

AN ASSESSMENT OF STANDARDS FOR
SUSTAINABLE FOREST MANAGEMENT
BY SMALL SCALE FOREST GROWERS
A case study in KwaZulu-Natal
South Africa

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1. INTRODUCTION

1.1 Purpose of the study

This study, undertaken by the Institute of Natural Resources (INR) in association with the Natural Resources Institute in the United Kingdom (NRI), builds on from a project looking at access to responsible business and ethical markets being carried out by the NRI, and forms part of a programme to investigate the effects of new trade opportunities on rural livelihoods (funded by DfID southern Africa). South Africa was chosen for the case study because the Government is in the process of developing a set of national standards for sustainable forest management that will be administered by the Department of Water Affairs and Forestry (DWAF), to which small scale forest growers will need to conform. While South Africa has a number of factors that make it different to other developing markets, there are also a number of general issues that are raised in the study (relating to small growers, indigenous land use practice and resource control), that will have relevance to the development of sustainable forest management standards in a number of other countries. Three factors stand out as identifying South Africa as being unique in this process:

- The forest and timber industry is dominated by very few players;
- The majority of the industry is certified to either ISO 14001 or Forestry Stewardship Council (FSC);
- Nearly all timber is grown on plantation of exotic species.

Overall the study examines a set of social and environmental standards relevant to small scale timber growers in South Africa. In addition the study makes reference to the potential for small growers to achieve FSC standards and certification. This was motivated by the fact that the independent small growers see compliance with national standards and certification as a potential opportunity for increasing demand for their timber and thereby improving the marketability of their output. Therefore three key objectives of the study were:

- To inform the national standards regarding the capacity and operations of small growers.
- To examine the ability of small growers to reach the required standard.
- To see what objectively verifiable proof it is realistic to expect from small growers to prove compliance with national standards.

1.2 Relevance of small scale forest growers in standard setting

Small scale¹ forest growers face the potential of being squeezed out or denied access to the market place if they are unable to meet national standards. However their ability to meet the standards could be limited if the standards demanded of them do not recognise their specific needs and capabilities. It is important that a single tier set of standards are designed for the forestry industry, rather than a 2-tier system that differentiates between large and small growers, as they all compete in the same market and operate in the same natural environment. While individually the impact of each small grower may be very small - their impact across a watershed could be highly significant due to the growing number of households entering into forestry plantation operations. For example, one of South Africa's largest timber companies

¹ In the context of this study, small growers are defined as those with plantations of less than 50 ha, however growers with plantation greater than 50 ha were not excluded from the case studies.

(Sappi) estimates that one third (approximately 200 000 tonnes) of its production in the near future may be derived from small growers (Gumede *pers comm.* 2000). Small scale forest growers therefore constitute a significant portion of the timber production sector, and the social and environmental impacts arising from the operations of this sector are therefore likely to be of consequence. It is therefore important that standards are developed that do not exclude the participation of small growers. While their potential to meet standards may in the short term be limited, compliance by small growers in the medium to long term should be achieved.

1.3 Implications of national standards for forest owners

The National Forests Act (No. 84 of 1998) empowers the Minister (of Water Affairs and Forestry), on the advice of the Committee for Sustainable Forest Management, to determine and enforce a set of national standards (comprising principles, criteria, indicators and standards) regulating forestry operations in South Africa. Any person found in breach of the standards and who is not implementing remedial action may be fined up to R50 000 in sentence. The importance of a comprehensive set of national standards aimed at achieving sustainable forest management, together with the weight of punishment for breaching the standards, makes it essential that the promulgated national standards clearly take into consideration all sectors of the forestry industry, of which the small scale forest growers form a small but significant part. Furthermore it is important that support is provided to small growers to enable them to be in a position to comply with the national standards.

2. STUDY METHODS

Building on information obtained from a preceding related study², the process followed in this study included a number of steps:

- *Development of matrix*
A matrix was developed of principles and criteria from a range of international certification organizations. This matrix (Appendix A) was used to develop a comprehensive list of generic principles and criteria.
- *Questionnaires*
A questionnaire was developed based on the comprehensive list of generic principles and criteria collated in the matrix. The aim was to test the relevance and achievability of the principles and criteria in the context of the small grower sector. Two versions of the questionnaire were developed (Appendix B), one to be applied during individual interviews and a second during group meetings with small growers.
- *Individual and group interviews*
Interviews were held to test the criteria and principles highlighted as potentially relevant through the matrix, and identify missing criteria and principles. Interviews with individual growers were used to obtain specific information on issues affecting individual households. Group discussions generated information around community issues such as land tenure, labour, community relations and grievance procedures.
- *Workshops with a grower elected committee*
A committee comprising two to four members from each community (including non-growers) was formed (Figure 1). The aim of the workshops with this committee was to test the conclusions drawn from the interviews with regards the relevance of criteria and principles and identification of missing criteria and principles. Furthermore the workshops were used to examine the capacity growers to meet standards given their operational conditions. The potential for collective organization of growers was also explored, and ways for these groups to participate in the standard setting process and subsequent meeting of the standards.
- *Engage National Standards Committee*
Communication channels were established with the Committee for Sustainable Forest Management in order to gain participation of Committee members in the research process. The representatives from the out-grower schemes of Sappi and Natal Co-operative Timbers (NCT) were also engaged in the study.

2

A preceding study was undertaken in the Greytown district of KwaZulu-Natal (South Africa). The study involved a survey of growers, contractors, employees and non-growers or contractors. The aim of the case study was to test the relevance of the nine FSC principles and criteria to the small scale forestry sector in the province. (Addo, P.K. and Lewis, F. 2000. Forest Stewardship Council certification and its relevance to small-scale timber growers: A case study involving small growers in KwaZulu-Natal, South Africa. Investigational Report No. 215. Institute of Natural Resources. Pietermaritzburg.)



