRECTORS**

31. The Number of the directors and the names of the first directors shall be determined in writing by the subscribers of the memorandum of association or a majority of them and until such determination the signatories to the Memorandum of Association shall be the first directors. Unless otherwise determined by ordinary resolution, the number of directors shall not subject to any maximum but shall be not less than two.
32. The remuneration of the directors shall from time be determined by the Company in general meeting. Such remuneration shall be deemed to accrue from day to day. The Directors shall also be paid all traveling, Hotel and other expenses properly incurred by them in attending and returning from meeting of the directors or any committee or the directors

or general meetings of the company or in connection with the business of the company.

33. The following persons shall be first Directors to the Company:-

1. **ISMAIL OMARI KASOMO**
2. **ALNOOR ABDULMOHAMED HUSSEIN**
3. **MICHAEL SIMON KARATA**

### **BORROWING POWERS**

34. The director may exercise all the powers of the company to borrow money, and to mortgage or charge its undertaking and property, or any part thereof, and to issue debentures, debenture stock and other securities, whether outright to as security for any debt, liability or obligation of the company or any third party.

### **POWERS AND DUTIES OF DIRECTORS**

35. Subject to the provisions of the Act. The memorandum and the articles and so any directors given by special resolution, the directors, who may exercise all the powers of the company, shall manager the business of the company. No alteration of the memorandum of articles and no such directions shall invalidate any prior act of the directors, which would otherwise have been valid. The powers given by this article shall not be limited by any special power given to the directors by the articles and a meeting of directors at which a quorum is present may exercise all powers exercisable by the directors.
36. The directors may by power of attorney appoint any person to be the attorney or agent of the company for such purposes and on such conditions as they determine, including authority for the attorney or agent to delegate all or any of his powers
37. All cheques, promissory notes, drafts, bills of exchange and other negotiable instruments, and all receipts for moneys paid to the company, shall be signed drawn, accepted, endorsed, or otherwise executed, as they case may be, in such manner as the directors shall from time to time by resolution determine,
38. The directors shall cause minutes to be made in books provided for the purpose:-
- (a) of all appointments of officers made by the directors;
  - (b) of the names of the directors present at each meeting of the directors and of any committee of the directors;
  - (c) of all resolution and proceedings at all meetings of the company,

of the holders of any class of shares in the company, and of the directors, and of committees of directors.

#### **REMUNERATION AND EXPENSES, GRATUITIES AND PENSIONS**

39. The remuneration of the directors shall be determined by ordinary resolution of the company and, unless, the resolution provides such remuneration shall be deemed to accrue from day to day. The directors may also be paid all traveling, hotel and other expenses properly incurred by the them in attending and returning from meetings of the directors or any committee of the directors or any committee of the directors of general meetings or separate meetings of the holders of any class of shares or of debentures of the company or otherwise in connection with the business of the company
40. The director on behalf of the company may pay a gratuity or pension or allowance on retirement to any director who had any other salaries office or place of profit with the company or to his widow or dependants and may make contributions to any fund and pay premiums for the purchase or provisions of any such gratuity, pension or allowance.

#### **DISQUALIFICATION AND REMOVAL OF DIRECTORS**

41. The office directors shall be vacated if the director.
  - (a). Ceases to be a director by virtue or any provision of the Act or he becomes prohibited by law from being a director ; or.
  - (b). Becomes bankrupt or makes any arrangement
  - (c). Becomes of unsound mind; or
  - (d). Resigns his office by notice in writing to the company; or
  - (e). Shall for more than six consecutive months have been absent without permission of the directors from meetings of the directors held during that period and the directors resolve that his office be vacated.

#### **APPOINTMENT AND RETIREMENT OF DIRECTORS**

42. The company may by ordinary resolution appoint a person who is willing to act to be a director either to fill a vacancy or to an additional director.
43. The directors may appoint a person who is willing to act to be a director, either to fill a vacancy or as an additional director, provided that the total number of directors does not exceed the number fixed by or in accordance with these articles. A director so appointed shall hold office until the next following annual general meeting, and shall them be eligible for re-election

