

South African Forestry Assurance Scheme

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Forest Management Standard

SAFAS

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1. Introduction

This standard is part of the South African Forestry Assurance Scheme (SAFAS) and sets out the criteria for forest certification. It was a goal of SAFAS to develop a standard that could be used to measure responsible plantation forestry in South Africa and to ensure that the requirement absolutely reflect sound forestry practice. A good forestry standard, audited by a competent auditor should tell the manager and owner where the weaknesses and strengths of the operation lie. At the same time the standard needs to incorporate a global vision of sustainable forestry in order to communicate these values to global markets. The SAFAS working group was able to mobilize the 18 years of forestry certification experience in South Africa to come up with a standard that is concise, clearly articulated and yet comprehensive.

The standard is also specifically designed to accommodate the smaller-scales of forestry (smallholders): the owner managers and communally owned plantations have up to now found certification prohibitively costly and complicated.

2. History

The SAFAS standard is based on the South African Principles, Criteria, Indicators and Standards Framework (PCIS).

The United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro (1992), together with conventions on biodiversity, climate change and desertification, called on governments to pursue, in cooperation with special interest groups and international organisations, the formulation of scientifically sound criteria and guidelines for the management, conservation and sustainable development of all types of forests.

South Africa acknowledged these international calls for sustainable forest management in its National Forestry Action Programme (NFAP) (1997). The National Forests Act (Act No. 84 of 1998) (NFA) binds forestry operation for principles of sustainable forest management and promotes the development of a set of PCIS for sustainable forest management. The PCIS have been developed and revised as a result of intensive stakeholder consultation. The first edition was commissioned in 2001. This version was reviewed and revised in 2007/2008, and again in 2015/2016.

In 2016 a steering committee was established to manage the process of using the PCIS to develop an auditable standard to submit to the PEFC for endorsement and to ensure the procedure followed adhered to the PEFC standard development requirements.

3. Endorsement by the PEFC

The Programme for Endorsement of Forest Certification (PEFC) is the world's largest forest certification system and has had the most success in the certification of small-scale forestry operations. For this reason, SAFAS chose PEFC for endorsement.

The PEFC was founded in 1999 by national forest organizations from eleven countries in response to the specific requirements for small and family forest owners. It is designed as an international umbrella organization providing independent assessment, endorsement and recognition of nationally developed forest certification systems.

PEFC has developed a mechanism to enable the independent development of national standards tailored to the political, economic, social, environmental and cultural realities of the respective countries while at the same time ensuring compliance with internationally-accepted requirements and global recognition.

4. References

The SAFAS Scheme comprises the following documents:

- 3.1 SAFAS 1:2017 SAFAS Council Statutes
- 3.2 SAFAS 2:2018 Standard Setting Procedure
- 3.3 SAFAS 3:2017 Standard Development Report
- 3.4 SAFAS 4:2018 Forest Management Standard
- 3.5 SAFAS 5:2018 Group Certification Procedures
- 3.6 SAFAS 6:2018 Certification and Accreditation Procedures
- 3.7 SAFAS 7:2018 Notification of Certification Bodies
- 3.8 SAFAS 8:2018 Issuance of PEFC Logo use licenses by SAFAS
- 3.9 SAFAS 9:2018 Dispute resolution procedures
- 3.10 PEFC ST 2002:2013 Chain of Custody Standard
- 3.11 PEFC ST 2003:2012 CB Requirements for Chain of Custody
- 3.12 PEFC ST 2001:2008 Logo Usage

5. Background to South African forestry

Commercial forestry in South Africa is almost entirely based on plantations of fast growing exotic *Pinus*, *Eucalyptus* and *Acacia* species. Timber plantations were mainly established in non-forest ecosystems, replacing mostly grasslands and fynbos. There are about 1.3 million hectares of timber plantations in South Africa and expansion is controlled though strictly enforced licensing requirements. Over the last 15 years the area under plantation forestry has in fact decreased as trees have been removed from ecologically sensitive or from commercially unviable areas. Indigenous forests cover only about 0.5 million hectares and are legally protected from any exploitation, although limited harvesting takes place under strict licensing conditions.

The South African forest management standard is focussed on plantation forestry of all commercially grown species present in South Africa. It is applicable to all scales and ownership categories of plantation forestry. Indigenous forests are not covered in this version of the standard. Indigenous forests are strictly protected by the National Forests Act (Act 84 of 1998) and very little timber harvesting takes place. Furthermore, the approach was to make the SA Standard very specific for the plantation context and accommodating indigenous forests would compromise this goal. If the need arises the standard will be expanded to include indigenous forest harvesting.

For more information on South African forestry visit <http://forestryexplained.co.za/>

6. Ownership and scale

As of 2017, 83% of the plantations were privately owned. Of this, 75% were owned by large-scale corporates, 21% owned by medium scale timber growers, most of which would be owner-managers and 4% were small-scale timber growers, the majority occurring in traditional authority areas.

The 17% publically owned plantation land is split up between the Department of Agriculture, Forestry and Fisheries (DAFF) and SAFCOL through its subsidiary, Komatiland Forests. A small percentage is owned by local municipalities. South Africa is going through a process of land reform focused on restitution, land tenure reform and land redistribution. As a result, much of farming and forestry land is changing hands which will change future ownership patterns.

7. Scope

Certified organizations and contractors that work within certified forests must be assessed against all relevant indicators. In some cases, verifiers are differentiated based on scale, ownership/management type or land tenure system. Verifiers state the preferred method of demonstrating compliance with an indicator, but are not mandatory, meaning that if there is an alternative method of demonstrating compliance, this can be used at the discretion of the auditor.

For verifiers which are specific to a certain category, this is indicated against the verifier and if no differentiation is made, then it is assumed that the verifier applies to all operations.

Guidance is provided in cases where additional information is deemed to be necessary or useful to understand and implement the requirement and is not mandatory.

The following are categories against which verification may be differentiated:

Corporate (CO): Large plantations with multi-level management structures and corporate ownership. Most corporate plantations are greater than 10 000 ha.

Owner manager (OM): These plantations have an owner that is also the manager. These are typically below 10 000 ha in extent. We usually refer to these holdings as timber farms, but they may also be mixed farming operations. In South Africa OM operations are almost always part of a Group Scheme.

Family Forestry (FF): These are owner manager operations where all the work is done by family members. These are typically small-scale forestry operations on traditional authority land. In South Africa, FF operations will always be part of Group Schemes. If FF requirements are stated in the verifier, then OM requirements apply to FF.

Traditional Authority (TA): These are communal areas, where land rights are accorded to people by the traditional authorities and where specific legislation is in place to protect informal land rights.

With respect to Group Schemes, where requirements can be met at group level, this is indicated under the verifiers.

The standard does not specifically make size differentiations, but in the South African context owner-managers range between a few hectares and 10 000ha. The timber may be part of a mixed farming operation or exclusively forestry. The concept behind having OM as a specific category is that the owner is able to make the management decisions without a chain of command or dilution of responsibility. In most instances the OM can be relied on to make the correct decisions because the impacts of those decisions are directly felt. The OM may own more than one farm, but typically lives and works on one of the timber farms.

8. Land reform

South Africa is going through a process of land reform focused on restitution, land tenure reform and land redistribution. The result is that significant areas of farming and forestry land are changing hands affecting ownership patterns. There will be many new entrants into the plantation forestry industry. It is envisaged that SAFAS will be a valuable tool to incentivize and assist these timber growers improve their forestry practice.

9. Indigenous people in South Africa

Collectively, the Indigenous Peoples in South Africa, known as Khoe-San, comprising the San and the Khoekhoe, are estimated to number about 100,000 individuals (Schlebusch, 2012) or 0.2% of the national population. Of these, the majority live in arid areas of the country

unsuitable for forest plantations. The main San groups are the Khwe and Xun who reside mainly in Platfontein near Kimberley, and the ǀKhomani San in the Kalahari.

The only surviving San within parts of the country suitable for forestry are descendants of the Drakensberg San, famous for the rock paintings made by their ancestors up until the middle of the last century. Their original language is extinct. Today these comprise a small pocket of ǀXegwi San living on farms in Mpumalanga Province near Lakes Bananger and Chrissie and around the towns of Lothair and Carolina. Their numbers are not known, though estimates run between 30 and 100 adults. In addition, individuals with claims to San descent live amongst non-indigenous communities in the Drakensberg mountain regions of both Kwa-Zulu Natal and Eastern Cape (so called 'Secret San', Prins 2009). Khoekhoe groups comprise the Nama, Koranna, Griqua and a number of smaller 'revivalist' groups who claim a Khoekhoe heritage. Nama, Koranna and some Griqua communities reside outside of forestry areas in the Northern Cape and Free State. A small number of Griqua communities and other small groups or 'tribes' that self-identify as 'KhoiSan' (the Gamtkwa, Gamtabakwa Khoi) live in certain areas surrounding forestry land in the Southern and Eastern Cape. The majority of these have been assimilated within local 'non-indigenous' communities.

The rights and interests of these remnant and revivalist groups and individuals cannot easily or usefully be separated from the rest of the local community members. Furthermore, South Africa has a robust Constitution and Bill of Rights protecting all citizens, as well as a land reform programme aimed at redressing the legacy of centuries of land dispossession and inferior land rights. For these reasons, the standard does not treat indigenous people as separate from other disadvantaged people in communities.

10. Structure of the SAFAS Standard

The requirements of the SAFAS Standard are arranged into 7 Principles These are as follows:

1. Planning, Legal Compliance and Chain of Custody
2. Engagement with Stakeholders and the Protection of Cultural Heritage
3. Protection of Worker's and Human rights
4. Protection of Soil, Carbon and Water
5. Conservation of Biodiversity and Ecological Integrity
6. Forest Health and Protection
7. Economic Sustainability

Under each principle are a number of Criteria, plus the indicators which are used to measure compliance with the criteria. Under the indicators are the verifiers which guide the auditor to the information sources that provide evidence of compliance. Where additional guidance would aid managers and auditors it is provided under the verifiers. Where there is legislation that covers this requirement, it is included in verifiers or guidance, depending on where it is most relevant. The full set of laws, regulations, nationally ratified international treaties, conventions and agreements related to plantation forestry are included in Appendix 1.