Figure 1: Growers committee together with the project team

Case studies were undertaken in four rural communities in the Richards Bay area of KwaZulu-Natal (Figure 2). Each community was characterized with differing forestry growing operations:

1. **Nseleni:** A community where forestry is relatively new to the area. Its potential was not fully understood without any harvest cycles having yet been completed and most plantations being less than one hectare.
2. **Kwambonambi:** A relatively well operating small grower sector, including a co-operative of 101 households who have been growing trees for 30 years and currently have a plantation of 43 ha. There are also a number of relatively large plantations owned by individuals in the area. Resource management in this area appears to be highly political with a very powerful Tribal Authority controlling these issues.
3. **Empembeni:** A community where forestry is well established but plantation operations are largely carried out individually and not collectively. Forestry operations were first initiated in the 1970s, and plantation sizes vary in size with an average between 3ha and 15ha.
4. **Port Durnford:** This study area has plantations as small as $\frac{1}{4}$ ha, but on average growers have plantations of 2ha to 5ha. One grower in the area has a plantation of over 55ha. Growers in this area are reasonably well informed as the Sappi and Mondi out-grower schemes of have been operating for a number of years, and have enabled a transfer of information and basic skills to the independent growers.

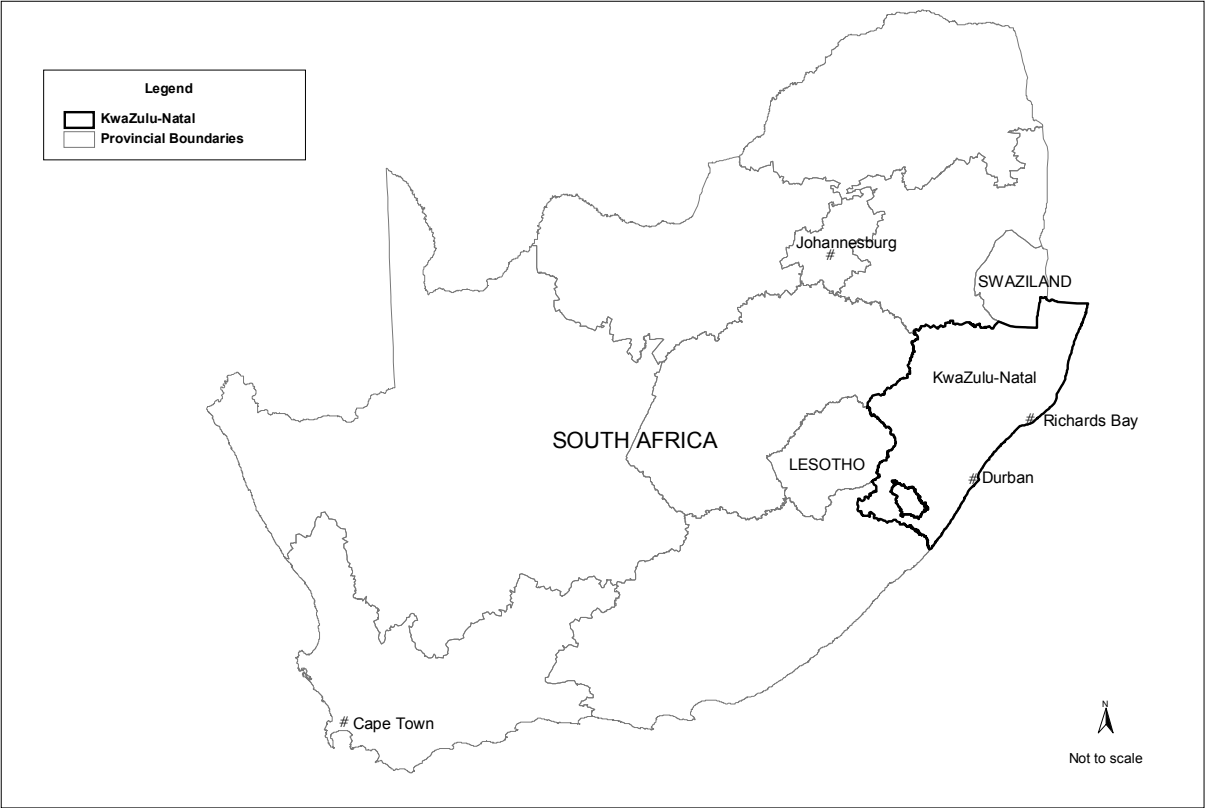


Figure 2: Location of study area

3. OVERVIEW OF FORESTRY OPERATIONS IN SOUTH AFRICA

3.1 Components of the forestry sector

The forestry production industry in South Africa is largely dominated by a number of private sector companies viz. Sappi and Mondi, and Safcol (a State run forestry enterprise which is currently being privatised). Between them they control the large majority of the forest growing industry in the country. In addition, there are a number of independent growers producing trees on farms with areas of between 50 ha and 3000 ha. These growers supply timber to either Sappi or Mondi, or to marketing co-operatives such as NCT. In addition there are the large number of independent 'small scale' producers growing trees on communal tenure land. It is estimated that there are approximately 14 000 individuals operating in out-growers or other small grower schemes. These small grower holdings can be substantial (well over 50 ha), but the vast majority are likely to be under 5 ha or even as small as ½ ha. These growers also attempt sell their timber to Sappi or Mondi, or through co-operatives such as NCT. Sappi and Mondi have out-grower schemes called Sappi Project Grow and Khulenathi respectively. Through these schemes the companies assist small growers in the rural areas to establish plantations, by providing extension services and seedlings and training in a range of basic forestry skills in the first cycle. At the end of the growing cycle the companies then purchase the timber at a negotiated rate. These small growers therefore have greater security than the independent small growers in terms of support and information during the first growing cycle, as well as inputs and a market on felling. However many small growers either do not qualify or are not able to join out-grower schemes, or voluntarily elect to develop their plantations independently.

3.2 Socio-economic characteristics of small growers

The results of the survey undertaken in the preceding small growers study (see footnote 2) indicated that in the Greytown district of KwaZulu-Natal (which could be considered a representative rural population in South Africa) 32% of the independent small growers had no formal education. A further 53% had less than six years of schooling, while only 15% had up to 12 years of formal schooling. None of the growers surveyed had any tertiary education. Given these statistics it is believed that, due to low literacy levels, the ability of these small growers to keep records of operational activities, or keep detailed records of formal monitoring operations, is minimal and it is unlikely that they would be able to achieve these requirements without employing someone with these skills. However the Greytown study also indicated that forestry operations for independent growers are financially marginal with the average return on an 8-year cycle being as little as R9 000 (equivalent to approximately US\$1 200). The ability of small growers to expand and improve productivity of their plantation operations is therefore limited both in terms of limited technical capacity of the growers (given their limited formal training opportunities), and a scarcity of financial and material resources with which to invest in forestry operations.

