May 2018

Public monitoring report 2017

Annual report on social impact, environmental data and plantation development at SFI Tanzania Ltd.

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Document version	2
Date of document	23 May 2018

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1. Introduction

Management is a continuous process. This means that the management will be adapted over time related to changes in the field. To keep track of these changes, SFI and Form Tanzania apply a system of monitoring in which annually information is gathered. The process of planning, monitoring and evaluation supports a further fine-tuning of the management plan. The monitoring plan for 2017 was developed at the beginning of the year.

The report over 2016 was the first monitoring report giving insight in all relevant operational, ecological and social impact of the company. This report builds on this established baseline and incorporates the first refinements made in the past year. It informs on the various monitoring activities that have taken place the past year, and what has been learned from it. As more knowledge is gained on monitoring activities, these are further refined, and the setup of the monitoring system will be adapted accordingly.

This annual monitoring report is public to allow interested persons to be informed on the progress of SFI and Form Tanzania and the impact its activities have on the people and the environment at both estates.

2. Economical sustainability

2.1. Plantation establishment

In 2017 a total area of 117 hectares was planted with sisal at Kwamdulu estate. Additionally, beating up was done in the 2016 forestry area which experienced a high mortality due to severe drought. Figure 1 shows the land use classification of the planted areas at both estates.

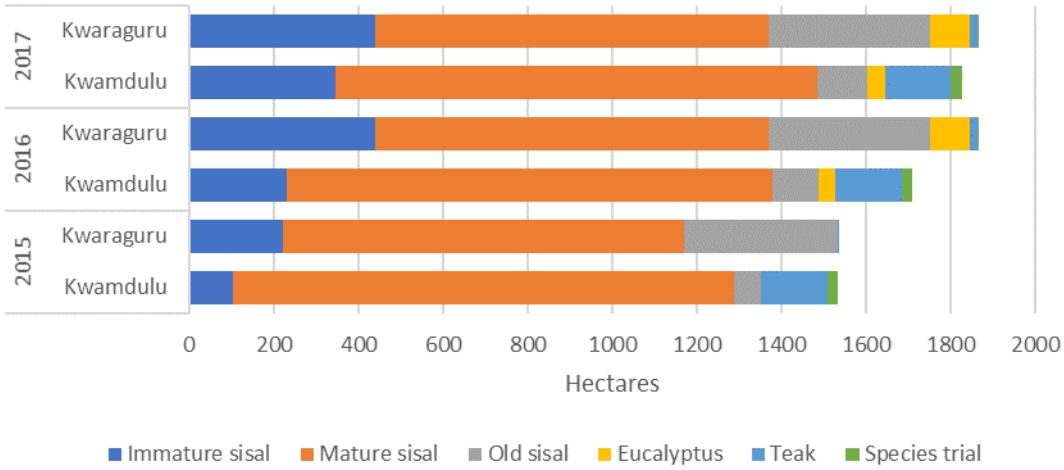


Figure 1 Planted areas at both estates

2.2.Plantation condition and regeneration

2.2.1. Sisal plantation productivity

The productivity of the sisal fields is estimated using the daily cutting reports per field. This is, after some calculations, displayed on maps. Figure 2 shows the sisal production per compartment at Kwaraguru estate.

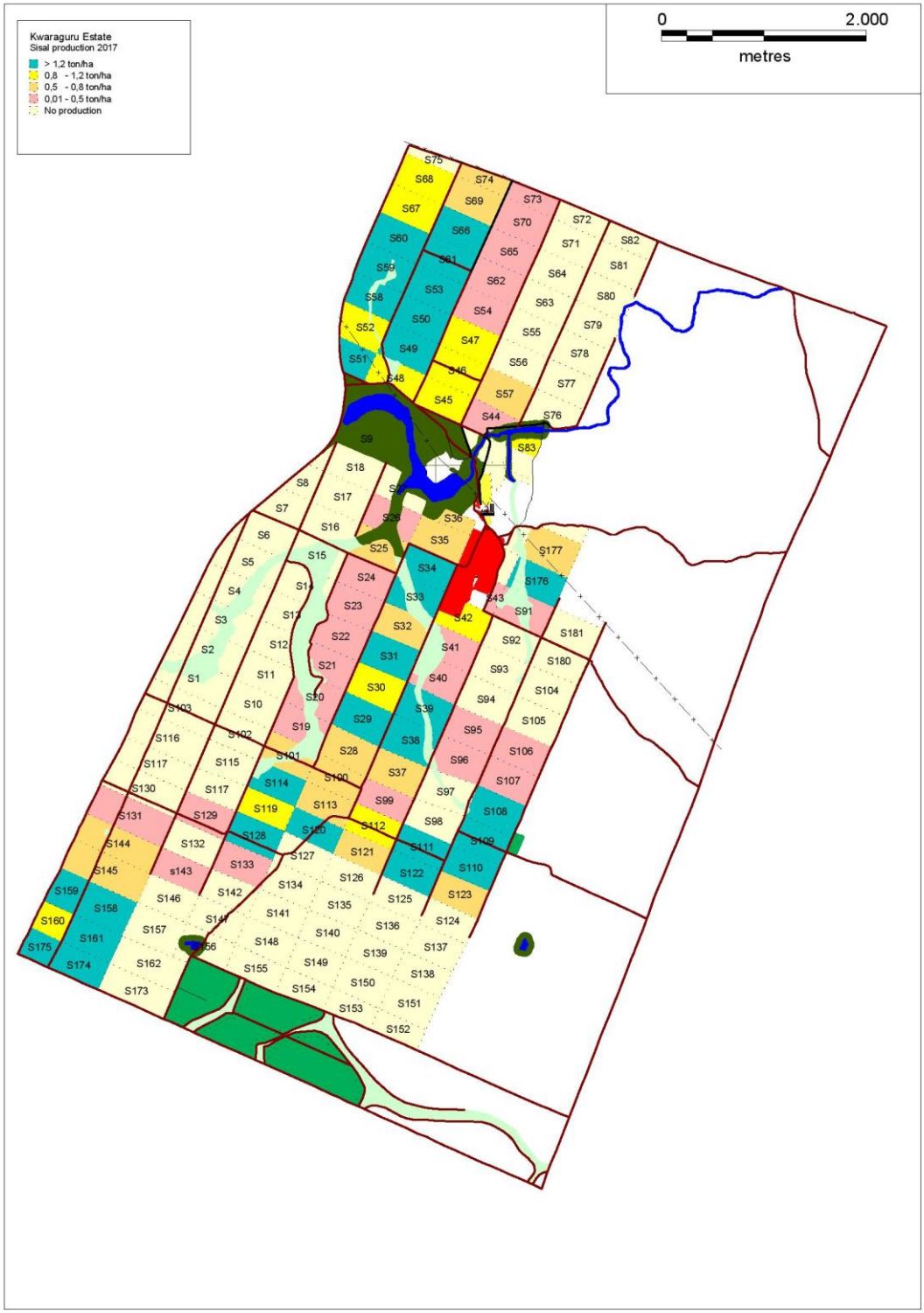


Figure 2 Sisal production per compartment at Kwaraguru estate

Figure 3 shows the sisal production per compartment at Kwamdulu estate.