11. Glossary of terms

Affected stakeholder	<p>Any person, group of persons or entity that is or is likely to be subject to the effects of the activities of a management unit. Examples include, but are not restricted to (for example in the case of downstream landowners), persons, groups of persons or entities located in the neighbourhood of the management unit. The following are examples of affected stakeholders:</p> <ul style="list-style-type: none"> · Local communities · Indigenous peoples · Workers · Forest dwellers · Neighbours
Alien species	<p>A species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce. {Convention on Biological Diversity (CBD), Invasive Alien Species Programme. Glossary of Terms as provided on CBD website}</p>
Best available information	<p>Data, facts, documents, expert opinions, and results of field surveys or consultations with stakeholders that are most credible, accurate, complete, and/or pertinent and that can be obtained through reasonable* effort and cost, subject to the scale* and intensity* of the management activities and the Precautionary Approach*.</p>
Biological control	<p>A method of controlling pests such as insects, mites, weeds and plant diseases using other organisms. It relies on predation, parasitism, herbivory, or other natural mechanisms, but typically also involves an active human management role.</p>
Biodiversity	<p>The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems. {Convention on Biological Diversity 1992, Article 2}</p>
Broad vegetation types	<p>Categories of vegetation type derived from the bioregions in Mucina and Rutherford (2006)</p> <p>The following broad vegetation units* that are likely to occur in the plantation growing areas of South Africa:</p> <p>Savannah: All types</p> <p>Grasslands: Dry Highveld Grasslands, Mesic Highveld Grasslands, High Altitude Grasslands, Sub-Escarpment Grasslands, Indian Ocean Coast Grasslands.</p> <p>Fynbos: Proteoid, Ericaceous, Restioid Asteraceous, Shrubby and Grassy.</p>

Connectivity	A measure of how connected or spatially continuous a corridor, network, or matrix is. The fewer gaps, the higher the connectivity. Related to the structural connectivity concept; functional or behavioural connectivity refers to how connected an area is for a process, such as an animal moving through different types of landscape elements. Aquatic connectivity deals with the accessibility and transport of materials and organisms, through groundwater and surface water, between different patches of aquatic ecosystems of all kinds. {Based on R.T.T. Forman. 1995. Land Mosaics. The Ecology of Landscapes and Regions. Cambridge University Press}
Conservation zones	Defined areas that are designated and managed primarily to safeguard species, habitats, ecosystems, natural features or other site-specific values because of their natural environmental or cultural values.
Community	A group of people who, regardless of the diversity of their backgrounds, that have been able to accept and transcend their differences, enabling them to communicate effectively and openly and to work together toward goals identified as being for their common good. This includes people regardless of their origins and indigenous people.
Customary rights	Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit
Dispute	An expression of dissatisfaction by any person or organization presented as a complaint to The Organization*, relating to its management activities.
Ecological integrity	Ecological integrity: A measure of how intact or complete an ecosystem is.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. {Convention on Biological Diversity 1992, Article 2}
Ecosystem services	The benefits people obtain from ecosystems. These include: a. provisioning services such as food, forest products and water; b. regulating services such as regulation of floods, drought, land degradation, air quality, climate and disease; c. supporting services such as soil formation and nutrient cycling; d. and cultural services and cultural values such as recreational, spiritual, religious and other nonmaterial benefits.
Engaging or engagement	The process by which the organization communicates, consults and/or provides for the participation of interested and/or affected stakeholders ensuring that their concerns, desires, expectations, needs, rights and opportunities are considered in the establishment, implementation and updating of the management plan.

Environmental impact assessment	Systematic process used to identify potential environmental and social impacts of proposed projects, to evaluate alternative approaches, and to design and incorporate appropriate prevention, mitigation, management and monitoring measures
Environmental values	The following set of elements of the biophysical and human environment: a. ecosystem functions (including carbon sequestration and storage) b. biological diversity c. water resources d. soils e. atmosphere f. landscape values (including cultural and spiritual values). The actual worth attributed to these elements depends on human and societal perceptions.
Family forestry	Smallholder forestry where there is no formal employment. The great majority of work is done by family members. (SDG)
Familiar/familiarise	To identify and become acquainted.
Forest	Land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent; or trees able to reach these thresholds <i>in situ</i> . Does not include land that is predominantly agricultural or under urban land use. Note: Further details on the definition of forests are available from the FAO Global Forest Resources Assessment 2005.
Forest conversion	The direct human-induced conversion of forests to other types of land use including conversion of primary forests to forest plantations.
Fundamental ILO conventions	Eight conventions (ILO 29, 87, 98, 100, 105, 111, 138 and 182) identified by the ILO's Governing Body as "fundamental" in terms of principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.
Genetically modified trees	Trees in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination, taking into account applicable legislation providing a specific definition of genetically modified organisms. Note 1: The following techniques are considered as genetic modification resulting in genetically modified trees (EU Directive 2001/18/EC): - recombinant nucleic acid techniques involving the formation of new combinations of genetic material by the insertion of nucleic acid molecules produced by whatever means outside an organism, into any virus, bacterial plasmid or other vector system and their incorporation into a host organism in which they do not

	<p>naturally occur, but in which they are capable of continued propagation;</p> <ul style="list-style-type: none"> - techniques involving the direct introduction into an organism of heritable material prepared outside the organism including micro-injection, macro-injection, and micro-encapsulation; - cell fusion (including protoplast fusion) or hybridisation techniques where live cells with new combinations of heritable genetic material are formed through the fusion of two or more cells by means of methods that do not occur naturally. <p>Note 2: The following techniques are not considered as genetic modification resulting in genetically modified trees (EU Directive 2001/18/EC):</p> <ul style="list-style-type: none"> - in vitro fertilisation; - natural processes such as: conjugation, transduction, transformation; - polyploidy induction.
Genotype	The genetic constitution of an organism
Habitat	The place or type of site where an organism or population occurs.
Interested stakeholder	<p>Any person, group of persons, or entity that has shown an interest, or is known to have an interest, in the activities of a management unit. The following are examples of interested stakeholders.</p> <ul style="list-style-type: none"> · Conservation organizations, for example environmental NGOs · Labour (rights) organizations, for example labour unions · Human rights organizations, for example social NGOs · Local development projects · Local governments · National government departments functioning in the region
Invasive species	<p>Species that are rapidly expanding outside of their native range. Invasive species can alter ecological relationships among native species and can affect ecosystem function and human health. {Based on World Conservation Union (IUCN). Glossary definitions as provided on IUCN website}</p>
Landscape	<p>A functionally homogenous unit defined by geographical mosaic composed of interacting ecosystems resulting from the influence of geological, topographical, soil, climatic, biotic and human interactions in a given area. {Based on World Conservation Union (IUCN). Glossary definitions as provided on IUCN website}</p>

Local communities	Communities of any size that are in or adjacent to the management unit, and also those that are close enough to have a significant impact on the economy or the environmental values of the management unit or to have their economies, rights or environments significantly affected by the management activities or the biophysical aspects of the management unit.
Management plan	The collection of documents, reports, records and maps that describe, justify and regulate the activities carried out by any manager, staff or organization within or in relation to the management unit, including statements of objectives and policies
Management unit	A spatial area or areas submitted for certification with clearly defined boundaries managed to a set of explicit long term management objectives which are expressed in a management plan. This area or areas include(s): <ul style="list-style-type: none"> · All facilities and area(s) within or adjacent to this spatial area or areas under legal title or management control of, or operated by or on behalf of The Organization, for the purpose of contributing to the management objectives; and · All facilities and area(s) outside, and not adjacent to this spatial area or areas and operated by or on behalf of The Organization, solely for the purpose of contributing to the management objectives.
Monitoring	Monitoring is a formal process to detect change and the checking of an operation against targets or standards. Monitoring is an element of adaptive management that is dispersed throughout the management activities and in the SAFAS Standard it is not viewed as a separate programme.
Native species	Species, subspecies, or lower taxon, occurring within its natural range (past or present) and dispersal potential (that is, within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Natural forest	A forest area with many of the principal characteristics and key elements of native ecosystems, such as complexity, structure and biological diversity, including soil characteristics, flora and fauna, in which all or almost all the trees are native species. 'Natural forest' does not include land which is not dominated by trees, was previously not forest, and which does not yet contain many of the characteristics and elements of native ecosystems. Young regeneration may be considered as natural forest after some years of ecological progression.
Non-timber forest products (NTFP)	All products other than timber derived from the management unit.
Occupational accident	An occurrence arising out of, or in the course of, work which results in fatal or non-fatal injury.

Pesticide	Any substance or preparation prepared or used in protecting plants or wood or other plant products from pests; in controlling pests; or in rendering such pests harmless. This definition includes insecticides, rodenticides, acaricides, molluscicides, larvaecides, fungicides and herbicides.
Forest plantation / timber plantation / productive plantation	Forest or other wooded land of introduced species, and in some cases native species, established through planting or seeding mainly for production of wood or non-wood goods.
Priority species	A select group of species that are especially important for their ecosystem and for people. They are usually nationally, or globally threatened, possibly endemic and require conservation effort.
Rare species	Species that are uncommon or scarce, but not classified as threatened. These species are located in geographically restricted areas or specific habitats, or are scantily scattered on a large scale. They are approximately equivalent to the IUCN (2001) category of Near Threatened (NT), including species that are close to qualifying for, or are likely to qualify for, a threatened category in the near future. They are also approximately equivalent to imperilled species. {Based on IUCN. (2001). IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN. Gland, Switzerland and Cambridge, UK}
Resilience	The ability of a system to maintain key functions and processes in the face of stresses or pressures by either resisting or adapting to change. Resilience can be applied to both ecological systems and social systems
Riparian Habitat	Riparian habitat includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterised by alluvial soils, and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas. [National Water Act, (Act 36 of 1998)] Also referred to as riparian zone.
Tenure	Socially defined agreements held by individuals or groups, recognized by legal statutes or customary practice, regarding the 'bundle of rights and duties' of ownership, holding, access and/or usage of a particular land unit or the associated resources there within (such as individual trees, plant species, water, minerals, etc.) {World Conservation Union (IUCN). Glossary definitions as provided on IUCN website}
The Organization	The person or entity holding or applying for certification and therefore responsible for demonstrating compliance with the requirements.