44. The company may by ordinary resolution, of which special notice has been given in accordance with section 144 of the act, remove any director before the expiration of his period of office notwithstanding anything in these articles or in any agreement between the company and the director. Such removal shall be without prejudice to any claim the director may have for damages for breach of any service contract with the company.
45. The company may by ordinary resolution appoint another person in place of a director removed from office under the immediately preceding regulation, and without prejudice to the powers of the directors under article 85 the company may by ordinary resolution appoint any person to be a director either to fill a vacancy or as an additional director.
46. The continuing directors may act notwithstanding any vacancy but, if and so long as their number is reduced below the number fixed by or pursuant to the articles of the act for the purpose of increasing the number of directors to that number, or summoning a general meeting of the company, but for no other purpose.
47. The directors may appoint one of their numbers to be the chairman of the board of directors and determine the period of which he is to hold office. Unless he is unwilling to do so, the director so appointed shall preside at every meeting of directors at which he is present. But if no such chairman is appointed, or if he is unwilling to preside, or if at any meeting the chairman is not present within five minutes after the time appointed for holding the same, the directors present may choose one of their number to be chairman of the meeting
48. The directors may delegate any of their powers to any committee consisting of one or more directors; any committees so formed shall in the exercise of the powers so to any such regulations, the proceedings of a committee with two or more members shall be governed by the articles regulating the proceeding of directors so far as they are capable of applying.
49. All act done by a meeting of the directors or a committee of directors or by a person acting as a director shall withstanding that it be afterwards discovered that there was some defect in the appointment of any such director, or that any of them were disqualified from holding office, or hand vacated office, or that were not entitled to vote, be as valid as if every such person had been duly appointed and was qualified and had continued to vote, be as valid as if every such person had been duly appointed to be a director and was entitled to vote.
50. A resolution in writing signed by all the directors entitled to receive notice of a meeting of the directors, or of a committee of directors, shall be as valid and effectual as if it had been passed at a meeting of the directors or (as the case may be) a committee of directors duly convened

and held, and may consist of several documents in the like form each signed by one or more directors.

### **SECRETARY**

51. The Secretary shall be appointed by the directors for such term, at such remuneration and upon such conditions as they may think fit; and any secretary so appointed may be removed by them.
52. A provisions of the Act or these articles requiring or authorizing a thing to be done by or to a director and the secretary shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of the secretary.

### **THE SEAL**

53. The seal shall only be used by the authority of the directors or a committee of the directors authorized by the directors. The directors may determine who shall sign any instrument to which the seal is affixed and unless otherwise so determined it shall be signed by a director and by the secretary or by a second director.
54. The directors shall cause proper books of account to be kept with respect to:-
  - (a). All sums of money received and expended by the company and the matters in respect to which the receipt and expenditure takes place;
  - (b). All sales and purchase of goods by the company; and
  - (c). The assets and liabilities of the company.




Property books shall not be deemed to be kept if there are not kept such books of account as are necessary to give a true and air view of the state of the company's affairs and to explain its transactions.
55. The books of account shall be kept at the registered office or the company, or subject to section 151 (4) of the Act, at such other place or places as the directors think fits, and shall always be open to the inspection of the directors.
56. No number shall (as such) have right of inspecting any accounting records or other book or document of the company except as conferred by statue or authorized by the directories or by ordinary resolution of the company.
57. The directors shall from time to time in accordance with sections 153, 155 and 150 of the Act, cause to be prepared and to be Laid before the company in general meeting, such profit and loss accounts, balance

sheets, group accounts(if any) and reports as are referred to in those sections.

58. In accordance with section 164 of the Act, the copy of the company's annual accounts to be Laid before the company in general meeting together with a copy of the directors' report and the auditors shall not less than twenty one days before the date of the meeting be sent to every member of, and every holder of debentures of, the company. Provided that this regulation shall not require a copy of those documents to be sent to any person or whose address the company is not aware or to more than one of the joint holders of any debentures.

#### AUDIT

59. Auditors shall be appointed and their duties regulated in accordance with section 170 to 179 of the Act.
59. Any notice to be given to or by any person pursuant to the articles shall be in writing except that a notice calling a meeting of directors need not be in writing. The company may give any notice to a member either personally or by sending it by post in a prepared envelope addressed to the member at his registered address, or by leaving it at that address. Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying, and posting a letter containing the notice, and to have been effected at the expiration of seventy two hours after the letter containing the same was posted. At member whose registered address is not with the Tanzania and who gives to the company an address within the Tanzania at which notices may be given him shall be entitled to have notices given to him at that address, but otherwise no such member shall be entitled to receive any notice from the company.

NAME, ADDRESS AND DESCRIPTIONS OF SUBSCRIBER	NUMBER OF SHARES TAKEN	SIGNATURE
1. ISMAIL OMARI KASOMO P.O. BOX 6125 TANGA	2,000	
2. ALNOOR ABDULMOHAMED HUSSEIN P.O. BOX 6125 TANGA	2,000	
3. MICHAEL SIMON KARATA P.O. BOX 6125 TANGA	2,000	

DATED at Dar es Salaam this 21<sup>st</sup> day of February, 2011

Witness to the above signatures:

Name: Hashim Hamza Mtanga

Signature: 

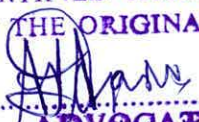
Postal Address: P.O. Box 15726

Dar es Salaam

Qualifications: Advocate



CERTIFIED TRUE COPY OF THE ORIGINAL

  
ADVOCATE  
9/3/11