3.3 Small grower timber production and market access

The timber grown by independent small growers is nearly all Eucalyptus species (gum) or wattle, grown on an eight-year cycle³, and usually grown on a small plot in the vicinity of the homestead. Poor market access is currently a major constraint to small growers, as the independent growers (ie. small growers who are not members of out-grower schemes or marketing co-operatives) are not guaranteed a market for their timber, but hope to find buyers for it when they harvest at the end of the eight-year cycle. The capacity of the mills is limited and supply to the mills is regulated by the issuing of tickets that allow for only a given number of tonnes per grower to be delivered to the mill. Large growers with consistent supply levels have preferential access to these tickets as they provide a higher guarantee for a constant supply of timber to the mills than do the small growers whose timber production is widely characterised by unreliable supply levels.

Inconsistency in supply of timber from small growers can arise due to a number of factors. For example, in times of cash shortages small growers frequently harvest trees before maturity, selling the poles locally as building materials. The quantity of timber available to the mills at the end of the eight-year cycle could therefore be significantly less than the quantity projected at the start of the planting cycle. Timber is therefore purchased from independent growers on an *ad hoc* basis. If timber mills have spare capacity at the time of a small grower offering their timber for sale the mill could purchase it from the independent small growers. Conversely if mills are running at full capacity, timber for sale by independent small growers who have not been awarded ticket allocations will be refused. Therefore, small growers often find that they have no market for their timber as there are only a limited number of tickets allocated to small growers by the mills. Yet the potential for income generation through forestry, despite the risks of uncertain markets for the sale of their timber, is such that there are an ever-increasing number of new small growers entering the forestry industry. Compliance with national standards and certification of operations is therefore seen by the small grower sector as a potential opportunity for increasing demand for their timber and thereby improving the marketability of their output, as they understand that certified timber (meeting national standards) will be in higher demand

by the mills than that which does not meet the standards.



Figure 3: A small scale forest grower at his 1ha plantation in the Nseleni district.

³ Pine species are seldom grown due to the long (approximately 18 years) growing cycle.

4. REVIEW OF RELEVANCE AND ACHIEVABILITY OF PRINCIPLES AND CRITERIA

Interpretation of the results from the review of international certification and standards systems (Appendix A) indicated that the FSC principles and criteria were a comprehensive set of standards. FSC principles and criteria (<http://www.fscoax.org>) were therefore used as a starting point for the assessment of criteria relevant to the small scale forest grower sector.

4.1 Assessment matrix

Table 3.1 lists the rankings from the outcome of the assessment of the relevance and achievability of FSC principles and criteria in terms of the small scale forest grower sector (detailed descriptions of the principles and criteria are provided in section 3.2). Principles and criteria were assessed in terms of their relevance to the scale of operation and environment within which small growers operate. Criteria with low relevance ratings (1) are those which are largely irrelevant to small growers in attaining sustainable forest management. Rating for achievability is an assessment of the ability of small growers to meet the required criteria, given current capacity within the small grower sector. Areas requiring particular attention are those where criteria rank high in relevance (2 or 3) but low in achievability (1). In these cases, it is important for growers to conform with the criteria in order to contribute to sustainable forest management. However without significant assistance or support they will be unable to do so.

Table 3.1: Relevance and achievability ranking of FSC Principles and Criteria

Key: 1 - low relevance or achievability 3 - high relevance or achievability

PRINCIPLE NO.	CRITERIA NO.	RELEVANCE	ACHIEVABILITY
1	1.1	3	2
	1.2	2	1
	1.3	3	2
	1.4	3	3
	1.5	3	2
	1.6	3	2
2	2.1	1	1
	2.2	3	3
	2.3	3	3
3	3.1	1	1
	3.2	1	1
	3.3	1	1
	3.4	1	1
4	4.1	3	2
	4.2	3	1
	4.3	2	1
	4.4	3	1
	4.5	3	3

5	5.1	3	1
	5.2	2	2
	5.3	2	2
	5.4	3	1
	5.5	3	1
	5.6	1	2
6	6.1	3	1
	6.2	3	1
	6.3	2	1
	6.4	2	1
	6.5	2	2
	6.6	2	1
	6.7	2	1
	6.8	1	3
	6.9	3	1
	6.10	2	1
7	7.1	3	1
	7.2	3	1
	7.3	3	1
	7.4	1	1
8	8.1	3	1
	8.2	2	1
	8.3	2	1
	8.4	2	1
	8.5	2	2
9	9.1	3	1
	9.2	2	1
	9.3	2	1
	9.4	2	1
10	10.1	2	1
	10.2	3	1
	10.3	3	1
	10.4	3	1
	10.5	3	2
	10.6	3	1
	10.7	2	2
	10.8	3	1
	10.9	2	1

4.2 Assessment of relevance and achievability of Principles and Criteria

While the study focusses on a set of social and environmental standards for sustainable forest management relevant to small scale timber growers in South Africa, criteria specifically relating to FSC certification were not omitted from the assessment. Independent small growers recognised advantages associated with certification (eg. potential increase in demand for their timber), and the recommended principles and criteria coming out of this study could therefore have bearing on standards for certification. However, with respect to the primary objectives of this study, relevance of these criteria were low. Achievability was nevertheless assessed.

Principle 1: Compliance with laws and FSC principles

Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

1.5 *Forest management shall respect all national and local laws and administrative requirements.*

Compliance with national laws is essential, and in general small growers demonstrate a willingness to comply with relevant forestry and environmental laws. However, lack of information regarding laws and legislation, as well as lack of detail about implications of laws to their small grower operations are widely reported problems among the small growers. In effect there is therefore little compliance achieved despite relevance of the criteria.

1.2 *All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.*

Relevant permit fees and taxes should be paid by small growers, however it is important that these fees consider the scale of operation, as in many cases the plantation operations are marginal economic ventures, and the small incomes generated are vital incomes for the rural households. Relevance of this criterion is limited, but achievement may be difficult as additional costs may not be affordable for many of the small growers.

1.3 *In signatory countries, the provisions of all binding international agreements such as CITES*

As in criterion 1.1, lack of information regarding binding international agreements and their implications for small grower operations is widely evident among the small growers. In effect there would therefore be little compliance should there be relevant agreements to which South Africa is a signatory.

