



MONITORING PLAN 2018

KWAMDULU AND KWARAGURU ESTATES



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INTRODUCTION

This document describes the monitoring framework and the activities that will be undertaken this year to monitor the company's performance and gather the necessary data. At the beginning of next year, the monitoring activities will be presented in an Annual Monitoring Report. The public version of this document is published on the company's website.

1 MONITORING FRAMEWORK

The monitoring system consists of several activities aimed at the collection of different types of information. The monitoring methods used depend on what is best suited per type of information. The system is set up in a hierarchical manner to assure that the information collected provides information on the management goals. The hierarchy of the information is shown in the following table.

Table 1. SFI Tanzania monitoring system

Management objectives	Criterion	Indicator	Verifier	Monitoring frequency	Responsibility	Applicable in 2018
1. Economical sustainability	1.1 Economic aspects	1.1.1 Cost/benefit analysis	Table	Annual	SFI Tanzania	Yes
		1.1.2 Sisal sales	Sales data	Annual	SFI Tanzania	Yes
		1.1.3 Timber sales	Sales data	When relevant	SFI Tanzania	No
		1.1.4 Carbon credit sales	Sales data	When relevant	SFI Tanzania	No
		1.1.5 Energy consumption	Yearly report	Annual	Form international	Yes
	1.2 Plantation establishment	1.2.1 Total sisal area planted	Map	Annual	Form international	Yes
		1.2.2 Changes in planted sisal area	Map	Annual	Form international	Yes
		1.2.3 Total forestry area planted	Map	Annual	Form international	Yes
		1.2.4 Changes in planted forestry area	Map	Annual	Form international	Yes
	1.3 Plantation condition and regeneration	1.3.1 Sisal yield	Sisal statistics	Annual	SFI Tanzania	Yes
		1.3.2 Stocking sisal fields	Sisal statistics	Annual	SFI Tanzania	Yes
		1.3.3 Nursery development	Nursery data	Annual	SFI Tanzania	Yes
		1.3.4 Growth rate forest plantation	Permanent Sample Plots	Annual	Form international	Yes
		1.3.5 Stocking forest plantation	Permanent Sample Plots	Annual	Form international	Yes
		1.3.6 Expected and actual harvest of round wood	Tables	When relevant	SFI Tanzania	No
		1.3.7 Comparison of yield with yield	Tables	When relevant	Form international	No

		tables				
		1.3.8 Calculation of carbon stored in the plantation	Calculation	Annual / when sales are foreseen	Form international	No
		1.3.9 Protection of the plantations against fire	Procedures / fire statistics	Annual	SFI Tanzania	Yes
		1.3.10 Check of plantation health (disease, insect outbreaks etc.)	Procedures / pest statistics	Annual	SFI Tanzania	Yes
	1.4 Sisal production	1.4.1 Production recovery	Sisal statistics for recovery of production processes	Annual	SFI Tanzania	Yes
		1.4.2 Production quality	Sisal statistics for grades produced	Annual	SFI Tanzania	Yes
		1.4.3 Internal consumption	Sisal statistics for internal consumption	Annual	SFI Tanzania	Yes
2. Ecological sustainability	2.1 Plantation ecosystem	2.1.1 Extent of protected area	Map	Annual	Form international	Yes
		2.1.2 Fauna population and diversity	Report	Every five years	Form international	No
		2.1.3 Flora diversity	Report	Every five years	Form international	No
		2.1.4 Identification and protection of endangered, rare and threatened species (flora and fauna)	Procedures	Annual	SFI Tanzania	Yes
		2.1.5 Growth in the buffer zones and conservation areas	Permanent Sample Plots	Every five years	Form international	No
	2.2 Water conservation	2.2.1 Procedures to protect forest and vegetation along water courses	Procedures	Annual	SFI Tanzania	Yes
		2.2.2 Rainfall	Rain gauge measurements	Daily	SFI Tanzania	Yes
		2.2.3 Water quality	Probe measurements	Annual	Form international	Yes
		2.2.4 Water consumption	Pumped water	Daily	SFI Tanzania	Yes