Threatened species	Species that meet the IUCN (2001) criteria for Vulnerable (VU), Endangered (EN) or Critically Endangered (CR), and are facing a high, very high or extremely high risk of extinction in the wild. {Based on IUCN. (2001). IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN. Gland, Switzerland and Cambridge, UK.}
Traditional housing	Housing that has been built by the workers themselves according to their own requirements and not supplied by the employer.
Use rights	Rights for the use of resources of the management unit that can be defined by local custom, mutual agreements, or prescribed by other entities holding access rights.
Vegetation unit	Vegetation unit: A complex of plant communities ecologically and historically (both in spatial and temporal terms) occupying habitat complexes at the landscape Scale. (Mucina and Rutherford, 2006)
Workers	All employed persons including public employees as well as 'self-employed' persons. This includes part-time and seasonal employees, of all ranks and categories, including labourers, administrators, supervisors, executives, contractor employees as well as self-employed contractors and sub-contractors. {ILO Convention C155 Occupational Safety and Health Convention, 1981}

12. Criteria and Indicators for sustainable forest management

1	PLANNING, LEGAL COMPLIANCE AND CHAIN OF CUSTODY
1.1	Legal compliance
1.1.1	Plantations are established in accordance with; 1) Applicable laws* and regulations and administrative requirements, 2) Legal* and customary rights*
V	<p>Compliance with the National Water Act (Act No. 36 of 1998) [NWA]. The key provisions of the Act that apply to 1.1.1 are:</p> <ol style="list-style-type: none"> 1. The plantation is registered for water use AND 2. There is a water use license OR 3. There is a planting permit OR 4. The plantation was established prior to 1972 or prior to 1998 in former homeland areas and traditional authority areas. <p>If the timber grower is in the process of engaging with the Department of Water Affairs and Sanitation to verify the legality of the timber they can be deemed to be compliant if can demonstrate that they are in accordance with each step in the process.</p> <p>Documented acknowledgement of payment of forestry water use fees from the Department of Water and Sanitation or other indisputable evidence of payment.</p> <p>The area of timber planted is less or equal to the area that was registered.</p>
G	<p>The legal requirement to grow timber is a license to use water obtained from the DWS. Environmental, agricultural and heritage authorization is a prerequisite of a water use license. (See 1.1.4) There are no legal requirements authorizing the harvesting of plantations. If ecosystem services are traded specific authorization may be required. Compulsory licensing, which is a function of DWS and is being rolled out gradually per catchment. Once this process is completed all legitimate plantations will have water use licenses</p> <p>For plantations under 10 hectares this payment for water use does not apply for Traditional Authority (TA) land. This threshold was set because cost of collecting the money for areas smaller than 10 hectares exceeds the revenue gained. In some TA areas the tribal authority has been registered and sent accounts for payment for water use. In many cases this payment has not been met because individual land-owners in the T.A. are less than 10 hectares and for the T.A. the cost to collect these small amounts of money would also not justify the amounts collected. Non-payment of water-use in these areas should not be considered a non-compliance. In future all water-use licences will be issued to individuals and this issue will not occur.</p>
1.1.2	The boundaries of all management units* are marked, mapped or described.
V	<p>On title deed land maps must be available indicating the management unit boundaries. Within T A lands, in the absence of maps, the boundary of individual woodlots within a T.A. or landscape can be identifiable by infield demarcation (e.g. beacons) or through recognition of boundaries by traditional leaders, neighbours and other members of the community.</p>
1.1.3	There shall be no substantiated outstanding claims of legal non-compliance related to plantation management raised by regulatory authorities.
V	<p>Interviews Stakeholder feedback</p>
G	<p>The certificate holder must declare any current legal processes involving laws relevant to forest management. The purpose of this indicator is to identify these legal processes to ensure that the organization is complying with the legal stipulations of the process. The laws relevant to specific requirements will be listed under that requirement. A list of all possible applicable legislation is included in Annex. A.</p>

1.1.4	Prior to any listed site disturbing activities*, environmental impact assessments as required by legislation shall be undertaken for any developments on the management unit and records of decision complied with.
V	Compliance with the National Environmental Management Act (No. 107 of 1998). [NEMA EIA regulation 2014. Listing Notices]
G	The NEMA EIA regulations contain listing notices which are periodically updated. These regulations must be consulted before undertaking activities such as; afforestation, construction of dams or weirs, sewage treatment plants, new roads, waste disposal sites and others to see if the planned activity triggers the requirement of an EIA. Note that certain activities affecting fresh water require a water use license. This requirement is included in 4.2.3. *listed site disturbing activities are those that are listed in the NEMA EIA regulation 2014. Listing Notices.
1.2	Management planning and monitoring
1.2.1	The management plan* and plantation map addresses the operational requirements of the management unit and is consistent with the organizations policies and broader management objectives. The key elements of a management plan are as follows: a. management objectives with verifiable targets where these are possible; b. description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands; c. description of silvicultural and/or other management system; d. rationale for rate of annual harvest and species selection; e. provisions for monitoring of forest growth and dynamics; f. environmental safeguards based on environmental assessments; g. plans for the identification and protection of rare, threatened and endangered species; h. maps describing the forest resource base including protected areas, planned management activities and land ownership; i. description and justification of harvesting techniques and equipment to be used. j. requirements of national legislation.
V	Management plan and plantation map. Corporates: Documented plans showing all required aspects Owner Manager: Depending on the scale and intensity of the operation elements of the management plan may be verbally expressed in interviews with the responsible people. Group Schemes: Some of the elements could be done at group level. The group management system must define the elements of the management plan that require documentation.
G	Additional activities that require management planning are described under the relevant indicators.
1.2.2	The management plan* is reviewed annually and where necessary updated to incorporate; 1) Monitoring results; including results of certification audits. 2) Inputs from stakeholder engagement. 3) New scientific or technical information 4) Changing environmental, social or economic circumstances.
V	Current and previous versions of the management plan include monitoring the aspects covered in 2.2.4, 4.1.2, 4.1.4, 5.2.3, 5.3.4, 5.3.5, 5.3.6, 5.3.7. 6.4. 7.2.3, 7.2.5.
1.2.3	A summary of the management plan* in a format comprehensible to stakeholders including maps and excluding confidential information* is made available to the public on request at no cost.
V	Group Schemes: The public summary can be done at group level.
G	The manager can indicate in a letter to stakeholders as part of the stakeholder communication process that a summary of the management plan has been prepared and will be available on request.

1.2.4	Forest management shall be based inter-alia on the results of scientific research. Forest management shall contribute to research activities and data collection needed for sustainable forest management or support relevant research activities carried out by other organisations, as appropriate.
V	Evidence of examples where research has been used.
G	Procedures in South Africa are derived from research done at the Institute of Commercial Forestry Research and various universities. Forestry companies also do their own research.
1.3	Chain of Custody
1.3.1	A system is implemented to track and trace all products that are marketed as certified.
V	Tracking and tracing system.
1.3.2	Information about all products sold is compiled and documented, including: 1) Common and scientific species name; 2) Product name or description; 3) Volume (or quantity) of product; 4) Information to trace the material to compartment of origin for large scale operations or compartment management unit for small and medium scale operations. 5) Logging or delivery date or period. 6) If basic processing activities take place in the forest, the date and volume produced; and 7) Whether or not the material was sold as certified.
V	Documented records of products sold.

2	ENGAGEMENT WITH STAKEHOLDERS AND THE PROTECTION OF CULTURAL HERITAGE
2.1	Tenure, access and use rights
2.1.1	Legal tenure to manage and use resources within the scope of the certificate is demonstrated.
V	<p>Title deeds and lease agreements OR</p> <p>In TA areas individual/family owned plantations planted on individual /family fields or household plots, informal rights to use this land can be presumed unless there is evidence of:</p> <ul style="list-style-type: none"> • Ownership disputes or overlapping claims to the land in question • Expansion of plantations into communal grazing land or other land to which other people have informal rights without a rights holders resolution in terms of IPILRA. • Illegal purchase of the land in question
2.1.2	Access and use by legitimate rights holders including indigenous people* are understood and respected
V	<p>The following rights are documented and/or mapped with supporting evidence:</p> <ol style="list-style-type: none"> 1) Legal* rights of tenure* and access of those living within the management unit, and obligations associated with these rights. 2) Servitudes and other legal* access rights of non-residents 3) Legal and Customary* rights* of tenure and access where the management unit is on Tribal Authority land; 4) Land claims lodged to the management unit and the status of these.
G	<p>The following legislation is relevant:</p> <p>Extension of Security of Tenure Act 62 of 1997 (ESTA)</p> <p>Land Reform (Labour Tenants) Act 3 of 1996 (LTA)</p> <p>The Interim Protection of Informal Land Rights Act , Act 31 of 1996 (IPILRA)</p> <p>* Indigenous people's rights are protected under the South African constitution as are all vulnerable and disadvantaged people in South Africa. Separating indigenous people out as a specific group runs counter to a democratic South Africa where all those disadvantaged by colonialism and apartheid should be treated in a similar manner. It is the dominant political discourse that the rights of indigenous people would be strengthened by ensuring that they are treated in the same way as all people marginalised by South Africa's past.</p>
2.2	Measures to engage with stakeholders, settle grievances and resolve disputes.
2.2.1	There is evidence of ongoing stakeholder engagement.
V	<p>Current list of stakeholders.</p> <p>It should be determined:</p> <ul style="list-style-type: none"> -if the forest managers and staff know their neighbours and other stakeholders. -if the stakeholders know the forest manager or representative of the organization. -the manager should know what influence each stakeholder or neighbour has on their plantation management and vice versa. <p>Corporates: Documented records of ongoing engagement.</p> <p>Owner Manager: Documented evidence of local contacting stakeholders at the start of the 5 year certification period. Thereafter it is unnecessary for all interactions to be recorded. Evidence of ongoing communication could be gathered by phoning stakeholders and interviewing the manager and worker.</p> <p>Group Schemes: The group scheme manager can be responsible for engagement with national or provincial level stakeholders.</p>
G	<p>The following are examples of stakeholders that should be included: local municipality, neighbours, contractors, user groups, neighbouring community representatives, labour unions, environmental interest groups, local clinics and local schools, clients and suppliers.</p>

2.2.2	Grievances/disputes are resolved using locally accepted mechanisms and/or institutions.
V	There is a formal process for the following situations: a) disputes over access and use rights, b) tenure or rights of occupation and c) requests for engaging in activities not permitted on the management unit. Corporates: Documented procedures for handling disputes and grievances. Owner Manager: May describe the procedures verbally but in cases where there is a legal dispute then records must be kept. For Owner Manager forestry within T A areas see guidance note below.
G	For disputes between members of a community on T A land, the local tribal authority is responsible for resolving grievances and disputes. It is not necessary to audit this institution unless there is reason to believe that there are disputes that substantially influence sustainable forest management.
2.2.3	There is a mutual understanding of the resource requirements and other needs within the community and these are met where possible.
V	Interview with managers. Interviews with members of the community. Family Forestry operations and on T A land this understanding is implicit in the way in which the community functions
G	A key ingredient of a harmonious community is a mutual understanding and respect for the various resource needs that exist in the landscape. There may be a need for employment, water, grazing, wood on the part of the local people while the plantations need to prevent fire, and maintain infrastructure. A number of these interests may overlap, for example, protection of water resources and grazing. It is through a mutual understanding of these factors that the foundation for harmony can be built. The object of the interview is to determine if there is an understanding of what resources the community needs and how forestry operations may affect these. Recommendation: Organizations are encouraged to involve members of the community in joint projects.
2.2.4	Indicators of community disharmony are noted, analysed and solutions are sought.
V	Evidence that signs of disharmony related to forest management are detected and responded to. Corporates: Documented evidence Owner Manager: Interviews
G	The following are possible indicators of disharmony that could be considered: - arson - demonstrations or protests against the organization. - disputes and grievances that have being registered. - direct feedback during stakeholder engagement. - change in attitudes Where these indicators of community disharmony are frequent they should be monitored and trends and responses analysed.
2.3	The organization contributes to socio-economic development in the area where they operate.
Context	According to the Hermes country report (2017) for South Africa the key economic risk factors are unemployment, rural poverty, skewed incomes, disease and a track record of labour militancy and weak educational standards. Furthermore, Moody's and other ratings agencies have cited youth unemployment as their area of greatest interest in South Africa. The challenge facing the plantation industry is to play a role in alleviating these factors while improving working conditions.