1.4 *Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.*

This standard would be highly relevant only in the case of small growers applying for certification.

1.5 *Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.*

Natural forest within the tribal areas should be protected, however in areas of high poverty levels and resource scarcity, it is not possible to simply prohibit or even limit harvesting of forest resources when many rural households depend on access to these resources for survival. This criterion is therefore highly relevant in all small grower areas, however given the current poverty and unemployment statistics in these areas it may not be possible for small growers to meet the standards.

1.6 *Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.*

While this criterion is primarily relevant in the case of small growers applying for certification, it could also be interpreted to apply to long term commitment to sustainable forest management and national regulations. The concern regarding small growers meeting this criterion would be in terms of the definition of “demonstration” of commitment. Given the low literacy levels among these rural communities and their inability to keep written records, alternate ways of demonstrating commitment would need to be recognised.

Principle 2: Tenure and use rights and responsibilities

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

2.1 *Clear evidence of long-term forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated.*

While households have user rights to the land, they do not hold private tenure rights. The land remains in trust to the nation. It is the traditional authority of the local *Inkosi*'s to allocate or reallocate land. However, no title deeds or long term land rights are given formally. It is only by implication that according to traditional custom, land is awarded to households on a long term basis. There is no clear evidence of long term land use rights, other than the word of the tribal authority. This criteria may therefore be difficult for small growers to achieve, depending on the interpretation of acceptable compliance.

2.2 *Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.*

The criteria only tends to become an issue among small grower communities in the instance of commercial forestry companies initiating out-grower schemes on community land. To date this has not been an issue as existing agreements recognise community ownership of the land.

2.3 *Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving*

a significant number of interests will normally disqualify an operation from being certified.

Customary processes for dealing with disputes are clearly defined and widely recognised among communities. Small disputes are dealt with by the individuals concerned, while disputes of substantial magnitude that cannot be resolved by the parties concerned are referred up to the tribal authority. This criteria is therefore adequately addressed by traditional practices, if these practices are formally recognised and accepted as compliance.

Principle 3: Indigenous peoples' rights

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

Principle 3 is not particularly relevant in the case of small grower communities, as the land and plantation forest assets are already under the *indigenous* or local peoples' control. The criteria of Principle 3 would come largely into effect in the case of a weak tribal authority and customary system where land rights could potentially be abused, or in the case of large commercial forestry operation establishing plantations on tribal land.

3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.

In most cases the forest plantations are owned and managed by the individual community members themselves, therefore criteria 3.1 is of little relevance. The situation in which it would be of relevance is when plantation growers are members of out-grower schemes with large commercial operations. In this case it is important to stipulate that the commercial operations have little jurisdiction over management of the land, unless it is voluntarily delegated to them by the local community.

3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.

Not all rural households are currently involved in plantation forestry, and even those that are, together with 'non-plantation' households rely on other traditional land uses such as crop farming to support the household. It is important that the diversification of interests and needs within the community are identified and respected and that plantation forests do not compromise land use opportunities of other community members. Given the traditional land management system it appears that this is currently achievable.

3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.

Land allocations are made and managed by the Tribal Authority who would be aware of sites of special cultural, ecological, economic or religious significance to the local community. It is therefore not likely that the tribal authorities would allocate sites of significance for development of plantations.

- 3.4 *Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.*

This set of standards relates specifically to plantation development and management by indigenous people themselves. The issue of compensation for application of indigenous knowledge is therefore not likely to be relevant in this context.

Principle 4: Community relations and worker's rights

Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

- 4.1 *The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.*

The majority of the labour required in the plantations are provided by the household family. In the case of additional labour required during peak seasons such as weeding, labour is obtained from surrounding households. For skilled jobs such as chain saw operators however, plantation owners may be required to recruit labour from further afield. Due to the relatively low skills base in rural areas it is not necessarily easy for plantation owners to fill skilled positions with local community members. Growers themselves have identified training as an important issue as they realise the advantages of employing local labour in their plantations. However small growers are not in a position to provide this training themselves and meeting this criteria may therefore not be easily achievable.

- 4.2 *Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.*

The Health and Safety Act stipulates that the health and safety of all persons, either employed or associated with plantation operations must be protected against hazards to health and safety. In order to meet these requirements these persons will require both protective equipment and training. Small growers currently experience problems in achieving the requirements for protective gear for two reasons. Firstly, the cost of some of the equipment is very high, eg. protective overalls for chainsaw operators are over R400 each. Secondly due to the informal nature of employment of labour in this sector, labour may not necessarily return to work with the same employer who has provided the equipment, resulting in losses. In terms of the training requirements, which would range from training for the use of dangerous equipment to training in the handling of hazardous chemicals, small growers have re-iterated on numerous cases the fact that training opportunities are in short supply and are in many cases unaffordable. Small growers are therefore likely to struggle to achieve the minimum requirements of this criterion.

- 4.3 *The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organisation (ILO).*

The large proportion of labour for the small scale operators is provided directly by the family. Additional labour is only required for short periods during peak operational seasons such as weeding and felling. Even when labour is required it is very seldom formal employment but rather *ad hoc* work which is often paid for with products from the plantations rather than cash. The informal nature of employment in the small scale forestry operations means that labour negotiations and application of conventions (such as ILO), have little relevance. However the criterion does hold some relevance, specifically among the larger growers (for example those of 50ha or more), or the small grower co-operatives which produce in excess of 100ha. Growers have highlighted concerns regarding the disjointed nature of employment and the need for training to raise the level of skills among the local labour force. The organization of labour providing services within this sector could therefore assist in the upliftment of employment conditions, skills and even payment within this sector. However given the informal nature of labour provision and the lack of relevant skills among the workforce, the ability of the work force to organise itself is severely limited.

- 4.4 *Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups directly affected by management operations.*

Social impact assessments should be an integral part of developing and operating forestry plantations, regardless of the scale of operation. While social impact assessments are currently not formally undertaken, small growers recognise the importance of good social relations. Growers report that there is a potential threat of acts of sabotage against the plantations, for example arson, should good social relations not be maintained. Third party verification of social impact management strategies would however be difficult to conduct, or for growers to prove given the current managed approach of small growers.