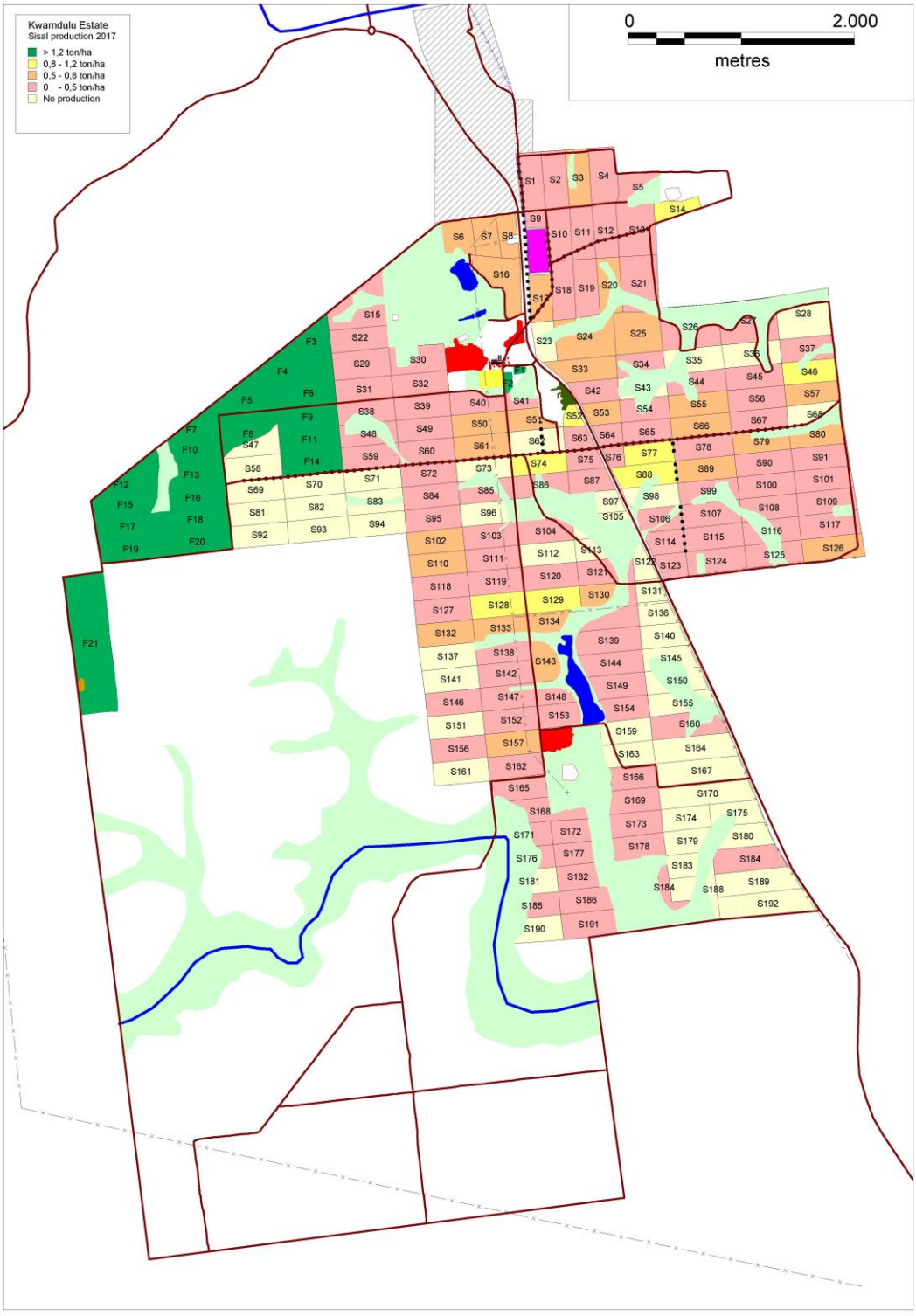


Figure 3 Sisal production per compartment at Kwamdulu estate

For both estates it can be observed that there are some sisal compartments with no production. This is mainly because of (1) the compartment is still immature, (2) the compartment is not planted, or (3) the compartment is a very old sisal compartment.

The conversion from number of metas to tons production is based on a best estimate. This estimate should be improved by further decortication testing per compartment, in order to establish a conversion per estate for each age class. Now a very rough estimate had to be used.

2.2.2. Forestry nursery development

The 95000 teak (*Tectona grandis*) stumps in the nursery at the beginning of the year were mostly used for beating up of the teak areas, and 19800 stumps were given to outgrowers. In 2017 the nursery produced 130000 new teak stumps, which will be used in the 2018 planting season.
The 9000 kapok (*Ceiba pentandra*) seedlings in the nursery at the beginning of the year were planted along the roads at Kwamdulu estate to counteract wind effect. Another 2200 seedlings were grown in the nursery, which will be planted along the roads during the 2018 planting season.
Some other species were grown in the nursery during the year, which will be planted either as a trial or in buffer zones during the 2018 planting season. In total 2000 *Dalbergia melanoxylon* seedlings, 1200 *Albizia versicolor* seedlings, and 1400 *Corymbia citriodora* seedlings were produced in the nursery.

2.2.3. Protection of the plantations against fire

During 2017 5 fires were reported on SFI estates showing a decline from the 14 fires reported during 2016. It is expected that this is mainly due to increased rainfall during 2017, and additionally the more stringent control in fire management.

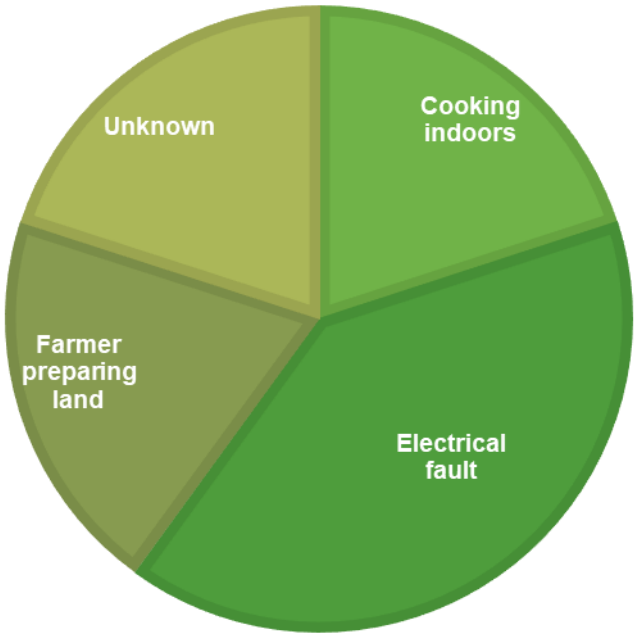


Figure 4 Causes of fires in 2017

2.2.4. Plantation health monitoring

Pest and disease recording commenced during the latter part of 2017. Additional monitoring and training is required during 2018 to ensure all pests and diseases are recorded. Table 1 depicts current information obtained – 7 pest and disease recording incidents stipulating: type of disease and scale of infestation.

Table 1 Pests and diseases recorded in 2017

Estate	Forestry/Sisal	Type of pest / disease	Scale of infestation
Kwamdulu	Forestry (Albizia versicolor seedlings)	Mildew fungus	Early stage of infestation
	Forestry (Eucalyptus)	Eucalyptus Beetle (Paraneleptes reticulata)	35 trees
	Sisal	Chlorosis	Small scale and mature stage of infestation
		Leaf spot disease	Small scale (early stage of infestation)
		Sisal Die Back Disease	Small scale (early stage of infestation)
		Sisal Weevil (Scyphophorus interstidialu)	Small scale (early stage of infestation)
Kwaraguru	Forestry (Eucalyptus)	Eucalyptus Termite Infestation	10 trees

3. Ecological sustainability

3.1.Plantation ecosystem

3.1.1. Extent of protected area

The protected areas are identified on the map and are mainly the remnant forest patches and buffer zones along the water courses. At Kwaraguru this is 101 hectares, of which the remnant forest at the big dam is the major portion. At Kwamdulu there are only 2 hectares remnant forest, which is the full conservation area of this estate. However, in the future the protected area will be further expanded with some other areas in currently unplanted portions of the estate, where the indigenous vegetation will be protected. Those areas will be selected as protected area that are not suitable for commercial plantation of either sisal or forestry.

3.1.2. Protection of flora and fauna species

In the biodiversity study of 2013 some endangered species were identified. Fauna is protected through the prohibition of hunting, while trees are protected as logging is also prohibited. Also, awareness of the protected states is raised for both company staff and surrounding communities through community meetings and trainings.
In addition to these protection measures the protected tree species Mpingo (*Dalbergia melanoxylon*) is planted at both estates, which will further strengthen the local population of this tree species.