			volumes			
	2.3 Soil conservation	2.3.1 Procedures to protect soil productivity and avoid erosion	Procedures	Annual	SFI Tanzania	Yes
		2.3.2 Effectiveness of activities undertaken to avoid soil erosion	Yearly report	Annual	Form international	Yes
		2.3.3 Nutrient management	Yearly report	Annual	Form international	Yes
	2.4 Carbon storage	2.4.1 Calculation of carbon stored in the forest plantation	Calculation	Annual	Form international	No
3. Social sustainability	3.1 Social impact	3.1.1 Number of people (partially) depending on the plantation for their livelihood (employees, inter croppers)	HR statistics	Annual	SFI Tanzania	Yes
		3.1.2 Impact of operations on surrounding communities	Yearly report	Annual	SFI Tanzania	Yes
		3.1.3 Training and capacity building for employees and inter croppers	Training matrix, intercropping statistics	Annual	SFI Tanzania	Yes
		3.1.4 Outgrowing program	Outgrowing statistics	Annual	SFI Tanzania	Yes
	3.2 Social interactions	3.2.1 Informing the public	Website, stakeholder meetings	Annual	SFI Tanzania	Yes
		3.2.2 Grievances and complaints	Complaint register	Annual	SFI Tanzania	Yes
	3.3 Health and Safety	3.3.1 Worker health / Accidents on work floor	Medical statistics register	Annual	SFI Tanzania	Yes
	3.4 Unauthorized activities	3.4.1 Prevention of unauthorized activities	Illegal activities register	Annual	SFI Tanzania	Yes

2 WORK PLAN 2018

This chapter outlines the planning of monitoring activities which are not covered by the regular data recording routines. Data for the monitoring activities covered by regular data recording routines is collected, analysed and reported upon when preparing the annual monitoring report. Form international is responsible for the monitoring program, but monitoring is mainly done by SFI Tanzania.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mapping												4
Forestry trial and PSP measurements		25										
Water quality										1		
Social Impact										4		
Reporting		5 (2018)										

3 MONITORING ACTIVITIES 2017

3.1 Cost/benefit analysis

The analysis of costs and benefits is the principal analysis showing the economic viability of SFI Tanzania. To this effect a summary is made of the annual financial result, showing investments made, operational costs and income generated.

Management objective	1. Economical sustainability
Indicator	1.1.1
Verifier	The annual monitoring report will give an overview of the key economic data of 2017
Public report?	No

3.2 Sales data

Volumes and qualities sold to whom and at what price are recorded by SFI Tanzania and analysed by Form international.

Management objective	1. Economical sustainability
Indicator	1.1.2 – 1.1.4
Verifier	The annual monitoring report will give an overview of the sisal sales in 2018
Public report?	No

3.3 Energy consumption

Consumption of fuel and electricity is recorded by SFI Tanzania and analysed by Form international.

Management objective	1. Economical sustainability
Indicator	1.1.5

Verifier	Analysis on energy consumption and its main drivers in the annual monitoring report.
Public report?	No

3.4 Mapping

This activity is done by Form Ghana's GIS expert and Form international. Form international assists where necessary and ensures proper back-up of information.

Management objective	1. Economical sustainability
Indicator	1.2.1 – 1.2.4, 2.1.1
Verifier	Maps are annually updated, where the updates include at least the changes in planted sisal areas, planted forestry areas, block coding, roads, buffer zones and conservation areas.
Public report?	Yes

3.5 Sisal statistics

The key parameters for sisal growing and production are recorded by SFI Tanzania, and analysed and reported by Form international.