- 4.5 *Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.*

As described in criteria 2.3, customary processes for dealing with disputes are clearly defined and widely recognised among communities. Small disputes are dealt with by the individuals concerned, while disputes of substantial magnitude that cannot be resolved by the parties concerned are referred up to the tribal authority. This criteria is therefore adequately addressed by traditional practices, if these are recognised.

Principle 5: Benefits from the forest

Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

- 5.1 *Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.*

Forest management activities do currently include formal consideration of social impacts and only limited environmental impacts (eg soil erosion), the primary focus is on economic productivity. The limited technical information base on management of social, environmental and productivity costs limits small growers' ability to achieve these objectives, particularly in ways that would be verifiable to a third party assessment team.

- 5.2 *Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.*

There is very little wastage in small scale grower operations, as conditions of scarcity experienced within these primarily subsistence economic households necessitate optimal use of resources. However the lack of resources and skills to invest in local processing operations means that the small scale growers largely export the products from their plantations prior to value enriching activities on site. Therefore while small scale forest growers attempt to maximise use, opportunities for local processing and enrichment are not easily achievable.

- 5.3 *Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.*

Resource scarcity and reliance on plantations as an important contributor to meeting resource needs compels small growers to maximise returns and minimise waste within plantation operations. Waste arises largely due to indirect actions such as inability to afford fertilization or proper harvesting and transport equipment. This results in low productivity, thereby implying waste. In some circumstances waste may also result from lack of knowledge on production maximisation techniques. Small grower operations therefore tend to automatically strive to meet these requirements, and where they are not met it is largely due to lack of capacity which would in turn limit the achievability of these requirements without outside intervention and support.

- 5.4 *Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.*

Small grower operations tend to rely only on timber and sometimes bark production, with little diversification in forest products. However the nature of timber production from exotic plantations does limit the potential for diversity of products that are available. Furthermore limited market access for the sale of products further reduce the achievability of this criterion for small growers.

- 5.5 *Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.*

Plantation operations among small growers are primarily production focussed with little recognition of impacts on other environmental functions. This appears to be due partly to lack of information and partly to lack of opportunities arising from the constrained

financial and resource environments within which small growers operate. Support through extension services would be required to explore and possibly assist in implementation of forest management operations if the chance of small growers achieving this criterion is to be improved.

- 5.6 *The rate of harvest of forest products shall not exceed levels which can be permanently sustained.*

Sustainable harvesting is not interpreted to apply in this context of exotic plantation operated by the small growers, but rather has relevance to commercial harvesting of natural forests. However limited relevance could be interpreted in terms of small growers could be expected to maintain the fertility of the soil through rotational cropping or fertilization of the soil in order to maintain productivity.

Principle 6: Environmental impact

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

- 6.1 *Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management, and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.*

While the environmental impact of individual small growers may be limited the cumulative impact of small grower activities, given the extent and growth in forest plantation as a land use in rural areas, is likely to be significant. Decisions on the establishment of plantation is left largely up to the discretion of the individual land owner⁴ and has generally occurred without formal assessment of environmental or social impacts. However environmental impacts arising from plantation forestry, regardless of scale of operation, are widely recognised. It is therefore important that impact assessments be undertaken and the results integrated into management systems relevant to small growers. Small growers however are unlikely to have the skills required to develop and implement an assessment system, or resources to employ someone to undertake the impact assessment on their behalf.

- 6.2 *Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.*

Communal tenure characterises the land and resource ownership in areas in which small growers operate. It is therefore unlikely that individual small growers will be able to have

⁴ Refer to discussion under Principle 2.

any influence on resource management or utilization on a significant scale. Land use and resource management will need to be viewed holistically in these areas, with plantation owners forming only one user group, with management occurring through the Tribal Authority, if this criterion is to be met.

- 6.3 *Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession; b) Genetic, species, and ecosystem diversity; c) Natural cycles that affect the productivity of the forest ecosystem.*

As in criteria 6.2, land management systems will need to be developed at a holistic level and while individual plantation owners can contribute to the successful implementation of the system, they are unlikely to be able to individually implement efficient systems as their individual land allocations are too small.

- 6.4 *Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.*

In many tribal wards a tract of forest land is set aside by the local *Nkosi* for protection. This is a traditional practice and not a new concept among rural communities, but it is likely to only be achievable at a ward level. It is unlikely that individual growers, given their small individual land allocations and the scarcity of land in these areas, would be able to protect and manage samples of ecosystems in their natural state. Furthermore specialist assistance is likely to be required for the development and management of these sample areas. Small growers are therefore unlikely to be in a position to achieve this criteria as individuals or without outside assistance.

- 6.5 *Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.*

While local knowledge exists widely on these aspects, specialist assistance is likely to be required for the development and implementation of the guidelines (refer to Principles 7 and 8).

- 6.6 *Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.*

With most small growers operating with limited financial resources, alternatives to expensive chemical inputs are automatically sought. Where small growers do resort to the use of chemicals, it is fair to expect that it is their responsibility to ensure they obtain all relevant information regarding restrictions, safety guidelines and controls governing

the use of the chemical. The development of management systems and training for the use of chemicals would however require outside assistance.

6.7 *Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.*

Small grower operations tend to be low input, with only limited amounts of waste being produced. However, access to secure waste disposal sites in rural areas would be a limitation. Advice and assistance in developing secure waste disposal sites locally could alleviate the problem.

6.8 *Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.*

Small grower access to resources such as biological control agents is highly limited. Should small growers have access to these resources, it would be fair to expect that it would be their responsibility to ensure all legal requirements are met. This information would be available to them from the supplier of the biological control agent. If they are unable to obtain the relevant information they should not engage in the activity. Ignoring this criterion should therefore be seen as a contravention of the standards and should not be permitted regardless of scale of operation.

6.9 *The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.*

Small grower plantations are primarily composed of exotic species, usually eucalyptus and wattle species. The impacts of these species is widely documented and monitoring and management of these impacts is therefore highly relevant (refer to criteria 6.1 for recommendations on monitoring).

6.10 *Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:*

- *entails a very limited portion of the forest management unit; and*
- *does not occur on high conservation value forest areas; and*
- *will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.*

The natural forests represent a valuable resource to the community and it is therefore unlikely that local tribal authority or community would permit the clearing of a natural forest for the establishment of a plantation by individuals or groups from the community. This criterion would likely be met through traditional management practices.