3.2.Water conservation

3.2.1. Protection of indigenous forest and vegetation along water courses

Buffer zones are protected along water courses, which was further enforced in 2017. No farming or other activities were allowed in the buffer zones to protect the water courses and give indigenous vegetation the chance to develop. In 2017 action was taken to further establish buffer zones in those places where the buffer zones around the dams did not yet have a minimum width of 60m. In some areas the sisal was cut out, and the cleared area will be planted with indigenous trees in the 2018 planting season. This will help to protect the water from negative external influences, and it will also function of a corridor for local biodiversity.

3.2.2. Rainfall

Figure 5 shows the rainfall per estate. Contrary to the rainfall pattern in 2016, which was very unusual and capricious, the rainfall pattern in 2017 was more according to the normal patterns.

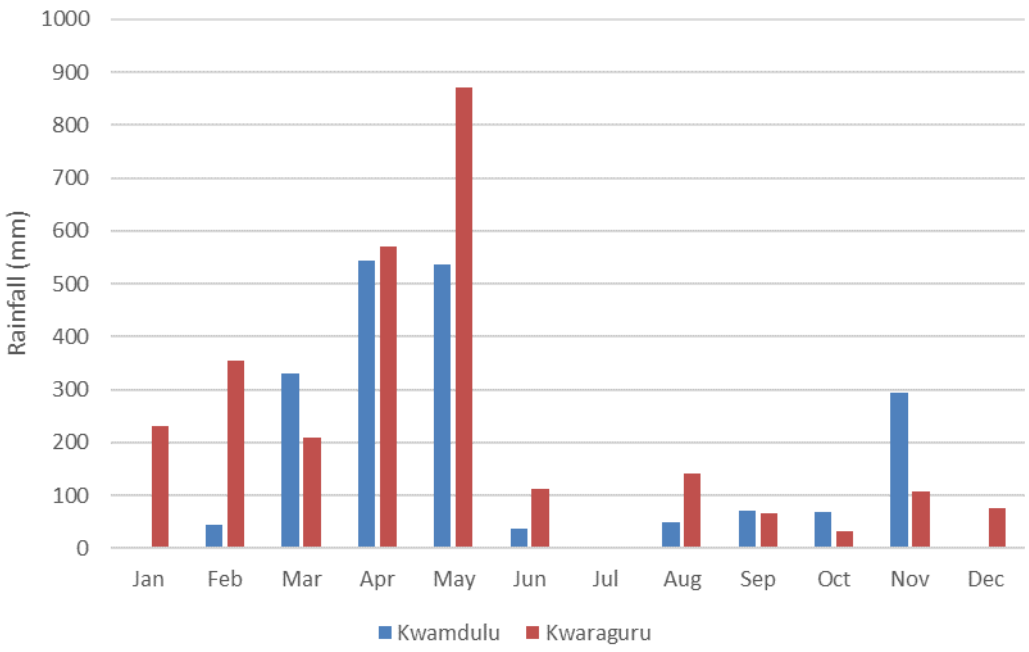


Figure 5 Rainfall per estate in 2017

It should be noted that there is a remarkable difference between the two estates, with the total rainfall at Kwaraguru estate being almost 800 mm higher than the rainfall at Kwamdulu estate. Figure 6 shows that this is an unusual difference, which should therefore be closely monitored as differences in rainfall patterns can be an important factor in land use planning. It should also be noted that there is only 1 measurement point per estate, while the variation in rainfall pattern within the estates is known. Additional measurement points per estate would improve the consistency of the data.

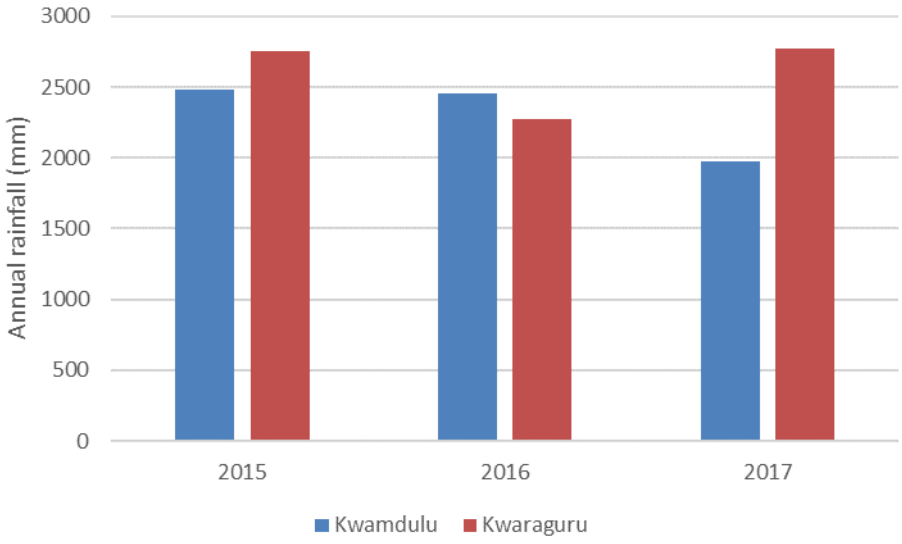


Figure 6 Annual rainfall per estate

3.2.3. Water quality

Monitoring of water quality was done in October 2017 and consisted of a full analysis of water samples taken at various points at the estates. Samples were taken by the SFI staff and analysed by the Water Quality Laboratory in Tanga. Sampling locations are presented on the maps in Annex I and Annex II. The same analyses were done as used for the water quality study performed in 2014, and consequently there is a baseline level for several sampling locations.

- For Kwamdulu: (1) Dam at Section II, (2) Mnyuzi stream, (3) Pangani river, and (4) the sisal waste water pond.
- For Kwaraguru: (1) Animal dam, (2) Big dam, and (3) Kabuku dam.

Two additional sampling locations (2 dugwells at Kwamdulu) were chosen as they are used by the local population to fetch water for domestic purposes. The test results for these locations show that the water is physically and chemically suitable for domestic purposes but needs disinfection due to the presence of faecal coli.
For all sampling locations the water had high colour and turbidity values. This indicates a relatively high amount of organic and inorganic matter in the water samples. For certain sampling points this could be influenced by management as buffer zones and erosion prevention would reduce influx of organic and inorganic matter in the water bodies. However, it is remarkable that also sampling points that have limited influence of operations (e.g. Animal dam at Kwaraguru estate, Mnyuzi stream at Kwamdulu estate) have relatively high pollution levels. The most polluted sources (Mnyuzi stream and Pangani river, Kwamdulu) are actually hardly affected by operations of the company. Therefore, while buffer zones and erosion control measures are further implemented no additional measures are recommended.
The waste ponds have, as expected, high levels of pollution, which demonstrates that (1) these ponds are needed for water treatment before it is discharged into the environment, and (2) additional treatment is necessary before waste water enters the ponds. Some measures have been taken in this regard at Kwamdulu estate, where treatment ponds were installed. Additional treatment steps are under investigation.

3.2.4. Water consumption

In October 2017 a study was done to get among others a better understanding of the water consumption of the decortication process. The water flow was measured for several days to have an accurate estimate of the water flow per hour. This is 48,6 m^3/hour at Kwaraguru estate, and 48,7 m^3/hour at Kwamdulu estate. However, since the sisal production per hour differs significantly, this will also significantly affect the water consumption per ton sisal. A timer was used for several months to determine the running hours of the water pumps used in the decortication process. Against the daily production a good estimate was obtained of the water consumption per ton sisal. For Kwaraguru estate this is 108,9 m^3/ton, and for Kwamdulu estate this is 241,3 m^3/ton. The figure for Kwaraguru is relatively close to the industry figures of 100 m^3/ton, while the figure for Kwamdulu is much higher. Investigations are currently carried out to recycle the water in order to reduce water consumption significantly.

Besides water consumption in the factory the other significant water consumer at Kwamdulu estate is the teak nursery. Consumption of the sprinkler installation in the nursery is recorded since June 2017. This is the major part of the consumption in the nursery, as there is also some consumption through manual watering. Figure 7 shows that the volume of monthly water consumption in the nursery is approximately 40% of the monthly volume of water consumption in the factory. This will vary with the rainfall pattern as rainfall will replace the need of watering.