2.3.1	The organization contributes to employment and job creation.
V	Employment records are maintained on the total number of permanent and temporary employees. Records are maintained on the total value of wages paid to permanent and temporary employees. The number of jobs created on the management unit is stable or increasing, or where declining can be justified. Family Forestry: records of employment are not required.
G	Information can be drawn from Skill development levy reports and UIF reports to SARS.
2.3.2	The organization's employment policies are responsive to the local socio-economic context.
V	Corporates: Policies of the organisation take account of the local socio-economic and context in which they operate. Managers demonstrate awareness of the socio-economic context in South Africa.
G	Aspects of the socio-economic context to consider include: -Levels of local poverty -Availability of willing labour -Unemployment rates -Levels of education -Other pressing social needs Aspects of the employment policies that are relevant in this case include: -Use of manual labour -Use of machines -Use of contractors This must be evaluated in relation to programmes to alleviate the key economic risk factors.
2.3.3	Demonstrable efforts to employ local workers and source local service providers.
V	Recruitment policies of the organization. Reasons for sourcing from further afield.
G	This is potentially a high risk factor that is generally well managed in the forestry industry because managers are aware of the benefits of employing local people and the risks of bringing in people from further afield when there is high local unemployment. The definition of the term 'local' in this context depends on a number of factors which the manager should be aware of. The principle is that if there are capable people in close proximity to the management unit they should get first option for employment.
2.3.4	Opportunities for local social and economic development are identified through engagement with local communities and other relevant organizations.
V	Evidence of engagement with the community and an understanding of the community's needs. Corporates: Documented evidence of engagement. Owner Manager: Interviews Family Forestry: Community engagement is implicit in the way in which the community functions
G	Where cost, quality and capacity of non-local and local options are at least equivalent, local goods, services, processing and value-added facilities are used. Reasonable* attempts are made to establish and encourage capacity where local goods, services, processing and value-added facilities are not available.

2.4	Cultural, ecological, recreational, historical, aesthetic and spiritual sites and services are maintained.
2.4.1	Sites of cultural, ecological, recreational, historical, aesthetic and spiritual significance are identified and protected. Access is granted to interested and affected parties.
V	Visits to sites to verify methods for protecting them from forestry impacts. Corporates: Significant sites are mapped and management prescriptions documented.
G	The following sites of special significance are commonly found within plantations: 1. Grave sites. 2. Sacred and historical sites, e.g. 3. Areas of significant scenic value 4. Rock Art 5. Buildings protected under SAHRA 6. Historical routes.

3	PROTECTION OF WORKERS AND HUMAN RIGHTS
G	<p>CONTEXT: South Africa has ratified the ILO Core Conventions and Labour standards. Compliance with the Basic Conditions of Employment Act (75 of 1997) and the Employment Equity Act (No. 55 of 1998) and Labour Relations Act (Act No. 66 of 1995) would ensure compliance with the all ILO core conventions:</p> <p>The eight fundamental Conventions are:</p> <ol style="list-style-type: none"> 1. Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) 2. Right to Organise and Collective Bargaining Convention, 1949 (No. 98) 3. Forced Labour Convention, 1930 (No. 29) 4. Abolition of Forced Labour Convention, 1957 (No. 105) 5. Minimum Age Convention, 1973 (No. 138) 6. Worst Forms of Child Labour Convention, 1999 (No. 182) 7. Equal Remuneration Convention, 1951 (No. 100) 8. Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
3.1	Compliance with National Labour legislation
3.1.1	Forest owners and managers take responsibility for ensuring compliance with labour legislation.
V	<p>For workers in formal employment: The organization monitors compliance with the Basic Conditions of Employment Act (75 of 1997) for all operations including those undertaken by contractors.</p> <p>Measures are implemented to address and rectify non-compliance.</p> <p>Family Forestry: Workers that are family members are not considered to be in formal employment.</p>
G	<p>The following are the key provisions:</p> <ol style="list-style-type: none"> 1. No children below the age of 15 are employed on the management unit 2. Workers over the age of 15 and under the age of 18 years are employed only in positions that are not hazardous, inappropriate for their age nor detrimental to their schooling. Forestry worker who is under the age of 18 years (and over the age of 15 years) do not: <ul style="list-style-type: none"> - Work more than a 35 hour week - Work after 18:00 and before 06:00 the following day - Work with agro-chemicals - Perform hazardous work <p>Family Forestry*: There may be children assisting parents in the school holidays or on weekends but this does not constitute formal employment.</p>
3.1.2	Compliance with the legislation that promotes equal opportunity in the workplace. Not applicable to Family Forestry
V	<p>There is no evidence of non-compliance with the Employment Equity Act (Act No. 55, 1998).</p> <p>Evidence that the organization has taken steps to promote equal opportunity in the workplace and eliminate unfair discrimination in any employment policies or practice.</p> <p>Corporates: Documented policies. Interviews with employees.</p>
G	<p>The purpose of the Act is to achieve equity in the workplace by;</p> <ol style="list-style-type: none"> a. promoting equal opportunity and fair treatment in employment through the elimination of unfair discrimination; and b. implementing affirmative action measures to redress the disadvantages in employment experienced by designated groups, to ensure their equitable representation in all occupational categories and levels in the workforce. <p>Occupational categories include race, gender, pregnancy, marital status, family responsibility, ethnic or social origin, colour, sexual orientation, age, disability, religion, HIV status, conscience, belief, political opinion, culture, language, and birth.</p>

3.1.3	Workers are able to negotiate their conditions of employment through: - collective bargaining with formal and informal workers organizations* or in the absence of Union structures, workers are adequately informed of and consulted on matters that directly affect their working conditions. Not applicable to Family Forestry
V	Interviews with workers Interviews with unions Collective bargaining agreements
3.1.4	Wages comply with national legislation. Not applicable to Family Forestry
V	Pay slips. Employment records
3.1.5	A dispute* resolution process that is acceptable to all parties, is in place. Not applicable to Family Forestry
V	There is a common understanding between managers and workers regarding what to do in case of a grievance or dispute. Interview workers to ensure that they are aware of what to do in the event of a grievance or dispute. Corporates: Documented dispute resolution process.
3.1.6	Workers* grievances are responded to and are either resolved or are in the dispute* resolution process. Not applicable to Family Forestry
V	Records of worker's* grievances related to worker's* loss or damage of property, occupational diseases* or injuries, including: 1) Steps taken to resolve grievances; 2) Outcomes of all dispute* resolution processes including fair compensation*; and 3) Unresolved disputes*, the reasons they are not resolved, and how they will be resolved.
3.1.7	Fair compensation* is provided to Workers* for work-related loss or damage of property and occupational disease* or injuries. Not applicable to Family Forestry
V	Compliance with the Compensation for Occupational Injuries and Diseases Act (No. 130 of 1993)
G	Organizations are required to register and make payments to the Workman's Compensation Fund. They are then entitled to claim against the fund for medical costs and other compensation related to occupational injury and disease. Organizations are required to report injuries to compensation commissioner.
3.2	Forest owners and managers take responsibility for ensuring compliance of all employees with legislated health and safety requirements and best practice
Context	All the requirements of the ILO Code of Practice are contained in the Occupational Health and Safety Act (No. 85 of 1993). The key requirements are grouped in the indicators below. The organization must ensure all contractors comply with all the indicators.
3.2.1	Hazards to the health and safety of workers from forestry activities have been identified.
V	Documented hazard identification and risk assessment. Group Schemes: Risk assessment can be done as part of the group management system. Family Forestry: Managers are aware of health and safety hazards and take action to protect themselves.

3.2.2	There are procedures for working safely.
V	Corporates and Owner managers: Documented safe operating procedures are available for all hazardous operations. Group Certification Schemes: Such procedures can form part of the schemes documentation. Family Forestry: Growers are able to describe safety precautions taken for hazardous activities.
G	Such procedures should include <i>inter alia</i> tool use, Personal Protective Equipment, communication and warning systems. Organizations must identify through their risk assessments which operations are hazardous.
3.2.3	Workers are aware of hazards in the workplace and are trained on safe work procedures in compliance with the national legislation. Not applicable to Family Forestry
V	Compliance with the Occupational Health And Safety Act (No. 85 of 1993). The following as the key requirements of the OHS Act are normative: -Displayed copy of company Health and Safety Policy -Copy of Occupational Health and Safety Act. -At least one person per 50 employees must have a valid first aid certificate. -Legally required training. -A health and safety representative must be appointed where there are more than twenty employees and thereafter one representative must be appointed for every 50 employees. Appointments must be kept on file. -Where there are two or more representatives a committee must be established. -Health and safety representatives are required to conduct inspections of their workplaces prior to every Health & Safety meeting, using a checklist. -Employees must be trained on safety procedures, along with contracted / contractors. -Safety talks should be conducted when necessary, records to be kept on file. -Workers have personal protective equipment appropriate to their assigned tasks.
3.2.4	Safe work procedures are carried out in the work place.
V	Observations of workers. Documented safe work procedures that include at least the following: -adequate supervision to ensure that work is conducted safely. -a trained first aider on site at all hazardous operations. (e.g. harvesting, spraying) -first aid kits and fire fighting equipment must be available and accessible. These must be available on site, during the implementation of any hazardous operation. - a system to restock first aid boxes -protective clothing is worn and in a condition so as to protect the labourer against injuries as intended. -specific safe work procedures for each hazardous task. -observations of the work place to determine the implementation to procedures. Group Schemes: All such procedures can form part group management system.
3.2.5	Workers have personal protective equipment appropriate to their assigned tasks.
V	Where the risk assessment required in 3.2.1 has identified the need, PPE is used by workers on the relevant tasks. Evidence that PPE has been issued to workers. Evidence of PPE being correctly used.
3.2.6	Past incidents are recorded, trends examined and safety practices adjusted to avoid recurrence. Not applicable to Family Forestry
V	Documented evidence of accident/injury investigations. Reportable injury related incidents* are recorded and investigated as required by the Occupational Health And Safety Act (No. 85 of 1993). Records are maintained of reportable injuries* so as to relate this to the effectiveness of personal protective clothing and training. Corporates: Recorded safety statistics. There is evidence for changes in practice in response to statistics. Owner managers: Describe the measures taken to improve safety performance.
G	Reportable injuries refers to lost time injuries as required by the Occupational Health And Safety Act (No. 85 of 1993).

3.2.7	Quality and condition of worker accommodation and associated services
V	Inspection of workers accommodation Examination of housing improvement plans if required.
G	See Appendix C for list of requirements.
3.3	Contribution to skills development in the work force
3.3.1	All workers have had relevant job specific training and where required or appropriate hold the necessary skills certificates. Not applicable to Family Forestry
V	Training records match training requirements. As a minimum all legally required machine or vehicle licenses, first aiders and chainsaw operators must have skills certificates. Evidence of payment into Skills Development Fund.
G	Organizations are required by law to pay into the skills development fund, this is unavoidable for registered tax payers as it forms part of the tax return. Legislation: Skills Development Levies Act, 1999 (Act No. 9 of 1999)
3.3.2	Workers are supervised to ensure they implement their tasks safely and effectively.
V	Observe work areas and interview supervisors and workers.