Principle 7: Management plan

A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.

- 7.1 *The management plan and supporting documents shall provide:*
- a) *Management objectives.*
 - 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, based on the ecology of the forest in question and information gathered through resource inventories.*
 - 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.*

Very few small forest growers have conceptual management plans, and management is mainly determined by resource availability and needs of the household. For example, should the household experience cash shortages, plantations could be felled well before the trees reach the optimal age for harvesting. Management is therefore in effect a short term strategy. The development of written/documented management plans is further limited by low literacy levels among growers. Growers who do keep limited records of plantation management do however recognise benefits of management planning. The concept of plantation management could therefore be expanded to include environmental management. However, unless support is provided to small growers it is unlikely that they will achieve this requirement.

- 7.2 *The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.*

Given the limited capacity of small growers to develop management plans (7.1), similar restrictions would apply to revision of the plans.

- 7.3 *Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.*

Training opportunities for small growers, and their employees, are limited as are growers ability to pay for training services. The growers have identified training as a priority as they recognise the lack of skills within the sector, not only in terms of implementing management plans. However the growers are unable to provide training opportunities themselves and are therefore reliant on outside intervention and support if they are to achieve the requirements of this criterion (refer to 7.1 and 7.2).

- 7.4 *While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.*

While this principle would be unlikely to affect national standards, small growers have tentatively indicated their interest in achieving certification in which case this criteria would become relevant to small growers (refer to 7.1 and 7.2).

Principle 8: Monitoring and assessment

Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

8.1 *The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations as well as the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.*

Literacy levels among growers are generally low and as a result there is little or no record keeping by households. Small growers are therefore disadvantaged in this respect as they have limited capacity for preparing and implementing monitoring strategies. Furthermore, extension services currently available to small growers are minimal and this together with the low literacy levels means that growers have a limited ability to develop monitoring strategies. Growers have recognised the advantages of monitoring systems, both in terms of improving productivity and managing the environment. However, unless support is provided to small growers it is unlikely that they will achieve this requirement.

8.2 *Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:*

- a) Yield of all forest products harvested.*
- b) Growth rates, regeneration and condition of the forest.*
- c) Composition and observed changes in the flora and fauna.*
- d) Environmental and social impacts of harvesting and other operations.*
- e) Costs, productivity, and efficiency of forest management.*

As described in 8.1, the capacity among small growers to undertake monitoring, research and data collection is limited. Furthermore, financial constraints make it almost impossible for small growers to employ the experts needed to undertake this work. Therefore, unless systems are developed that reflect the capacity and technical ability of the average small grower, or the services are donated to the small grower sector, it is unlikely that they will be able to meet the requirements of this principle.

8.3 *Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."*

As in principle 7, and criteria 8.1 and 8.2, small growers are limited in their capacity to keep records and detailed documentation in order for chain of custody to be determined. While this principle would be unlikely to affect national standards, small growers have

tentatively indicated their interest in achieving certification in which case this criteria would become relevant to small growers.

8.4 *The results of monitoring shall be incorporated into the implementation and revision of the management plan.*

The limitations of growers in terms of meeting monitoring and management plan requirements has been described in 8.1 and 8.2.

8.5 *While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators.*

This criterion should be achievable if it is built into a monitoring and management system developed to reflect the capacity and scale of operation of small growers.

Principle 9: Maintenance of high conservation value forests

Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

9.1 *Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.*

Formal skills for undertaking this requirement are unlikely to exist within rural small grower communities, and specialist input and advice will be required to assist small growers. However given the financial constraints of most small growers it would be unrealistic to expect them to be able to afford to pay for this specialist input. It would initially need to be provided in the form of a sponsored extension service.

9.2 *The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.*

This criterion would be relevant only in the case of small growers applying for certification.

9.3 *The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.*

The limitations of small growers in achieving management plan requirements is discussed in detail under Principle 7.

9.4 *Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.*

The limitations of small growers in achieving management plan and monitoring requirements is discussed in detail under Principle 7 and 8.

Principle 10: Plantations

Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.

The limitations of small growers in achieving management plan requirements is discussed in detail under Principle 7.

10.2 The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests. Wildlife corridors, stream side zones and a mosaic of stands of different ages and rotation periods, shall be used in the layout of the plantation, consistent with the scale of the operation. The scale and layout of plantation blocks shall be consistent with the patterns of forest stands found within the natural landscape.

The development of plantations by small growers occurs with little or no spatial planning consideration for conservation of natural forests and wildlife, stream side zones, and vegetation mosaics. Land is becoming a scarce resource within rural areas of communal tenure and therefore in many cases even stream side zones are planted. In reality therefore the achievability of spatial zonation and planning within communal tenure (small grower) communities is severely limited. (Also refer to Section 5 Information Box 1.2).

10.3 Diversity in the composition of plantations is preferred, so as to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, number and genetic composition of species, age classes and structures.

With most small growers planting very small areas (eg less than 10ha) and growers planting at different stages, a natural mosaic tends to develop between plantations in terms of spatial and size distribution. However there is very little, if any, species differentiation within the plantations. If the plantation of one grower is observed to be successful, other growers are likely to switch to that species or hybrid on the next cycle. This is therefore a threat to economic, social and ecological stability as failure (eg due to disease) of one plantation is likely to spread to the others. Given the resource and information limitations of small grower operations it is unlikely that a change in this characteristic of the plantations is likely to be achievable.

10.4 *The selection of species for planting shall be based on their overall suitability for the site and their appropriateness to the management objectives. In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.*

Small growers largely follow the lead of large commercial operations, buying species that have been tried and tested. Small growers are unlikely to have the resources to invest in the investigation of new species or hybrids specifically suited to their individual site conditions. This has widely led to the selection of wrong hybrids by small growers, resulting in poor returns. Under current resource limited conditions it is unlikely that small growers will be able to achieve an improvement in this field, without the assistance of an extension service.

10.5 *A proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover.*

With many small growers operating plantations of 5ha or less, it is highly unlikely that they will be able to set aside areas of natural forest of significant size and condition to be of any biological significance. However in many tribal wards a tract of forest land is set aside by the local *Nkosi* for protection. This is a traditional practice and not a new concept. Traditional practices could therefore be broadened, eg to include an area of indigenous forest, representing the commitment to long term sustainability of these habitats by the community.