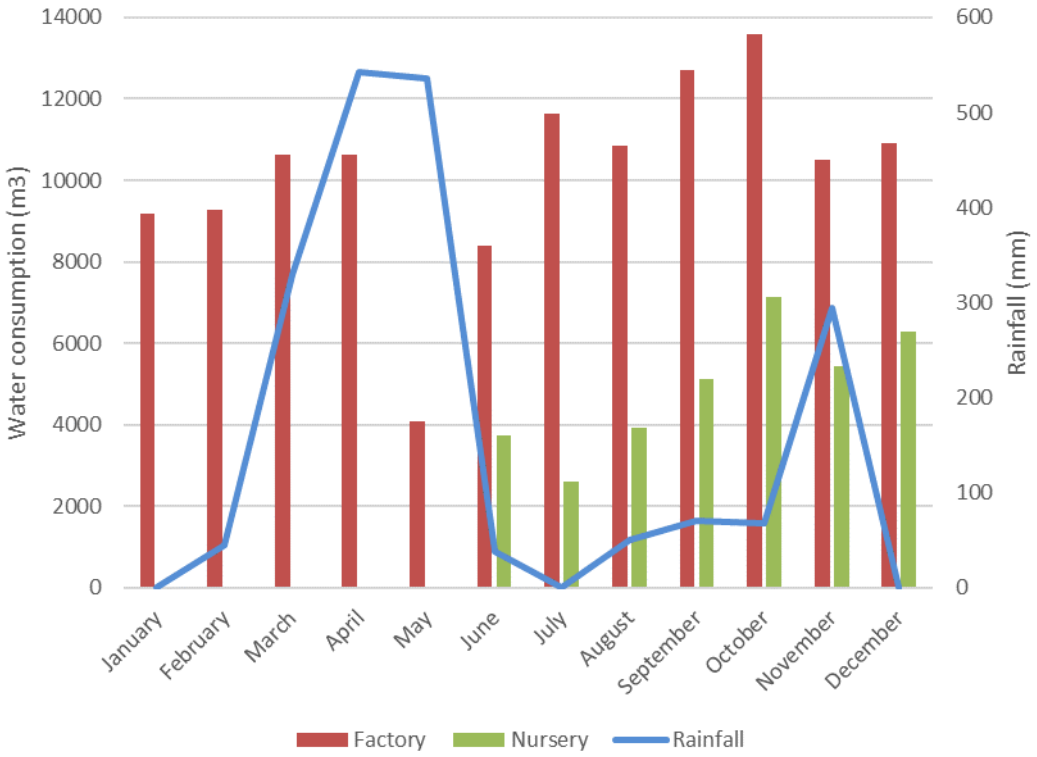


Figure 7 Water consumption at Kwamdulu vs. rainfall

3.3.Soil conservation

3.3.1. Erosion prevention

On sloped terrain erosion can be a problem, and for this reason we pay special attention to erosion on the roads and in the fields. As much as possible weeding is done mechanically and manually to ensure a permanent vegetative cover of the soil. In the permanent sample plots in the forestry erosion is checked every time the plot is measured, and in the sisal plantations this is monitored through regular field observations. No serious erosion was found in the fields in 2017. Along the roads some observations of erosion were made at both estates due to insufficient road maintenance. Additional equipment for road maintenance would be needed to improve erosion prevention measures along the roads.

4. Social sustainability

4.1.Social impact

4.1.1. Human capital

Provision of employment is one of the major social impacts of the company. Figure 8 shows that number of employees remained stable since 2016, with the total workforce being 1297 employees in 2016 and 1294 in 2017.

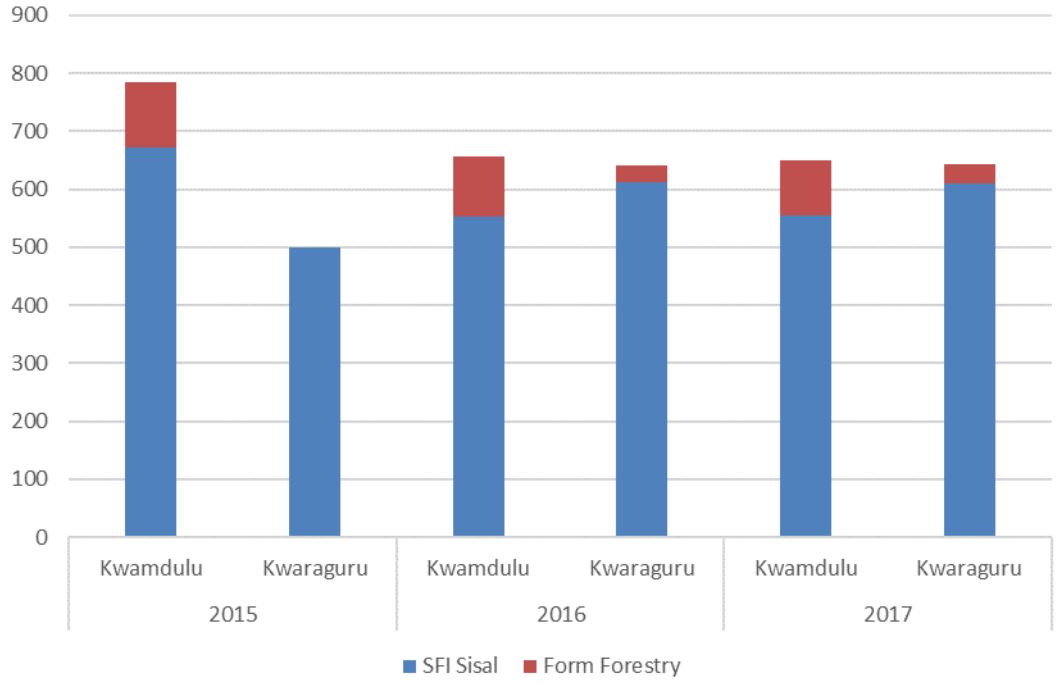


Figure 8 Development of employment

Besides absolute data on total workers also the composition of the labour force is of importance when talking about social impact. Figure 9 shows some key data on labour force composition. A few trends can be observed, particularly (1) the increase in permanent contracts, and (2) an increase in number of female workers.