4	PROTECTION OF SOIL, CARBON AND WATER
4.1	Maintenance of the productivity and carbon storage potential of soils and minimisation of impacts on water resources.
4.1.1	Soil erosion is minimised through the use of forest management systems which are appropriate to the slope, soil sensitivity and weather.
V	Determine harvesting and silviculture systems in use. Field inspections of harvesting sites. Corporates: Documented operational guidelines. Group Schemes: Operations guidelines can form part of the group management scheme.
G	The organization can refer to Best Operating Practice (BOPs) or industry guidelines. E.g. Forestry Engineering South Africa (FESA) Harvesting Code of Practice. For mechanical harvesting the organizations should have operational guidelines.
4.1.2	Soil is protected through responsible residue management.
V	Inspection of post-harvest sites to verify compliance. Corporates: Documented policy and procedures Examine systems to categorize site sensitivity. Group Schemes: Should include policies and procedures in group management system.
G	Plantation residues should be retained on site wherever possible. The choice of residue management practice should be guided by slope, soil sensitivity and fire risk. If residues are burnt, then it must be a cool burn. Burned areas are monitored and measures taken to prevent soil erosion or rehabilitate eroding areas. See 4.1.4.
4.1.3	Development, maintenance and use of infrastructure, as well as transport activities, are managed to protect environmental values* and withstand the impacts of flooding.
V	Inspection of road network, including road works and newly constructed roads. Best operating practice guidelines for the construction and maintenance of infrastructure.
G	These guidelines should include as a minimum the following aspects: 1. Minimising the road density, without compromising harvest and transport systems. 2. Low impact construction and maintenance techniques including the use of equipment and methods that minimise environmental impacts and the risk of sedimentation. 3. The construction and upgrade of crossings to ensure stream flow and the passage of aquatic organisms as well as preventing prevent bank scouring and impoundments. For legal requirements refer to Guidance in 4.2.3. 4. The setback distances specified for wetlands, water bodies and watercourses in 4.2.1 apply to roads and other infrastructural developments. For legal requirements refer to Guidance in 4.2.3.
4.1.4	Eroded areas are rehabilitated and interventions monitored and adapted to ensure effectiveness and steps are taken to prevent soil erosion.
V	Field inspections. Evidence of monitoring to see if measures taken are effective. Monitoring techniques could include dated photographs. Owner Manager: No documented monitoring required if it is clear that erosion is under control and manager carries out regular farm inspections.

4.2	Prevention of negative impacts to water resources
4.2.1	Wetlands and riparian areas are identified, delineated and protected from forestry impacts by adequate buffers of appropriate vegetation guided by the best available information.*
V	<p>Field inspections of wetlands * and riparian areas*.</p> <p>There is a wetland and riparian area delineation plan (using the DWS delineation guidelines) in place that ensures that at re-establishment delineation has been done.</p> <p>Corporates: Maps showing wetlands. Documents or maps showing the wetlands and riparian areas and how wetland systems are prioritised for clearing and management. Prioritisation includes catchment or regional considerations. E.g. Use of National or Provincial wetland, NFEPA, DWS stressed catchment or Important Water Source Area datasets.</p> <p>Owner Managers can describe the reasons for prioritisation. Prioritisation at this scale would for be focused on local conditions but may include broader catchment or regional scale considerations should the farm fall within identified NFEPA, DWS stressed catchment or Important Water Source Area datasets.</p> <p>Group Schemes: Rationale for prioritization can be outlined in the group management system.</p>
G	<p>Best available information* is as follows:</p> <p>Maps of the NFEPA found at: http://bgis.sanbi.org/nfepa/project.asp</p> <p>A practical field procedure for identification and delineation of wetlands and riparian areas. This is available from www.dws.gov.za</p> <p>A synopsis is presented in the Environmental Guidelines for Commercial Forestry Plantations in South Africa.</p> <p>The DWS guidelines state that for forestry the minimum buffer between the outer edge of the temporary zone of a wetland or the outer boundary of a riparian zone* and the land use would normally be 20 meters, unless specified to the contrary in a permit or water use license</p> <p>Where the buffer zone is less there must be clear justification.</p> <p>**Note that riparian habitats and riparian zones are synonymous.</p>
4.2.2	Wetlands*, riparian habitats* and their buffers are managed for maintenance or enhancement of ecosystem health and connectivity.
V	<p>Field inspections of wetlands* and riparian habitats*.</p> <p>Evidence of restoration activities and effectiveness thereof.</p> <p>Corporates: Examination of management plans and progress against plans.</p>
G	<p>Best available information includes the following:</p> <p>FSA Environmental Guidelines</p> <p>WET-Rehab Methods national guidelines and methods for wetland rehabilitation (See www.wrc.org.za)</p> <p>This includes blocking of artificial or unwanted drains in wetlands, stabilizing head-cut and river bank erosion and the restoration of wetland, riparian zone and buffer vegetation. The impact of dams and river crossings on connectivity must be considered.</p>
4.2.3	Safeguards to protect wetlands and riparian habitats* from the impacts of forestry activities are implemented.
V	<p>Forestry activities that impact on freshwater ecosystems have been included under the relevant criteria in this standard. These are, use of fertilizers (6.2.8), use of chemicals (6.2.3), uncontrolled fires (6.3), soil erosion and sedimentation related to the road network (4.1.3), hydrocarbon spillage (6.2.3), harvesting and extraction (4.1.1), management of plantation residues (4.1.2), waste disposal (6.2.2), soil erosion and sedimentation as a result of cultivation and the use of machinery. (4.1.1).</p>

G	<p>Legal Requirements</p> <p>Section 21 of the National Water Act (Act 36 of 1998) protects Watercourses and Wetlands by requiring a water use license for a number of activities the following of which are directly related to forestry: taking water from a water resource, storing water impeding or diverting the flow of water in a watercourse, disposing of waste in a manner which may detrimentally impact on a water course, altering the bed, banks, course or characteristics of a watercourse.</p>
4.3	Maintenance of carbon sequestration and storage potential
4.3.1	Annual harvest does not exceed the annual increment, or where this is exceeded it is justified and a plan of how any over-cutting is to be compensated for in future, is prepared.
V	<p>Corporates: Documented annual felling plan.</p> <p>Owner Manager: Interviews</p>
G	More flexibility should be applied to farming operations and smaller operations because forestry may only form part of their total income options.
4.3.2	The growing stock (standing volume) of the management unit is maintained or increased over consecutive rotations, or where this is not achieved justification can be provided.
V	<p>Corporates: Comparing records of past tonnages.</p> <p>Owner Manager: Interviews</p>
G	More flexibility should be applied to owner managers because details records are not usually kept for each compartment. These organizations can report on productivity of the whole farm.
4.3.3	Protection of natural habitats to maintain ecosystem functioning for the delivery of ecosystem services
V	Met in the following indicators: wetlands (4.2.1), (4.2.2), (4.2.3) and all other natural habitats and associated biodiversity (5.3.1-5.3.9.)
4.3.4	Steps taken to improve soil carbon stocks
V	<p>Refer to the following indicators in this standard:</p> <p>Residue management - 4.1.2</p> <p>Measures to minimise soil erosion - 4.1.1</p> <p>Safeguards to protect wetlands - 4.2.3</p> <p>Measures to restore wetlands - 4.2.2</p>

5	CONSERVATION OF BIODIVERSITY AND ECOLOGICAL INTEGRITY
5.1	Prevention of adverse off-site impacts arising from forestry operations
5.1.1	Operations are planned and managed to prevent adverse off-site environmental impacts, including impacts to neighbouring communities and other stakeholders.
V	<p>The organization has assessed the risks of its management activities on the environment, communities and stakeholders.</p> <p>The organization's planning and management includes measures to prevent adverse off-site environmental impacts.</p> <p>Group Schemes: These risks can be assessed at group level and incorporated into the group management system.</p>
G	<p>These activities must include all listed activities*, burning of firebreaks, transporting of timber through private land and should include any activities that would impact directly on neighbours communities and other stakeholders.</p> <p>*NEMA EIA regulation 2014. Listing Notices</p>
5.2	Prevention or mitigation of forestry impacts
5.2.1	The organization has determined if the species they intend to grow or are growing are known to be invasive, and if so have appraised the landscape for signs that these may be a source of invasion.
V	<p>The category and invasive potential of the species grown is known according to NEMBA (No. 10 of 2004) Alien and Invasive Species List, 2015.</p> <p>A visual assessment by the manager has been undertaken to determine if the plantations are a source of invasion in the landscape.</p> <p>Corporates: The results of the assessment are documented.</p> <p>Owner managers: Interview and field verification.</p>
G	<p>Context: The South African forestry industry uses a number of species that are known to be invasive, however plantation establishment and control of their spread is regulated through the NEMA EIA Regulations, National Environmental Management: Biodiversity Act (No. 10 of 2004), Invasive Alien Plant Regulations and the National Water Act. (Act 36 of 1998). Landowners are by law required to control the spread of alien plants on their properties. There are a dedicated government programmes, most prominently, The Working for Water Programme, directed towards working with landowners to manage invasive alien plant spread. The indicators have been designed with this context in mind.</p> <p>The appraisal of the landscape could include the following:</p> <p>There is evidence that on neighboring lands there are trees that clearly originated from the management unit. It might be clearer in water courses, disturbed land or on lands down-wind from the management unit. In some landscapes it may be impossible to determine if the management unit is the source of the invasion- For example, in heavily afforested or historically invaded landscapes it may be difficult to apportion responsibility on a particular landowner. In such cases the auditor must evaluate the situation on a case by case basis.</p> <p>The following points must be considered:</p> <ul style="list-style-type: none"> - In some areas trees were introduced into South Africa over a hundred years ago and it is impossible to apportion responsibility to current land owners. For example, <i>Acacia mearnsii</i> has been used in South Africa since the 1850s and the seed can remain viable for up to 50 years (Cronk, 1995) - Some species, particularly <i>A. mearnsii</i>, are being used by communities in the landscape for sustaining livelihoods. In many cases the value of the timber and bark may keep the tree from spreading.