10.6 *Measures shall be taken to maintain or improve soil structure, fertility, and biological activity. The techniques and rate of harvesting, road and trail construction and maintenance, and the choice of species shall not result in long term soil degradation or adverse impacts on water quality, quantity or substantial deviation from stream course drainage patterns.*

Most small growers have received little or no formal training in forestry or agricultural techniques. Knowledge is either gained through work experience or as a result of traditional practices. Highly technical information such as soil structure and biological activity is therefore likely to be lacking among small growers and unless opportunities are created for small growers to obtain this information it is unlikely that they will be able to achieve these criterion, despite its relevance in terms of the importance of maintaining the sustainability of land use activities.

10.7 *Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. Integrated pest management shall form an essential part of the management plan, with primary reliance on prevention and biological control*

methods rather than chemical pesticides and fertilizers. Plantation management should make every effort to move away from chemical pesticides and fertilizers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.

With most small growers operating with limited financial resources alternatives to expensive chemical inputs are automatically sought. Reliance on indigenous knowledge or mechanical control methods are therefore more likely to be applied. However in cases where chemical controls it is essential that growers ensure they are well informed on regulations and recommended controls for application of the chemical. This information could be obtained at the time of purchase and the criterion is therefore relatively relevant and achievable with the assistance of extension programmes.

10.8 Appropriate to the scale and diversity of the operation, monitoring of plantations shall include regular assessment of potential on-site and off-site ecological and social impacts, (e.g. natural regeneration, effects on water resources and soil fertility, and impacts on local welfare and social well-being), in addition to those elements addressed in principles 8, 6 and 4, no species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems. Special attention will be paid to social issues of land acquisition for plantations, especially the protection of local rights of ownership, use or access.

As described under principles 8, 6 and 4, monitoring and impacts assessment are relevant regardless of scale of operation, however strategies will need to be devised that consider small grower capacity to implement monitoring and assessment systems if they are to meet these criteria. If the *status quo* of resources, information and capacity among small growers remains unchanged it is unlikely that these growers will be able to achieved the requirements of this criteria.

10.9 Plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion.

Forests are an important communal resource for a range of goods and services to rural communities, and while individual indigenous trees may be cleared for the establishment of plantations, these communities cannot afford to lose and indigenous forest for the establishment of a plantation. The clearing of woodlands is a more relevant issue in the context of small growers in South Africa. The criterion is therefore relevant if interpreted to include woodlands, and the condition and extent of remaining woodland area would need to be taken into consideration as a mitigation.

5. RECOMMENDATIONS FOR SUSTAINABLE FOREST MANAGEMENT STANDARDS FOR THE SMALL SCALE FOREST GROWERS SECTOR

During the time period that this study was being undertaken, the Committee for Sustainable Forest Management (CSFM) and Department of Water Affairs and Forestry (DWAF) released a draft set of principles and criteria for sustainable forest management in South Africa. These draft principles and criteria are likely to form the basis of the set of national standards for sustainable forest management, with which the small growers would be required to comply. For this reason, the lessons learned from the critique of the relevance and achievability of the FSC principles and criteria were incorporated into an assessment of requirements for application of the draft South African principles and criteria by the small scale forestry grower sector. Table 5.1. outlines and describes the draft principles and criteria proposed by the CSFM and DWAF, and provides recommendations for the application of these principles and criteria to the small grower sector.

In terms of the CSFM and DWAF draft principles and criteria, principles and criteria are defined as:

- A principle is a fundamental truth or law as a basis of reasoning. Principles are the broadest goals of sustainable forest management.
- Criteria are broad forest values that society seeks to maintain. Criteria define a principle and provide the basis for assessing whether the goals of sustainable forest management are being achieved.

The CSFM and DWAF draft principles and criteria are designed to be applied to both plantation and indigenous forests, rather than require the development of a separate set of standards for each sector.

5.1 Principles and Criteria

The relevance of principles and criteria is not the only determinant of whether or not they will be implemented within the small scale forest growers sector. Very little, if any, progress is likely to be made in achieving sustainable forest management if a number of actions are not initiated to assist the small growers in building capacity in order to implement and meet the standards. Recommendations have therefore been made both in terms of principles and criteria that are relevant to the small scale forest growers, as well as ways in which compliance within the sector should be interpreted. Furthermore recommendations are made regarding activities that need to be actioned to support and increase capacity of small growers to enable them to meet the national standards. Background information to assist the interpretation of relevance of proposed principles and criteria, and recommended action activities are also provided in information boxes at the end of each section.

Table 5.1: Recommendations for the small scale forest grower sector

PRINCIPLE	RECOMMENDATION
<p>1 The natural forest and woodland resource base is secured <i>Only small areas of natural forests remain in South Africa, and these require full protection. While woodland areas are extensive, a minimum area of each woodland type should be protected.</i></p>	
<p>1.6 Natural forests in South Africa are protected</p> <p>1.1.1 There is evidence that a representative area of natural forest and woodland is managed and maintained.</p> <p>1.1.2 There is a management system to ensure that the state of the natural forest is kept at an acceptable level according to government regulations, and that negative impacts such as illegal harvesting are being addressed.</p> <p>1.1.3 There is evidence that silvicultural practices do not infringe or interfere with natural forests in general.</p> <p>1.1.4 Forest and woodland management areas are protected from illegal or unsustainable levels of harvesting.</p>	<p>1.1.1. Land units and the conservation of natural forest is viewed at a tribal ward level, rather than each individual plantation owner attempting to conserve natural forest. There is a representative area of natural forest and woodland protected at a tribal ward level.</p> <p>1.1.2 A community environmental management forum is established at a community level, the representatives of the community are responsible for ensuring that the forests are protected and maintained. Authority of the forum is ratified by the Tribal Authority.</p> <p>1.1.3 Natural forests may not be cleared for the establishment of plantation forests.</p> <p>1.1.4 An enforceable strategy is developed at ward level to deter both locals and outsiders from illegally or unsustainably harvesting forest resources. Sustainable levels should be determined, with the aid of specialist input.</p>

INFORMATION BOX 1.1

With rural areas in South Africa being widely characterised by high population densities, land and resource shortages and high poverty levels, it is not possible to prevent people from harvesting or clearing forests in an attempt to meet the household survival needs. Until these households are afforded alternate income generation opportunities and nutritional security it will be almost impossible to enforce environmental law requiring the conservation of all natural forests as stipulated in the National Forest Act (84 of 1998). Under the circumstances it would therefore be advisable to search for alternatives that will afford a realistic opportunity for the conservation of forests and woodlands in rural areas of communal land tenure. An example of a potential system for the conservation of forests and woodlands could be the setting aside of a representative portion of forest and woodland within a tribal ward, representing the commitment to long term sustainability of these habitats by the community. In many tribal wards tract of land have already been put aside for protection by the local *Nkosi* - this is therefore not a new concept and could be broadened to apply and meet the sustainable forest and woodland management requirements of the proposed National Standards.