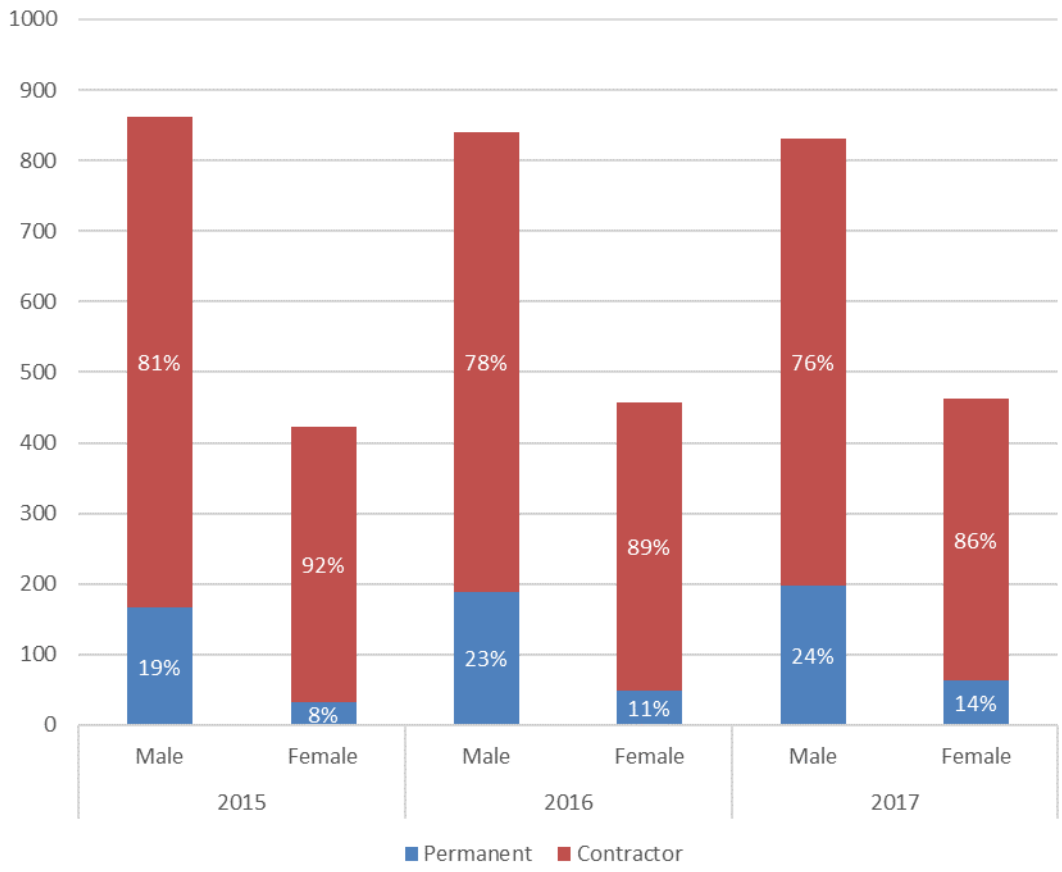


Figure 9 Composition of labour force

4.1.2. Farming and intercropping

Besides employment many people are dependent on the estate area for (subsistence) farming. In 2016 the company started with a farming and intercropping system. This system intends to provide local communities with access to farmland, while having a more effective control on land-use on the estates. Farming is considered to be on fallow land of the estates, while intercropping is farming within planted areas of sisal or forestry. Figure 10 shows that a significant increase in the number of farmer / intercropper agreements, which shows the further embedding of this system in the local context.

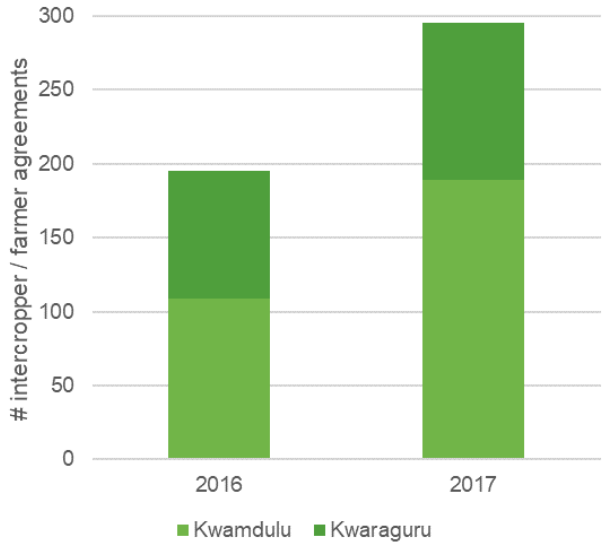


Figure 10 Number of signed farmer / intercropper agreements over time

The total area under farmer / intercropper agreements shows an even more significant increase (Figure 11), which is a proof of the importance of this practice for the local communities.

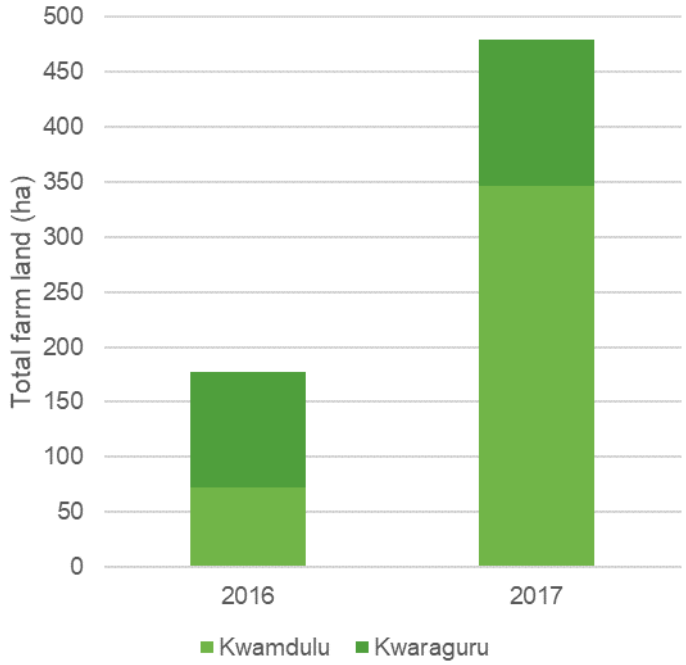


Figure 11 Farmland covered by farmer / intercropper agreements over time

Thus far it is not possible to make a clear distinction between intercroppers and farmers, which needs further monitoring.

4.1.3. Impact of operations on surrounding communities

During October 2017 social monitoring was conducted at Kwamdulu Estate. Social monitoring at Kwaraguru was postponed till January 2018 due to the serious incident in December 2017 but is included in this monitoring report as it forms part of the monitoring activities for 2017.

Social monitoring was conducted by the company's SHEQ Officer and included standard social monitoring, but the opportunity was also utilized to discuss the following important company information:

- Corporate Responsibility Policy
- Teak outgrower program
- Intercropping Contract Procedure
- Grievance and Complaints Procedure
- Illegal activities
- Community rights

Communities at both estates generally displayed an overall positive disposition towards the company and listed, among others, the following improvements since the inception of SFI Tanzania Ltd in 2013:

- Employment opportunities resulting in increased income
- Supply of clean drinking water
- Community contributions

- Social development and healthcare
- Intercropping and out-grower program
- Environmental changes and conservation

Some concerns were also raised, which were mostly related to requests for assistance in infrastructure development. Further, it was reported that the company should continue to assist the communities in social development and increase information dissemination regarding employment opportunities.

4.1.4. Training and capacity building for employees and inter croppers

At SFI and Form Tanzania training opportunities are offered as and when needed in order to enhance staff skills and attitude. Besides on the job trainings, workers and management of SFI and Form Tanzania have been trained formally on various subjects. Table 2 provides an overview of the training subjects and the number of training participants for the formal trainings provided in 2017.

Table 2 Training courses provided in 2017

Training course per entity	
FORM & SFI Tanzania	**727**
Cholera prevention, HIV Aids	496
Safety Policy	100
First Aid Training	58
Fire Safety	39
Annual First Aid Refreshment Course	18
Vehicle Checklist & Protected Tree Identification	13
Electronic Immunization Registry – Estate Clinics	3
FORM Tanzania	**5**
International Forestry Tour: South Africa	2
Standard Operations of Tree Breeding	1
Eco Toxicology and Pesticides Risk Assessment	1
FSC Introduction	1
SFI Tanzania	**61**
Sisal Grade specification: UG, SSUG, UF	36
Tow Specification Training	13
MSDS Training for Chemicals	7
Tow - Carding Machine	4
Certified Public Accountant	1
Grand Total	**793**

4.1.5. Outgrowing program

In 2015 Form Tanzania initiated an outgrowing program where people from local communities grow teak on their own plot using teak stumps supplied from the Form Tanzania nursery.