5.2.2	Where 5.2.1 is relevant then the organization is taking steps towards reducing the invasiveness of their plantations.
V	Corporates: Documented evidence of steps taken and infield evidence. Owner Manager Interviews and field evidence
G	Progression towards reducing invasiveness could involve various measures depending on the organizations circumstances. For Corporates this could involve the following: -changing species -biological control -investing in the development of sterile clones -silvicultural practices, e.g. harvesting before flowering - alien and invasive plant control plans -creating buffers of natural vegetation around water courses and wetlands as required under 5.2.1. For Owner-managers who usually don't have the resources to invest in research programmes the focus could be on alien and invasive species control, silvicultural practices and creating buffers of natural vegetation around water courses and wetlands as required under 5.2.1. It must be noted that the benefits of research done into biological control, development of sterile clones and new silvicultural approach eventually gets passed on to the smaller scale operations through information sharing and sharing of genetic material.
5.2.3	Where the management unit is a source of invasion then the organization is part of a cooperative and strategic approach with other land users and organizations to eradicate invasive plantation species from the landscape beyond the management unit.
V	Corporates have documented evidence of a strategic cooperative approach. Owner manager: Interviews
G	This strategy should include <i>inter alia</i> : - A dedicated budget for alien plant eradication. -Investment in biological control -Strategic use of resources -Use of spatial prioritization -Community involvement -Opportunities for beneficiation -Monitoring the effectiveness of the programme
5.2.4	Genetically modified organisms (GMOs)* are not used commercially.
V	GMOs are not used commercially anywhere in South Africa.
5.2.5	Where fertilizers are used, they shall be applied according to accepted industry protocols with due consideration for the environment.
V	Corporates: Records of application that conform to procedures. Owner managers: Have credible guidelines for fertiliser use. Group Schemes: Such guidelines form part of the group management system.
5.2.6	Damage to conservation zones should be avoided during harvesting. When damage occurs it must be repaired.
V	Field inspections of current and previous years harvesting sites. Corporates: Examine harvesting plans for identification of conservation zones and measures taken to prevent damage. Owner manager: Interview – description of steps taken to avoid damage to conservation zones.

5.3	Protection of natural habitats and biodiversity
5.3.1	Best Available Information* is used to identify native ecosystems*.
V	<p>Corporates: The vegetation of native ecosystems occurring on the management unit are mapped according to the national vegetation types (Muccina and Rutherford, 2006) .</p> <p>Group Schemes: The management system provides guidelines regarding broad vegetation types, and the broad vegetation types** of the native ecosystems that occur on the management unit, are known.</p>
G	<p>The SANBI National Vegetation Map is available in the SANBI web site. http://bgis.sanbi.org/vegmap/map.asp?</p> <p>**The following broad vegetation types*, that are likely to occur in the plantation growing areas of South Africa:</p> <p>Savannah: All types</p> <p>Grasslands: Dry Highveld Grasslands, Mesic Highveld Grasslands, High Altitude Grasslands, Sub-Escarpment Grasslands, Indian Ocean Coast Grasslands.</p> <p>Fynbos: Proteoid, Ericaceous, Restioid Asteraceous, Shrubby and Grassy.</p> <p>Indigenous forests: Montane forest, Mistbelt forest, Coastal scarp forest, Coastal lowland forest Sand forest, Riverine forest.</p> <p>The conservation agencies can provide information on the identification of habitats. - Consulting directly conservation NGO's such as the Endangered Wildlife Trust. *These were derived from the bioregions in Muccina and Rutherford (2006)</p>
5.3.2	At least 10% of the certified area is comprised of representative sample areas* of native ecosystems* which are prioritized according to conservation value and protected.
V	<p>The representative ecosystems are mapped and designated as conservation zones.</p> <p>Corporates: Use of systematic conservation planning and condition of the vegetation are key information sources for prioritizing the conservation value of the conservation zones.</p> <p>Group Schemes: This requirement can be met at group scheme level.</p>
G	<p>The Grasslands Programmes Biodiversity Conservation Planning Tool can be used as a first level assessment for prioritizing conservation zones. The National Freshwater Ecosystem Priority Areas (NFEPA) allows for the use of national criteria to identify FEPAs which is available on www.wetlands.za.net</p>
5.3.3	The presence or likely presence of listed threatened or protected, species and their habitats occurring within and adjacent to the management unit is assessed using the best available information*.
V	<p>Corporates: The vegetation unit*, its conservation status and listed threatened or protected species* likely to occur, are known and recorded for the unplanted areas on the plantation estate. If priority species*^h have been found, their presence is recorded. It can be demonstrated that this assessment is in accordance with 5.3.2.</p> <p>Owner Manager: Interviews to explain how best available information* is used to identify presence or likely presence of priority species. E.g. directly advice from conservation agencies or NGOs.</p> <p>Group Schemes: Should include guidance on identifying presence or likely presence of priority species. This could include getting advice directly from conservation agencies or NGOs. This can be provided for a region or landscape.</p>

G	<p>NEMBA 10 of 2004 refers to "listed threatened or protected species" meaning any species listed in terms of section 56 (1)</p> <p>Best available information includes: SANBI National Vegetation Map: http://bgis.sanbi.org/vegmap/map.asp? for information on the vegetation unit*, species lists, geology and soils, climate, important taxa, conservation status etc.</p> <ul style="list-style-type: none"> - Consulting the systematic conservation plan for the province directly or by contacting the provincial conservation agencies. The conservation agencies can provide information on priority species depending on what habitats are on the management unit. - Consulting directly conservation NGO's such as the Endangered Wildlife Trust. <p>Group Schemes could provide support to members by conducting landscape level assessments and listing potential priority species* in the management system.</p>
5.3.4	<p>Priority species* are being managed and monitored according to best available information*.</p>
V	<p>Examine sources of best available information. Evidence that the best available information is being used for management of priority species and their habitats.</p> <p>Corporates: Documented evidence of collaboration with species protection programmes with respect to monitoring and management of priority species*.</p> <p>Group Schemes: This requirement can be met at group level and as such be part of the group management system.</p>
G	<p>Best available information can mean published best management practices or through direct consultation with the conservation experts. Some credible sources of best available information are*:</p> <ul style="list-style-type: none"> - Environmental Guidelines for Commercial Forestry Plantations in South Africa. - Grazing and Burning Guidelines: Managing Grasslands for Biodiversity and Livestock Production (SANBI, 2014) - Grasslands Ecosystem Guidelines (SANBI, 2014) - Conservation at work guidelines for the Western Cape: http://www.conservationatwork.co.za/conservation-guidelines - Ecosystem Guidelines for Environmental Assessment in the Western Cape (Fynbos Forum, 2016) - The Endangered Wildlife Trust - http://www.ewt.org.za/biodiversitydata.htm <p>*Priority species are defined as: A select group of species that are especially important for their ecosystem and for people. They are usually nationally, or globally threatened, possibly endemic and require conservation effort.</p>
5.3.5	<p>A fire management plan for natural ecosystems guided by the best available information is implemented.</p>
V	<p>There is a fire management plan, specific with respect to the burning of wetlands**, grasslands, fynbos and the protection of natural forests.</p> <p>Corporates: Documented fire management plan for conservation zones with accompanying maps. Field verification of implementation. Biodiversity monitoring takes place in Conservation zones designated as high priority in 5.3.2. E.g. Grassland forbe diversity monitoring.</p> <p>Owner Manager: Rationale for burning regimes can verbally explained and demonstrated infield.</p>

G	<p>Best available information could include:</p> <ul style="list-style-type: none"> - SANBI Grasslands Programme - Grazing and Burning Guidelines (2014) - Ecosystem Guidelines for Environmental Assessment in the Western Cape (Fynbos Forum, 2016) <p>Expert advice in cases where infield management indicates that it is necessary or where the manager clearly does not have the knowledge or information required.</p> <p>**Fires on plantation estates have had a significant negative impact on certain sensitive ecosystems. For example, swamp forest and peat lands in parts of the country. It is critical that these impacts are identified and specifically addressed where they occur.</p>
5.3.6	<p>A programme to control and eradicate listed invasive species is implemented</p>
V	<p>Corporates: Documented Alien and Invasive Species control plan containing the elements described in the guidance.</p> <p>Field inspections to evaluate the effectiveness of the control plans.</p> <p>Owner Manager: A field inspection by the manager to assess severity of any infestation. Where less than 50% of open areas are in maintenance phase* a documented plan must be in place and followed for 5 years.</p>
G	<p>Control and eradication of listed invasive species is required under the following legislation.</p> <p>National Environmental Management: Biodiversity Act (No. 10 of 2004) NEMBA (No. 10 of 2004) Alien and Invasive Species Regulations, 2014 NEMBA (No. 10 of 2004) Alien and Invasive Species List, 2014</p> <p>The documented plan should contain the following at individual farm level:</p> <ol style="list-style-type: none"> 1. An assessment of levels of infestation. 2. Targets with time frames. The ultimate aim should be to get all conservation zones to a maintenance level of infestation. *Maintenance phase is a level of infestation which will require 1 person per day per hectare to clear all alien invasive species. 3. A rationale for prioritization which includes ecological considerations 4. The progress of the weed control programme is monitored and can be demonstrated. <p>Owner Manager must be able to demonstrate the following;</p> <ol style="list-style-type: none"> 1. Follow-up operations are prioritized. 2. Progress is being made over time.

5.3.7	Grazing by livestock and wildlife populations shall be managed to prevent degradation of the natural habitat
V	<p>Inspection of grazing areas for signs of overgrazing, such as soil erosion and proliferation of indicator (increaser) species such as <i>Aristida junciformis</i>. Inspection of wetlands and watercourses for signs of excessive trampling by livestock which could cause erosion. Where grazing is under the control of the manager: The manager has a documented grazing plan that ensures carrying capacity is not exceeded and wetlands and watercourses are protected. Monitoring of grazing areas for indicators of overgrazing is undertaken where carrying capacity is exceeded. Corporates: There is a documented grazing plan. Results of monitoring are documented. Biodiversity monitoring takes place in Conservation zones designated as high priority in 5.3.2. E.g. Grassland forbe diversity monitoring. Owner Manager: The manager can describe the grazing system and monitoring that takes place to ensure overgrazing does not occur. In cases where neighbouring communities' animals are straying onto the management unit or the cattle belong to workers: - evidence that the manager is engaging with livestock owners to find solutions if there are signs of overgrazing. -Interviews with livestock owners -Examine managers monitoring systems -Examine systems of controlling grazing Forestry operations on communal land would not include grazing as part of the management unit.</p>
G	<p>This applies to management units with natural habitats that are subject to high grazing pressure. FSA Environmental Guidelines (10.4.4) contain the key points on grazing and burning.</p> <p>In cases where neighbouring communities' animals are straying onto the management unit or the cattle belong to workers, the issue must be dealt with sensitively. Apart from having financial value, cattle play an important cultural role in African tradition. Efforts to reduce grazing pressure within the management unit can result in disputes and reactions such as arson are common. In such cases, there must be evidence of efforts to resolve these.</p> <p>The following issues should be considered:</p> <ol style="list-style-type: none"> 1. Carrying capacities of grazed areas in relation to number of cattle. 2. Organization's relationship with livestock owners. 3. System of control (permits, tags, herds under control of a herdsman, evidence of security guards etc.) 4. Monitoring of impacts of livestock on streams or wetlands or other ecologically sensitive areas. 5. The manager is talking to the livestock owners about it. <p>Additional resources: Grazing and Burning Guidelines. (SANBI, 2014)</p>
5.3.8	Measures are taken to manage and control hunting, fishing, trapping and collecting.
V	Hunting, fishing, trapping or collecting that takes place on the management unit is compliant with the provincial and national legislation.
G	<p>In South Africa all such activities are regulated through the provincial conservation agencies. Certain species are protected and require permits. The legislation covering this is the various Nature Conservation ordinances in the provinces and the NEMBA (No. 10, 2004) Threatened or Protected species regulations. This indicator refers to the control of legal hunting. Control of illegal activities is covered in 7.1.1</p>