Management objective	1. Economical sustainability
Indicator	1.3.1, 1.3.2, 1.4.1 – 1.4.3
Verifier	Annual monitoring report with data on at least yield per hectare, stocking per hectare, production recovery, production of the various grades, and internal consumption of own produce.
Public report?	No

3.6 Nursery development

To keep track of nursery productivity, the Forestry Operational Manager is responsible for the delivery of a summary on nursery activities, which are processed and reported by Form international.

Management objective	1. Economical sustainability
Indicator	1.3.3
Verifier	Nursery data on production per species and type of planting material to be included in the annual monitoring report.
Public report?	Yes

3.7 Forestry trial measurements

Provenance trials have been planted in 2015. They were measured in the same year in order to obtain initial results upon which could be decided which clones should be ordered for further planting. Annually the provenance trial will be monitored to obtain more information on the species planted. When the trials are 3 years old they will be followed in normal Permanent Sample Plot monitoring.

Management objective	1. Economical sustainability
Indicator	1.3.4, 1.3.5

Verifier	Annual report on tree growth
Public report?	Yes

3.8 Fire

The company security officers monitor all activities that take place in and around the estates. These data are collected by HR and at the end of the year processed by Form international in the Annual Monitoring Report. Procedures are described in P 19 Firefighting and prevention.

Management objective	1. Economical sustainability
Indicator	1.3.9
Verifier	Statistics on fires in annual monitoring report
Public report?	Yes

3.9 Pests and diseases

Pests and diseases are discovered during regular plantation patrols, Permanent Sample Plot (PSP) monitoring or during other operations. Records are maintained for each infestation and will be collected by Form international at the end of the year, and included in the Annual Monitoring report. Procedures are described in P 18 Integrated pest management.

Management objective	1. Economical sustainability
Indicator	1.3.10
Verifier	Occurrence information on pests and diseases in annual monitoring report
Public report?	Yes

3.10 Protected species

Areas with high density of protected species are earmarked for conservation. Besides that protected species could also be promoted through (enrichment) planting. The newly earmarked areas (if any) and activities regarding protected species are described in the annual monitoring report.

Management objective	2. Ecological sustainability
Indicator	2.1.4
Verifier	Description of current status of protected species in annual monitoring report.
Public report?	Yes

3.11 Buffer zones and conservation areas

The status, location and size of the buffer zones and other conservation areas is analysed and reported upon in the annual monitoring report.

Management objective	2. Ecological sustainability
Indicator	2.2.1
Verifier	Description of current status of the buffer zones and conservation areas in annual monitoring report.
Public report?	Yes

3.12 Rainfall

Rainfall information is collected daily and internally reported upon monthly. Once every year the data are compiled into annual statistics for comparison with the other years

Management objective	2. Ecological sustainability
Indicator	2.2.2
Verifier	Statistics on rainfall in annual report
Public report?	Yes

3.13 Water quality

Water quality will be measured once a year in September/October according to the procedure described in P 08 Monitoring. Monitoring will be done by SFI Tanzania with assistance of Form international.

Management objective	2. Ecological sustainability
Indicator	2.2.3
Verifier	Annual monitoring report with data on quality of water of all relevant water bodies.
Public report?	Yes

3.14 Water consumption

Water is an important, but scarce resource for both the sisal production and the tree nursery. Understanding of the consumption is crucial for both water conservation and continuity of production. The water consumption will therefore be monitored on a regular basis.

Management objective	2. Ecological sustainability
Indicator	2.2.4
Verifier	Annual monitoring report with data on the water consumption quantity.
Public report?	Yes

3.15 Erosion and soil protection

Soil protection and erosion prevention is an important element of the quality management procedures of SFI Tanzania. Effectiveness of the protection measures is annually evaluated through visual observations and included in the annual monitoring report.

Management objective	2. Ecological sustainability
Indicator	2.3.1, 2.3.2
Verifier	Description of measures taken, and effectiveness based on visual inspections in annual monitoring report.
Public report?	Yes

3.16 Nutrient management

Good nutrient management is essential for a sustainable sisal production with the key parameters being nutrient removal through harvesting and nutrient addition through fertilisation activities. The annual monitoring report will contain information on nutrient removal, which is calculated through

harvesting data, and fertilisation activities. Activities are recorded by SFI Tanzania and analysed and reported upon by Form international.