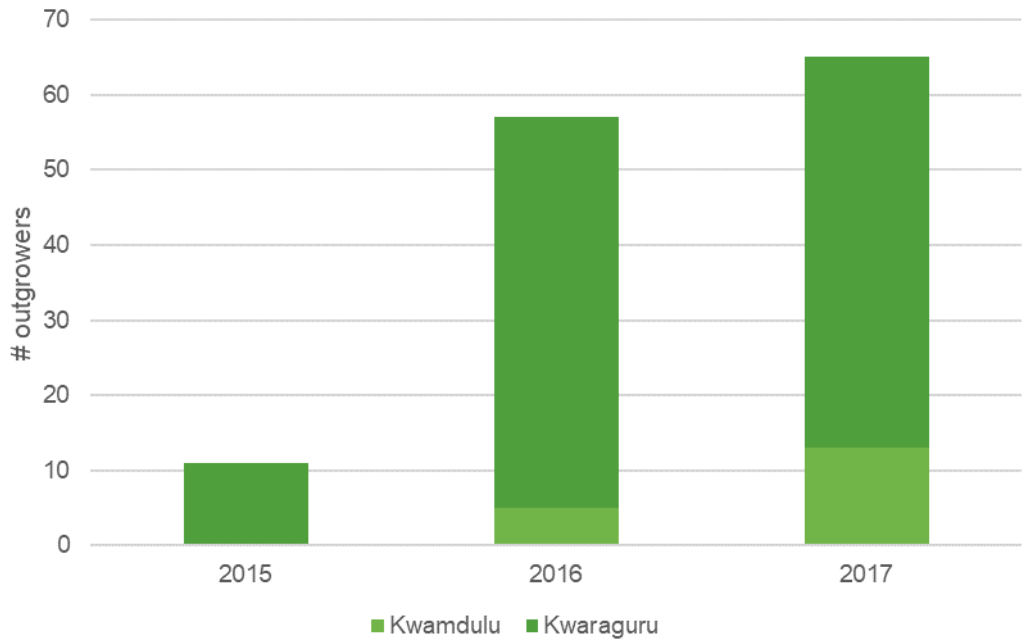


Figure 12 Number of outgrowers

As can be observed from Figure 12, the outgrower project started with 11 outgrowers in 2015. In 2016 an additional 46 outgrowers joined, with the majority at Kwaraguru estate. In 2017 8 additional outgrowers joined the program at Kwamdulu estate. This results in a total number of 65 outgrowers in the project. The 65 outgrowers represent together a planted area of 78 hectares.

4.2.Social interactions

4.2.1. Stakeholder activities

Regular stakeholder meetings are held to maintain good relations with all parties impacted by the company and vice versa. Minutes of the meetings are recorded and filed. Figure 13 gives an overview on the meetings held with the various stakeholder categories. It should be noted that the categories contain all kind of stakeholders, such as authorities, communities, suppliers and industry.

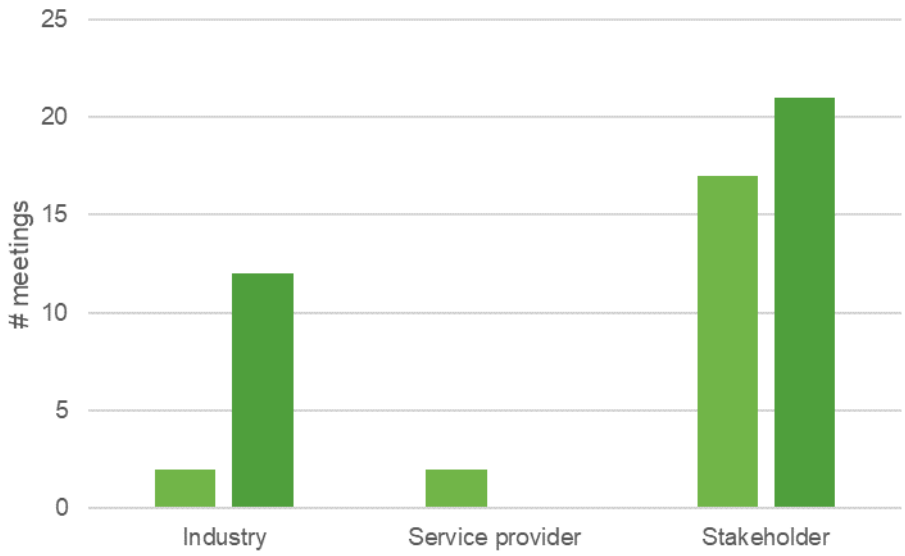


Figure 13 Stakeholder meetings conducted in 2017

In 2017 only 1 community meeting was conducted besides the social monitoring (see paragraph 4.1.3). It is recommended to perform these meetings more often in order to strengthen the relationship and mutual understanding with the communities.

4.3.Health and Safety

4.3.1. Worker health

Although health is primarily a personal matter and the clinics serve as a benefit to SFI employees, continuous efforts are implemented to improve the health of the workers and their families. For this purpose, SFI Tanzania Ltd. is collecting anonymous data from the clinics at both estates. This gives more insight in the health and work-related injuries of the company's labour force and their families, and will help to direct improvement programs implemented by the company. Since data cannot be related to individuals; the data are counted in number of consults. 5173 Medical cases were reported at SFI Estate Clinics during 2017. Figure 14 depicts number of cases per estate from 2015 to 2017.

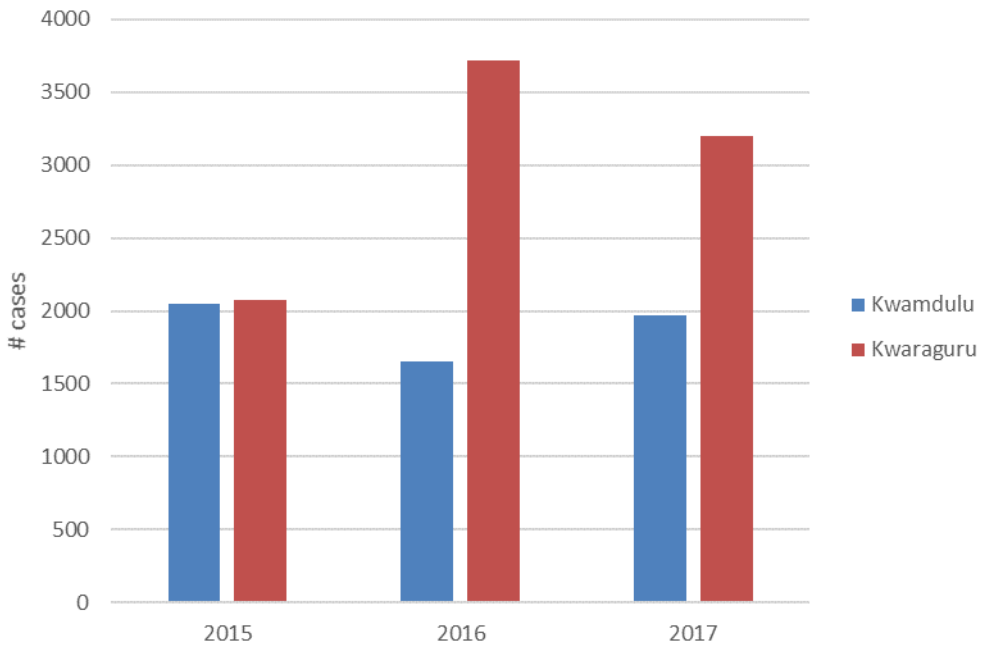


Figure 14 Medical cases over time at both estates

Table 3 shows the most prevalent diseases recorded in 2017. Important to note is that:

- Urinary Tract Infections (UTI) declined from 674 in 2016 to 360 in 2017, which is expected to be a direct reflection on continuous hygiene training and water purification factories.
- Malaria showed a decline of 2508 in 2016 to 1117 in 2017
- Acute respiratory infections showed a decline of 539 in 2016 to 338 in 2017
- Diarrhoea was in the top 5 in 2016, but number 9 in 2017 which is expected to reflect the hygiene measures taken.

Table 3 Top-5 most prevalent diseases recorded in 2017

DISEASE	No CASES	CAUSE
Malaria	1117	Waterborne parasite
Bronchitis	478	Lung infection - contagious
Urinary tract infection	360	Hygienic infection - contagious
Acute respiratory infection	338	Lung infection
Musculoskeletal Pain	250	Body pain

4.3.2. Injuries on duty

Kwamdulu estate reported 167 and Kwaraguru estate reported 52 injuries on duty respectively, with the majority in the Bush knife cleaning and Sisal cutting job categories (Figure 15). This is a direct relation to the lack of personal protective equipment. Important to note that Personal Protective equipment was issued during the 4th quarter and a decrease of injuries is expected during 2018 in combination with training initiatives. However, this will be closely monitored as there is also a remarkable difference between the estates which needs further investigation.