5.3.9	<p>Plantations established on land converted from natural forests after 1972 will not be eligible for certification.</p> <p>Conversion of plantations to other types of land use, shall not occur unless in justified circumstances where the conversion:</p> <p>a) is in compliance with national and regional policy and legislation relevant for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority including consultation with materially and directly interested persons and organisations; and</p> <p>b) entails less than 10 % of a landscape</p> <p>c) does not have negative impacts on threatened (including vulnerable, rare or endangered) ecosystems, culturally and socially significant areas, important habitats of threatened species or other protected areas; and</p> <p>d) makes a contribution to long-term conservation, economic, and social benefits.</p>
G	<p>In South Africa the National Forest Act prohibits the conversion of natural forests since 1998. Afforestation within indigenous forests has never been authorised so this criterion is met for all legal plantations established since 1972.</p> <p>Section 3 (3) of the National Forests Act No. 84 of 1998 states:</p> <p>(3) The principles are that-</p> <p>(a) natural forests must not be destroyed save in exceptional circumstances where, in the opinion of the Minister, a proposed new land use is preferable in terms of its economic, social or environmental benefits;</p> <p>Further section 7 (1) states</p> <p>(1) No person may -5.5.3.9</p> <p>(a) cut, disturb, damage or destroy any indigenous tree in a natural forest; or</p> <p>(b) possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any tree, or any forest product derived from a tree contemplated in paragraph (a)</p>

6	FOREST HEALTH AND PROTECTION
6.1	Protection from illegal activities
6.1.1	Measures are implemented to provide protection from timber theft, illegal hunting, fishing, trapping, collecting, settlement and other unauthorized activities.
V	Someone is tasked with inspecting for illegal activities. Access control is in place where needed. Where the management unit is on leased land there is agreement between parties on how to control unauthorized or illegal activities.
6.2	Responsible use of chemicals and biocontrol agents
6.2.1	Storage of hazardous materials and chemicals (including all fuels, pesticides, herbicides and fertilisers) is in accordance with legislation and best practice.
V	Inspect chemical stores or field sites for: <ul style="list-style-type: none"> - Emergency procedure - PPE requirements - Soap and water and/or eyewash - Measures for prevention, containment or mitigation of spillages - Evidence of training of workers. - The Material Safety Data Sheet for all chemicals. - Refer to MSDS for specific requirements for each chemical pesticides. <p>Fuel stores are managed according to legal requirements</p>
G	Legal requirements for fuel storage facilities include the following: Tanks shall not be installed close to excavations, lakes, streams, canals, dams or the seaside. Tanks located on sites in urban areas require bunding. Tanks installed in rural areas, if deemed to be a sensitive area, will also require bunding. If installation close to a watercourse is unavoidable, adequate bunding and sealing of the surface within the bund shall be provided. Tanks should be located at least 3 m from buildings, boundaries, drains and any combustible materials. Tanks should be installed on a level site, away from overhead cables. Tanks shall be located in secure areas. Taken from South African National Standard for Above-ground storage tanks for petroleum products. [SANS 10131]
6.2.2	Waste disposal sites on the management unit comply with national legislation and local by-laws and are managed according to industry best practice guidelines. Hazardous waste is only disposed of at sites registered for the disposal of hazardous waste.
V	Inspection of waste disposal facilities. Used chemical containers are safely disposed of.
G	Domestic waste of less than 1 ton per day may be disposed of at a safely managed on-site waste disposal site that complies with national legislation and local bye-laws. Hazardous waste, including medical waste, is only disposed of at sites registered for the disposal of hazardous waste. Hazardous waste includes but is not restricted to: -Used batteries, Florescent tubes, Unused chemicals, Oil / fuel / chemical containers Legislation: National Environmental Management : Waste Amendment Act 26 of 2014, Most managers return the containers to the chemical supplier who recycle the containers.
6.2.3	Measures shall be taken to prevent chemical and hydrocarbon pollution and remediate areas in the event of spillage.
V	Documented procedures are in place to avoid fuel and oil pollution and remediate significant** spillages. Inspections of fuel stores and workshops.

	Evidence of remediation practices for pollution incidents. In field inspection of sites where vehicles, fuels and oils are being used. Group Schemes: Procedures form part of the group management system.
G	Procedures should include special consideration for high risk activities such as: Mobile tankers transporting hydrocarbons infield and increased risks where operations are highly mechanized. **An oil spillage is considered significant if: - It occurs in the vicinity of a water body. - It has a volume in excess of 20 litres. - It occurs in the vicinity of a habitat for known rare or threatened species.
6.2.4	Integrated pest management, including silvicultural systems, lead to more efficient use of chemicals.
V	Documented integrated pest management (IPM) programmes and evidence of implementation. Group Schemes: May have a group IPM strategy in the group management system.
6.2.5	The following groups of pesticides are prohibited: a) WHO Type 1A and 1B pesticides and other highly toxic pesticides, b) Chlorinated hydrocarbons whose derivatives remain biologically active and accumulate in the food chain beyond their intended use. c) Pesticides banned by international agreement Note: "pesticides banned by international agreements" are defined in the Stockholm Convention on Persistent Organic Pollutants 2001, as amended.
V	Chemical stores Records of type of chemicals used.
6.2.6	The use of pesticides shall follow the instructions given by the pesticide producer and be implemented with proper equipment and training.
V	Inspect field sites where chemicals are being applied. For contractors spraying chemicals there must be a registered Pest Control Operator.
G	The South African legislation exceeds the ILO requirements for all aspects of chemical use. See FSA Environmental Guidelines 5.3-5.6. Legislation: The use of pesticides is regulated through the Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No. 36 of 1947)
6.2.7	The use of biological control agents is in accordance with legislation and with internationally accepted scientific protocols*
V	The release of biological control agents is managed by authorized organizations.
G	NEMA requires EIAs before release of biological agents. International protocols require - that the use of biological control agents is recorded including type, quantity, date of deployment, location and reason for use. - that damage to environmental values caused by the use of biological control agents is prevented and mitigated or repaired where damage occurs.
6.2.8	Where fertilisers are used, they shall be applied in a controlled manner and with due consideration for the environment.
V	The use of fertilizers is according to accepted industry protocols. Corporates: Examine procedures and records of application. Owner Managers: Interviews with managers.
6.3	Protection of forests from negative impacts of fire
6.3.1	Records of past uncontrolled fires are kept and trends examined.
V	Corporates: Documented record of past fires which includes; number of fires, extent of damage, examination of causes and analysis of trends.

	Owner Manager: Interview to demonstrate an understanding of the causes Evidence of how the management has been modified as a result of analysis of past fires.
6.3.2	There is a comprehensive fire risk management strategy that is implemented.
V	Corporates: Documented fire risk plan. Owner managers: Interview manager
G	A fire risk management strategy should include: 1. FIRE PROTECTION ORGANISATION - Schedules of activities necessary for fire preparedness, a pre-season check list. 2. FIREBELTS AND CONTROLLED BURNING - Details of internal and external breaks, clearly shown on maps. Legal requirements and Insurance warranties. 3. FIRE MANAGEMENT - Standby duty arrangements. - Special precautions for orange/red FDI. - Action plans and call-out procedures and aircraft operations - KNFPA operations plan (if a member). - Resource lists, including neighbour contact numbers and equipment. 4. FIRE REPORTS - Statistical reports of fire incidence and post mortems (This is done through FPA) 5. STANDARDS - Radios, Lookouts, Water supplies, Fire equipment, Fire tenders, Training and Fire belts. 6. ASPECTS WHICH CONTRIBUTE TO DECREASED FIRE RISK Forestry management contributes to conditions which reduces the risk of uncontrolled fires and limits the extent of their damage. The following are examples of aspects influence fire risk: Community relations, road maintenance, management of conservation zones, alien plant control, residue management and road density.
6.3.3	Those responsible for implementing the fire management strategy are capable.
V	Corporates: Examine records of formal fire protection training. Owner Manager: Formal training for manager or must be able to demonstrate high levels of experience. In-house training for general staff. Interviews with staff
G	There should be an experienced fire chief, a competent manager and well trained staff.
6.3.4	The organization is a member of the Fire Protection Association in all areas that the management unit occupies.
V	Evidence of FPA membership and participation in cases where an FPA covers the area.
G	Legislation: The National Veld and Forest Fire Act, 1998 states (2) outlines the functions and requirements for membership of the FPA.
6.3.5	Measures shall be taken to limit environmental damage after the occurrence of uncontrolled fires.
V	Evidence that there are actions taken to rehabilitate areas that have been damaged after uncontrolled fires. Corporates: : Documented procedures that cover rehabilitation after damage from uncontrolled fires. Evidence of implementation and monitoring.
G	Damage from wildfires present a high risk to all the conservation values associated with the management unit. Rehabilitation plans should cover the major risks for the management unit. A focus for rehabilitation would be on arresting soil erosion and the resulting sedimentation of freshwater ecosystems. Burning regimes for grasslands and fynbos could be interrupted and would need to be adjusted. Hot uncontrolled or unseasonal fires could result in damage to indigenous forest patches and other sensitive ecosystems.
6.4	Monitoring, identification and control of pests and diseases and damage-causing animals

6.4.1	Managers inspect plantations for evidence of ill-health and damage and take appropriate action. The frequency of inspections shall be determined by the specific pests and environmental factors.
V	Corporates: Maps or records of occurrence of pests and diseases. Owner management: Interviews
G	This should form part of the Integrated Pest Management Strategy covered in 6.2.4. Support to managers is available from the Tree Protection Co-operative Programme (TPCP).
6.4.2	New outbreaks and spread of specified pests and disease are reported to the relevant authority or organization.
V	Significant pest incidents are monitored with a frequency that is linked to the specific pest and environmental factors and reported to the Tree Protection Co-operative Programme (TPCP.) Group Scheme: This reporting can be done by the group scheme manager.
6.4.3	Where damage-causing animals (e.g. baboons, bush pigs, antelope & rodents) pose a significant threat to the productivity of the plantation, they are controlled according to recommended protocols and in line with legislation.
V	Assessment of damage has taken place and shown that productivity is significantly affected. Corporates: Clear policy and procedure and evidence of implementation. Records to show losses suffered are sufficient justification for chosen control measures. Owner Manager: Interviews with managers to determine if there is a systematic approach to controlling damage-causing animals.
G	Non-chemical controls are used where available. Non-lethal control options have been attempted first. Where not effective, other means approved by conservation authorities are implemented. SA Environmental Guidelines for Commercial Forestry Plantations in South Africa Chapter 5.1 Damage-causing Animals