Management objective	2. Ecological sustainability
Indicator	2.3.3
Verifier	Data on fertilization and nutrient removal in the annual monitoring report.
Public report?	No

3.17 Workforce

The main social impact of the company is through provision of employment. A summary on the size and composition of the workforce is included in the annual monitoring report.

Management objective	3. Social sustainability
Indicator	3.1.1
Verifier	Statistics on the current workforce in annual monitoring report.
Public report?	Yes

3.18 Intercropping

The impact SFI Tanzania has on the livelihood of surrounding communities through its intercropping program is monitored. The statistics on the intercropping program as well as intercropping activities are reported in the Annual Monitoring report.

Management objective	3. Social sustainability
Indicator	3.1.1
Verifier	Statistics on intercropping in annual monitoring report.
Public report?	Yes

3.19 Outgrowing

The impact SFI Tanzania has on the livelihood of surrounding communities through its outgrowing program is monitored. The statistics on the outgrowing program as well as outgrowing activities are reported in the Annual Monitoring report.

Management objective	3. Social sustainability
Indicator	3.1.4
Verifier	Statistics on outgrowing in annual monitoring report.
Public report?	Yes

3.20 Impact on surrounding communities

The impact SFI Tanzania has on the livelihood of people that live near and inside the estates is monitored in group discussions with surrounding communities. This information is analysed and updated every year. SFI Tanzania performs this monitoring, with assistance by Form international. Procedures are described in P 08 Monitoring. An overview of social development projects will be provided in a Community Development Plan.

Management objective	3. Social sustainability
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objective**Indicator** 3.1.2**Verifier** Results of social survey and details of social projects in annual monitoring report.**Public report?** Yes

3.21 Training and capacity building

Training and capacity building is organised by SFI Tanzania, and trainings are recorded on an annual training overview. Form international analyses and processed this in an annual (evaluation) report. See HR Training and Development Policy for more information.

Management objective 3. Social sustainability**Indicator** 3.1.3**Verifier** Overview of given trainings in annual monitoring report**Public report?** Yes

3.22 Informing the public

Annual stakeholder meetings are held to maintain good relations with all parties impacted by the company and vice versa. Minutes of each meeting are recorded and filed.

Management objective 3. Social sustainability**Indicator** 3.2.1**Verifier** Results of stakeholder meetings and details on other ways of informing the public in annual monitoring report.**Public report?** Yes

3.23 Grievances and complaints

Complaints are processed according to procedure P 04 Grievances and Complaints. A summary of every complaint is recorded by the HR manager on a complaints database. This file is analysed annually and reported in the annual monitoring report.

Management objective 3. Social sustainability**Indicator** 3.2.2**Verifier** Records on grievances and complaints in annual monitoring report**Public report?** No

3.24 Health and safety

Health and safety issues are recorded by the nurses at the clinics of SFI Tanzania. The data are collected by HR, and analysed and processed by Form international in the annual monitoring report. The information is used to increase work safety and to record illnesses and accidents.

Management objective 3. Social sustainability**Indicator** 3.3.1**Verifier** Medical records in annual monitoring report, which among others includes:
- most prevailing diagnoses
- injuries on duty

	- high risk positions
	- number of treatments dealt with on site, cases forwarded to hospital
	- report on specific health awareness programs
Public report?	Yes

3.25 Unauthorized activities

The security team records the incidences of illegal activities on the estates on a daily basis, which is collected by HR. Procedures are described in P 17 Prevention of illegal activities. Annually this information will be compiled and analysed.

Management objective	3. Social sustainability
Indicator	3.4.1
Verifier	Records on unauthorized activities in annual monitoring report
Public report?	Yes