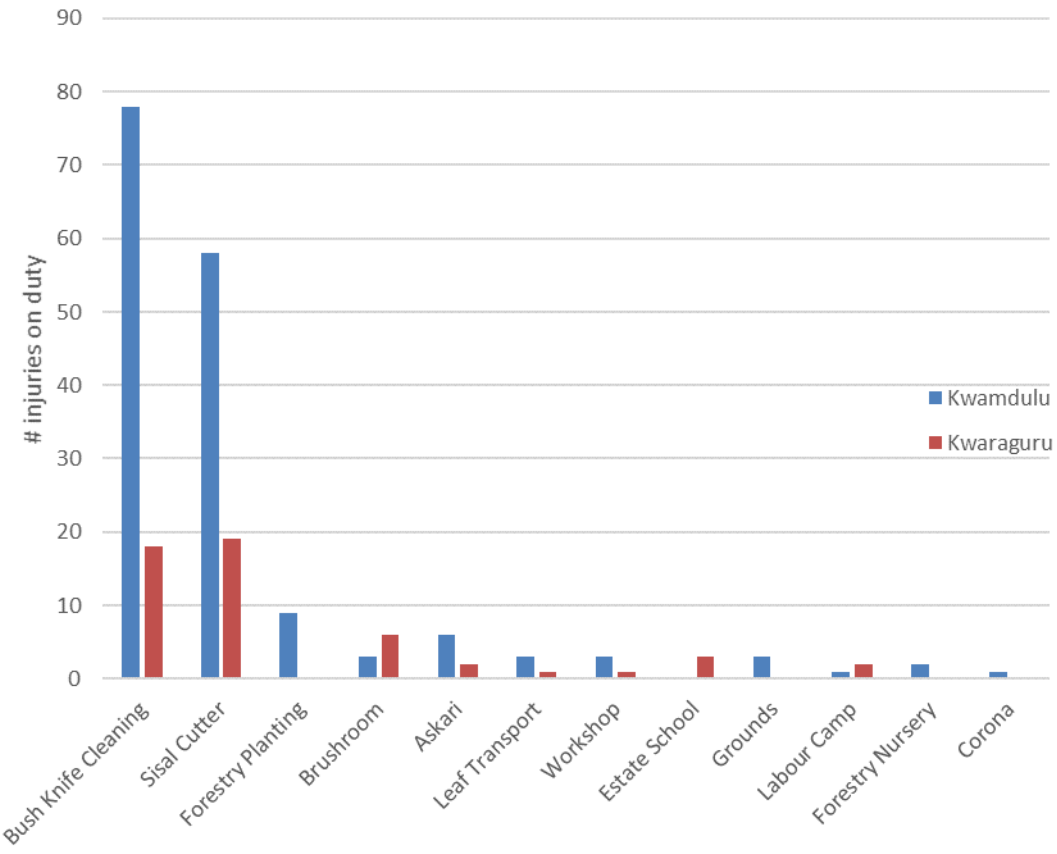


Figure 15 Reported Injuries on Duty in 2017

4.4. Unauthorized activities

4.4.1. Prevention of unauthorized activities and incidents

During 2017 a total of 30 illegal activities and 6 incidents was reported on SFI estates. Incidents are reported following the same procedure as illegal activities. Figure 16 shows the subdivision of illegal activities and incidents in 2017.

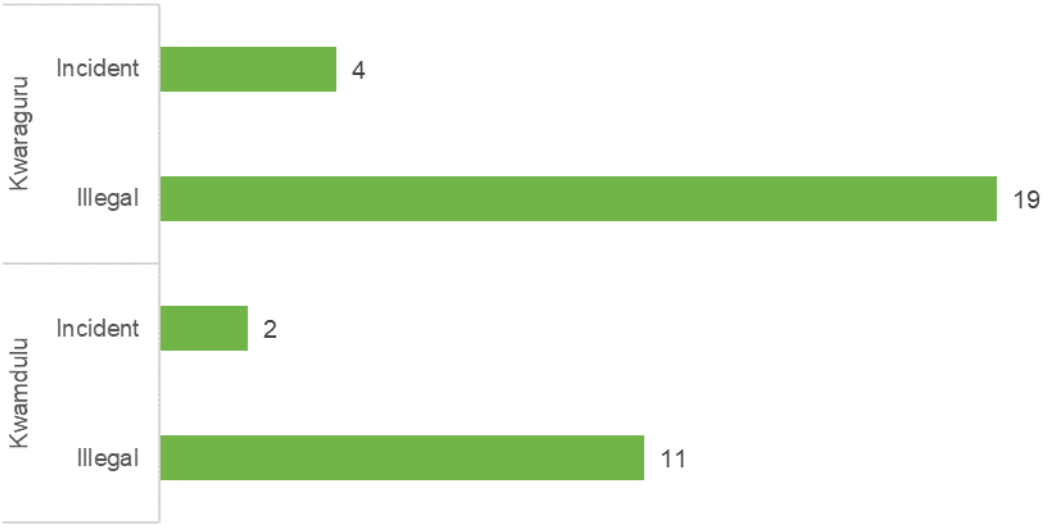


Figure 16 Illegal activities and incidents 2017

A comparison between 2016 and 2017 shows a slight decrease at Kwamdulu compared to a considerable increase at Kwaraguru estate (Figure 17). This is due to more stringent control of illegal activities and the subsequent capturing and monitoring of the Illegal Activities procedure. The implementation of the procedure has been more successful at Kwaraguru whereas Kwamdulu still requires additional monitoring. Illegal activities and incidents are reported and managed immediately. In the event of illegal activities, additional training and measures are put in place to ensure more stringent controls.

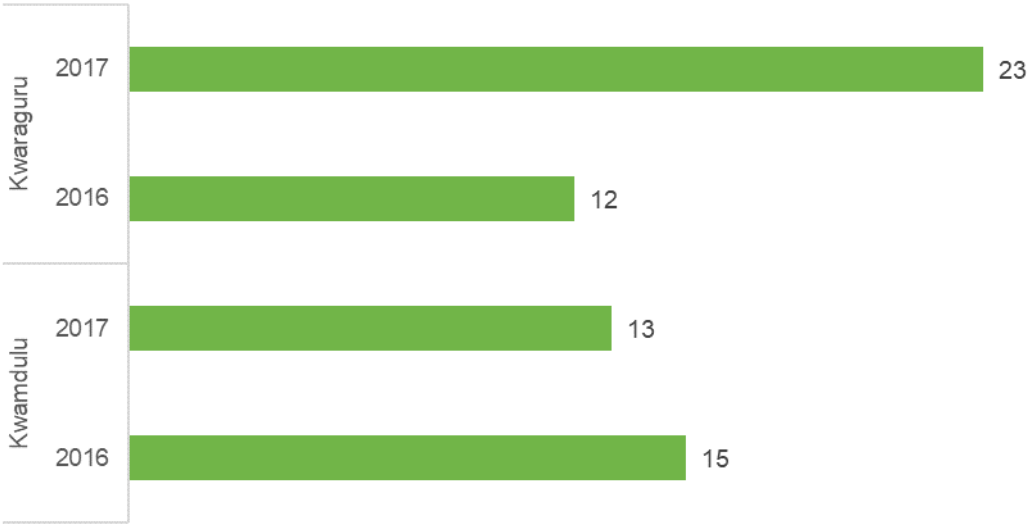


Figure 17 Illegal activities and incidents 2016 - 2017

Figure 18 details the list of 2017 illegal activities recorded on SFI Tanzania estates.