7	ECONOMIC SUSTAINABILITY
7.1	Sustainable use of non-timber forest products
7.1.1	For commercial use of non-timber forest products from natural areas under the organization's* control, a sustainable harvest level is calculated and adhered to. Sustainable harvest levels are based on Best Available Information*.
V	Calculations of sustainable harvest levels of non-timber forest products. Evidence that these are being adhered to. Sources of best available information. Compliance with legal requirements. National Environmental Management: Biodiversity Act (No. 10 of 2004) NEMBA (No. 10 of 2004) Threatened or Protected Species Regulations, 2013
G	This indicator refers to Non Timber Forest Products (NTFPs) that are harvested from natural ecosystems, for example medicinal plants, reeds and flowers. There are currently few documented sources of Best Available Information for these activities. However, any harvesting of species from natural ecosystems will require permission from the provincial conservation agencies. These permits will come with requirements for sustainable management of the species. Legislation: NEMBA (No. 10 of 2004) Threatened or Protected Species Regulations, 2013
7.1.2	The range of resources and ecosystem services on the management unit and the potential benefits to local communities are known by management.
V	The manager is able to describe 1. the range of plantation products and how this could benefit local communities. 2. the range of ecosystem services and how these could benefit local communities. Corporates: Documented evidence of the above. Corporates should undertake a formal assessment of ecosystem services available in order to fully appreciate the range of products and services provided by the management unit and to communicate it throughout the organization and to stakeholders. Owner Manager: Interviews involving inter alia the following: Does the management unit have; -opportunities for recreation -important catchments for water supply -wetlands for water quality maintenance and flood attenuation -natural ecosystems for biodiversity conservation and the other associated services? - any other resources or ecosystem services of relevance to the management unit in question and/or the neighbouring communities
7.1.3	The organization diversifies the range of products and services produced on the management unit where this is beneficial to the sustainability of the operation and the community. [See 2.2.3]
V	The range of products and services that are available are being used where there are opportunities. Evidence of how opportunities are made known to the community. This could include passing information via word of mouth, notices to neighbours, agendas of liaison meetings with stakeholders, publicity campaigns.
G	The diversification of the operations may not always yield financial returns that seem to justify the effort, however consideration should be given to role that opening access to the diversity of forest products will bring to promoting community harmony. This could play a vital role promoting cooperation and reducing risks such as arson.

7.2	Forestry operations are economically sustainable
7.2.1	Harvested timber areas are re-established within a year of felling unless the area is being rehabilitated to natural vegetation for ecological reasons.
V	Field observations Harvesting and planting records
G	The goal should be to re-establish as soon as possible. Delays in reestablishment must be justified. In the case of losses due to natural disasters, replanting is undertaken as soon as possible.
7.2.2	There is a clear justification for the choice of species and genotypes chosen for the plantation, which takes into account the objectives of the plantation, and the climate, geology and soils at the planting sites.
V	Evidence that the key factors governing species choice have been considered. If there is reason to believe the incorrect species have been chosen then further requirements for evidence such as soil maps, climate data and market information should be requested.
G	Species choice is governed by site, fire risk, market and risk of disease Consideration for climate change and its impacts on site, such as increasing risk of drought and disease. Support for research such as that done by the ICFR is funded by FSA funds and membership of FSA implies support for this work.
7.2.3	Aspects important to plantation productivity are monitored.
V	Corporates: Documented monitoring results. Owner Manager: Interview on how aspects listed in the guidance below are monitored. If infield compliance indicators are poor, then documented evidence can be requested.
G	Monitoring should include the following where relevant to operations: 1. Actual yields against predicted yield. 2. Silvicultural specifications important to optimize stocking. [silvicultural quality, weeding, growth, plant quality and seed source, chemical use] 3. External aspects critical to production. [disease, fire, weather, theft, damage from animals] 4. Harvesting practices
7.2.4	Where there is evidence of a loss of productivity over successive rotations that can be attributed to reduction in site quality action is taken to restore site quality.
V	Growth data that indicates loss of production Evaluation of actions taken.
G	Actions could include aspects such as limiting loss of soil organic matter/soil erosion and eliminating high intensity fires when burning residues.
7.2.5	The drivers of the costs of production must be understood and relevant aspects monitored including; labour efficiency, productivity of machinery.
V	Corporates: Examine management plan budgets Owner Manager: Interview managers
G	It is only necessary explore these aspects in depth if there is reason to believe that the manager is not controlling costs and this is a risk to profitability.
7.2.6	Forestry operations make an economic contribution to the community and country.
V	Value of annual operations is stable or increasing, or where declining can be justified. Financial statements
G	In combination with the requirements of criterion 2.3 the goal of economic benefits to the community and country should be assured.
7.2.7	Forestry operations make provision for diversification and resilience.
V	Forestry operations produce a range of products/customers to diversify income streams. A range of species or clones and age classes are present on the management unit.
	For large vertically integrated companies it may more challenging to diversify. However, diversification remains a critically important principle for sustainable forestry so all organisations should look for ways to increase their overall genetic diversity and resilience to both environmental and economic change.

7.2.8	Responsibilities for sustainable forest management are clearly defined and assigned.
V	Corporates: Refer to organograms and job descriptions Owner managers: Interviews

Appendix 1: Applicable laws, regulations, nationally ratified international treaties, conventions and agreements [Check for subsequent amendments to legislation]

1	Land tenure	
	1.1	Property rights, communal land: Interim Protection of Informal Land Rights Act (Act No. 31 of 1996)
	1.2	Ingonyama Trust Act (Act No. of 1994)
2	Water use authorisation	
	2.1	National Water Act (Act No. 36 of 1998)
3	Taxes and fees	
	3.1	National Water Act (Act No. 36 of 1998)
	3.2	Local Government: Municipal Property Rates Act, 2004 (Act No. 6 of 2004)
4	Forestry related laws	
	4.1	National Forests Act (Act 84 of 1998) (provisions for authorising harvesting in State Forests)
5	Protected sites and species	
	5.1	National Heritage Resources Act (Act No. 25 of 1999)
	5.2	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
	5.3	NEMBA (No. 10 of 2004) Threatened or Protected Species Regulations, 2013
6	Environmental requirements	
	6.1	National Environmental Management Act (Act No. 107 of 1998)
	6.2	National Environmental Management Amendment Act (Act No. 56 of 2002)
	6.3	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
	6.4	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
	6.5	National Environmental Management: Waste Act (Act No. 59 of 2008)
	6.6	National Environmental Management: Air Quality Act (Act No. 39 of 2004)
	6.7	NEMA EIA regulation 2014. Listing Notices
	6.8	NEMBA (No. 10 of 2004) Alien and Invasive Species Regulations, 2014
	6.9	NEMBA (No. 10 of 2004) Alien and Invasive Species List, 2015
	6.10	National Veld and Forest Fire Act (Act No. 101 of 1998)
	6.11	Conservation of Agricultural Resources Act (Act No. 43 of 1983), as amended 2001
	6.12	Agricultural Pests Act (Act No. 39 of 1983)

	6.13	Hazardous Substances Act (Act No. 15 of 1973)
	6.14	Hazardous Chemical Substances Regulations. (Government Notice R1179, 1995)
	6.15	The Stockholm Convention on Persistent Organic Pollutant 2001, as amended.
7	Health and safety	
	7.1	Occupational Health and Safety Act (Act No. 85 of 1993)
	7.2	National Health Act (Act No. 61 of 2003)
	7.3	Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993)
	7.4	National Road Traffic Act (Act No. 93 of 1996)
8	Employment	
	8.1	Constitution of the Republic of South Africa Act (Act 106 of 1996)
	8.2	Basic Conditions of Employment Act (No. 75 of 1997)
	8.3	Sectoral Determination 12: Forestry Sector
	8.4	Labour Relations Act (LRA), 1995 (Act No. 66 of 1995)
	8.5	Employment Equity Act, 1998 (Act No. 55 of 1998)
	8.6	Unemployment Insurance Act, 2001 (Act No. 63 of 2001)
	8.7	Skills Development Levies Act, 1999 (Act No. 9 of 1999)
9	Customary rights, rights to land and restitution of land rights	
	9.1	Extension of Security of Tenure Act (No. 67 of 1997)
	9.2	Prevention of Illegal Eviction from and Unlawful occupation of Land Act (No. 19 of 1998)
	9.3	Land Reform (Labour Tenants) Act (No. 3 of 1996)
	9.4	The Interim Protection of Informal Rights Act (No. 31 of 1996)
	9.5	Restitution of Land Rights Act (No. 22 of 1994)
10	Anti-corruption	
	10.1	Prevention and Combating of Corrupt Activities Act, (Act No. ? of 2004 (PCCAA)
11	Miscellaneous	
	9.1	Fencing Act (No. 31 of 1963)
	9.2	Minerals and Petroleum Resources Development Act (No. 28 of 2002)
	9.3	National Building Regulations and Building Standards (No. 103 of 1977)
	9.4	Plant Breeders Rights Act (No. 15 of 1976)

Appendix 2: Housing standards

Housing constructed for workers by landowners:

1. Safe and structurally sound.
2. Clean and well maintained.
3. Situated so as to avoid flooding or other natural hazards.
4. Waterproof, windproof and weatherproof.
5. Sufficient ventilation and insulation.
6. No more than 6 people sharing a room.
7. Minimum bedroom floor sizes:
7.5 m²: two beds
11.5 m²: three beds
14.5 m²: four beds
More than four beds, at least 3.5 m² per person.
8. Lockers to be provided for keeping personal belongings in shared rooms.
9. Kitchen areas separated from sleeping areas.
10. Food store for hygienic storage of food.
11. Sufficient clean water available within close proximity. Water must be regularly tested for portability.
12. Sanitary facilities (washrooms, showers, toilets or latrines) separated from sleeping and dining areas and from kitchen facilities and storage areas for food, complying to hygienic requirements.
13. A minimum of 1 toilet, 1 wash basin and 1 tub or shower for every six persons. Separate sanitary facilities for men and women.
14. Facilities for washing and drying clothes, with adequate water supply and drainage.
15. Stores for any flammable, chemical or explosive substances at a safe distance from living quarters.
16. Means of control of rodent and harmful insects.
17. Appropriate fire safety equipment and systems.
18. Appropriate refuse and sewage disposal.

The following applies to self-built housing:

1. Facilities are provided for rubbish disposal.
2. Provision of potable water within 200m of dwellings.
Water supply must be adequate for drinking and washing purposes. As a rough guideline this is about 50 litres per person per day.
3. The use of rivers for washing of utensils and clothing is strongly discouraged.
5. Adequate ventilation in houses where cooking takes place on open fires.
6. Toilet facilities must be sited appropriately and must be enclosed.

Latrines must:

1. be situated more than 50m from any surface water bodies.
2. be situated more than 50m from any boreholes.
3. be situated on soils with suitable drainage.
4. must not have any storm water drainage flowing into it.
5. pit latrines must be 3m or more deep (where possible), with a sturdy enclosed structure.
6. If necessary be treated with chemicals to reduce offensive odours and control flies.