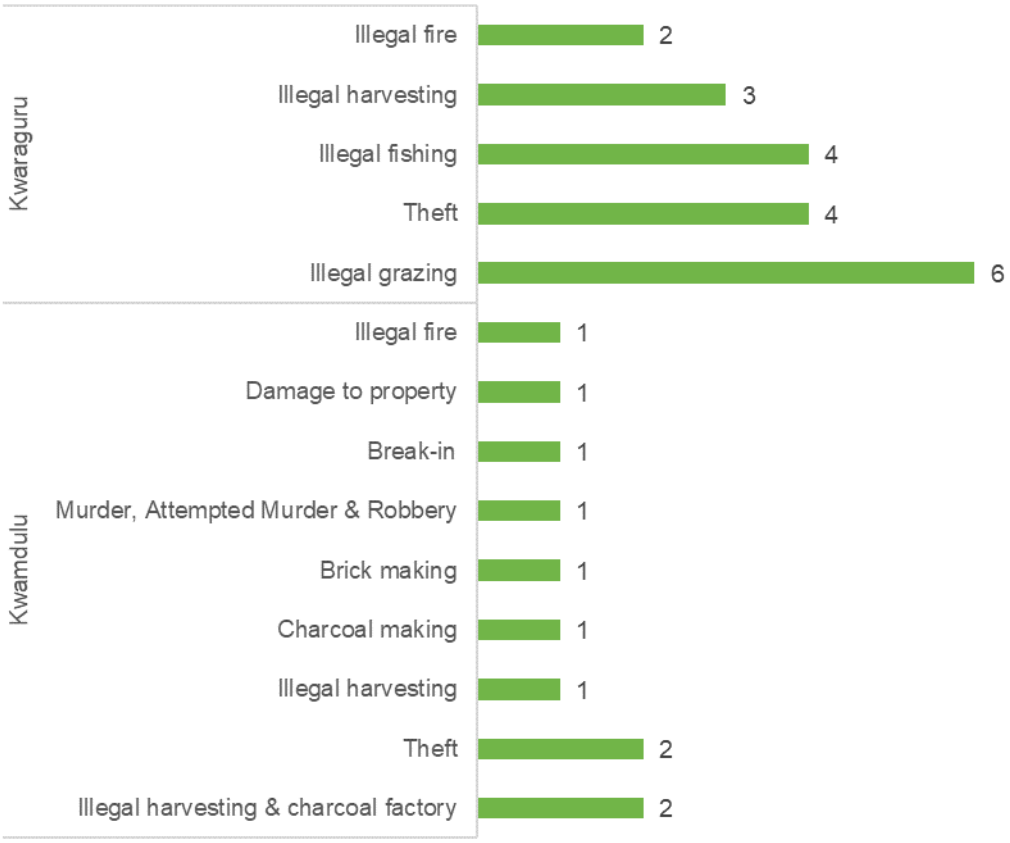


Figure 18 Detail of illegal activities recorded in 2017 at SFI Tanzania estates

5. Conclusions and recommendations

Based on the data presented in this report valuable information is obtained on many relevant aspects of the company's management. Further implementation and improvement of the monitoring system will yield more valuable information that can be used to direct future management actions. The monitoring system is still new and needs further maturation. A few findings of this report are highlighted:

Fertilisation

High priority should be paid on fertilisation, because it is affecting many elements of the company's activities. Fertilisation will increase field productivity (paragraph 2.2.1) as the soils are facing depletion due to decades of sisal harvesting without fertilisation. The compartment details provided from the monitoring system already allow for targeted fertilisation based on current productivity levels. Fertilisation will result in bigger leaves, which will improve production recovery and reduced energy costs per ton fibre.

Decortication tests

The current information also demonstrates the need for improved and more regular decortication tests. This will help to establish recovery figures per compartment (paragraph 2.2.1), and improve understanding of the various losses in the process from plant to fibre.

Water consumption for factory and nursery

The current water consumption for both the factory and the teak nursery are very high. Recycling of water should be given higher priority to minimize consumption, reduce water pumping costs (electricity), and reduce dependency on natural water bodies (paragraph 3.2.4).

Water for consumption

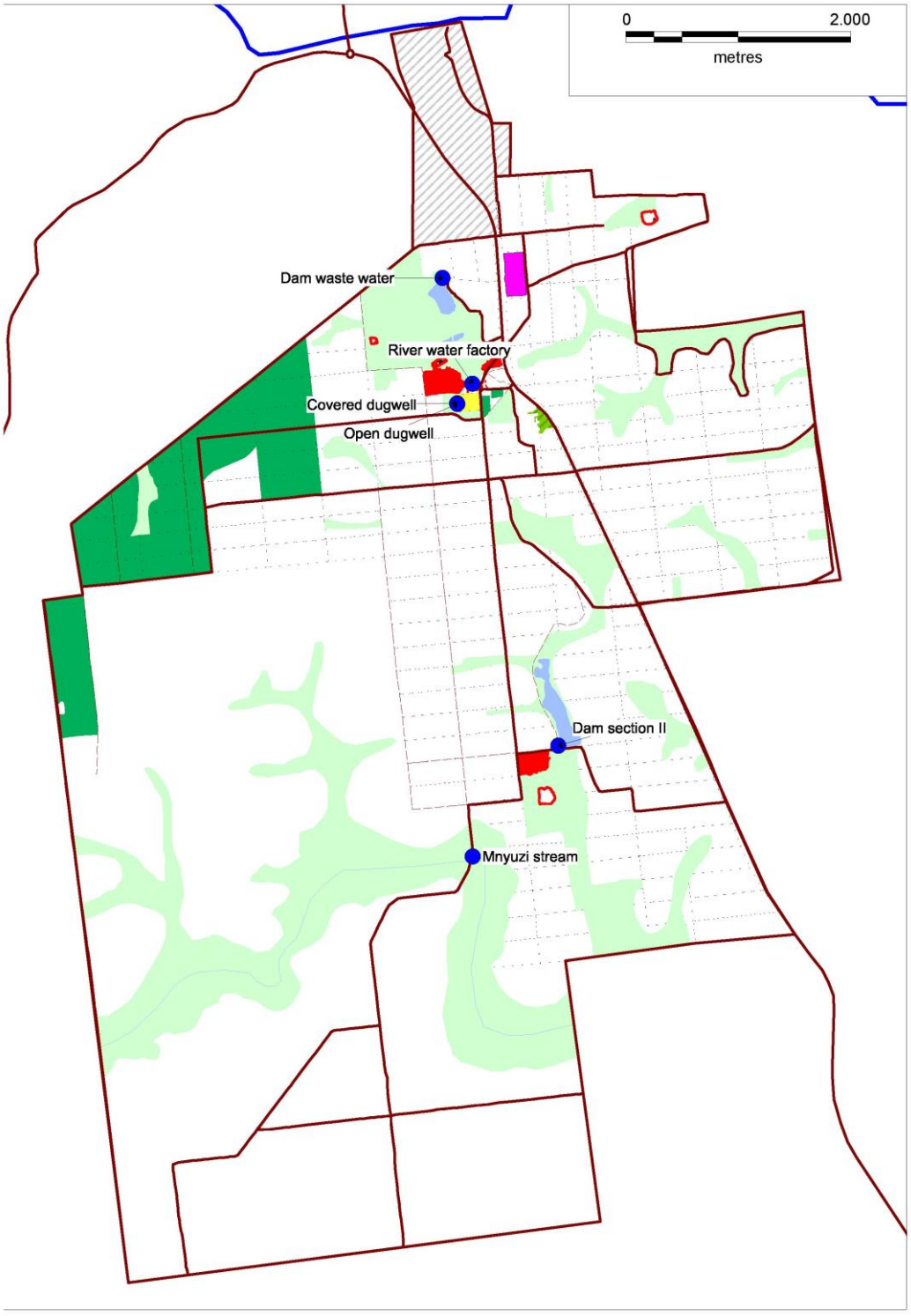
The tests confirm that all water bodies on the estates are not suitable for human consumption without desinfection. Therefore, a major step was taken with the construction of water purification plants for both estates. This is also reflected in the health and safety statistics, where a reduction in the prevalence of Urinary Tract Infections and diarrhoea was observed as well as in the absence of cholera (paragraph 4.3.1).

Social impact

The company is having a significant positive social impact (chapter 4) through, among others, (1) provision of employment in a safe and healthy environment, (2) farming and intercropping activities, and (3) an outgrowing program. Further actions, such as community meetings, should be undertaken to strengthen the relationship with the local communities.

Annex I: Water sampling locations Kwaraguru

Annex II: Water sampling locations Kwamdulu



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