PRINCIPLE		RECOMMENDATION	
1.2	Biological diversity of forests and woodlands is conserved.	1.2	DWAF initiates an extension programme to create an awareness and understanding of the meaning and importance of biodiversity in forests and woodlands, and provides guidance of implementation of management plans that conserve biodiversity. The community environmental forum ensures that the information is integrated with indigenous knowledge systems and implemented effectively.
1.2.1	Diversity of species and genetic resources in natural forests and woodlands is conserved.		
1.3.	Health and vitality of forests is promoted and maintained.	1.3	DWAF initiates an extension programme to create an awareness and understanding of the meaning and importance of biodiversity in forests and woodlands, and provides guidance of implementation of management plans that conserve biodiversity. The community environmental forum ensures that the information is integrated with indigenous knowledge systems and implemented effectively.
1.3.1	Forests are managed to promote their resilience and alien species are controlled.		
1.3.2	Forests are protected from harmful pests and pollution.		
1.3.3	Fires are minimised.		
1.3.4	Impact of wild and domestic animals is controlled.		
1.4	Degraded forests are rehabilitated and productive functions maintained	1.4	DWAF assists with establishment and resourcing of projects to rehabilitate degraded forests.
1.4.1	The flow of goods and services from the forests is sustained.		
1.5	The protective and environmental functions of forests are promoted and maintained.	1.5	DWAF initiates an extension programme to create an awareness and understanding of the meaning and importance of biodiversity in forests and woodlands, and provides guidance of implementation of management plans that conserve biodiversity. The community environmental forum ensures that the information is integrated with indigenous knowledge systems and implemented effectively
1.5.1	Potential yield and quality of water is maintained.		
1.5.2	Forest soils are conserved.		
1.5.3	Forests are managed so as to maintain their ability to act as filters for airborne pollutants and perform carbon sequestration.		
1.5.4	Management of forests contributes to prevention of desertification.		

INFORMATION BOX 1.2

A community based forest management forum needs to be established. In some areas a forum of this type has already been established to manage programmes such as the government funded Working for Water Project. The mandate of these forums needs to be community defined and managed. For example the community will need to define and develop an alien plant eradication programme that suits local conditions. In these rural areas many of the alien plants provide valuable resources and indiscriminate eradication of aliens could result in the loss of resources depended on by many of the local households. Examples of this would include eradication of wattle species that are self coppicing and growing wild. Wattle provides a good source of firewood for households in areas where electricity is not available or unaffordable. Loss of this resource could therefore increase pressure on remaining natural forests, rather that promote their health and vitality. A strategy for the control of certain alien species would therefore be more appropriate that eradication in meeting this principle. The forums will initially require assistance both in the form of financial assistance as well as training and capacity building. Should growers within a tribal ward decide to apply and be awarded FSC certification, these growers could be asked to pay a small dividend towards funding the forum's operations, as certified growers are dependent on meeting national standards, but can also benefit financially from certification.

PRINCIPLE		RECOMMENDATION	
2	An appropriate level of plantation forest resources is promoted and managed <i>Plantations need to be planned and developed in accordance with national policies and criteria. While plantations can provide a range of social and economic benefits, they should complement the management of, reduce the pressure on, and promote the restoration and conservation of natural forests and tree species.</i>		
2.1	The extent of forestry plantations in any catchment must reflect the catchment's capacity to support the activity without compromising the viability of other catchment functions eg sustainable forest management, water production, as well as social and economic needs of the population within the catchment.	2.1	A catchment level strategy for appropriate levels of afforestation needs to be calculated. This level of afforestation needs to take into account all resource demands within the catchment so the environmental sustainability and economic development options are not compromised.
2.2	Plantation forests are planned developed and managed so that the loss of biological diversity is avoided or minimised.	2.2	Land identified and approved for plantation development may not infringe on areas of natural forests.
2.3	Indigenous tree species are promoted for their social, economic and environmental value.	2.3	Plantation owners are encouraged to plant indigenous trees of social and economic value, on a small scale around they homestead, in addition to their plantation forests.
2.4	The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressure on natural forests. Diversity in composition of plantations is preferred, so as to enhance economic, social and ecological stability.	2.4	Plantations do not infringe on natural forests, but rather through a diversification of resource availability should be promoted to induce substitution of products from natural forests and woodlands for those available from plantations (eg building poles and firewood from plantations)
2.5	Species selection should be based on suitability of site and appropriateness to the management objectives. Exotic species should be used only where their performance is greater than that of native species.	2.5	An assessment should be undertaken to ensure the slope, soil type and depth etc. are suitable for planting of the selected species eg. <i>Eucalyptus</i> sp.
2.6	Measures must be taken to maintain or improve soil structure, fertility and biological activity.	2.6	Allowance must be made for acquisition of resources needed maintaining soil fertility beyond the first rotation.
2.7	Plantation management should attempt to limit use of chemical pesticides and fertilizers, using tested biological control methods as far as possible.	2.7	Use of organic resources (eg. dung for fertilizing) or mechanical control methods. Chemicals applied only when alternatives are not available.

INFORMATION BOX 2

With local Tribal Authorities largely responsible for the allocation of land, it is important that they are informed about catchment management strategies so that they are able to take informed decisions about land allocations that could potentially impact on land use and management in the greater catchment area. Furthermore, while a range of research is being conducted on commercialization of indigenous trees, little of this information appears to be filtering down to small grower level. Field trials of these studies should be encouraged within these rural areas. These trials could be integrated with local indigenous knowledge to develop plantation strategies that are best suited to local conditions. Similarly, indigenous knowledge on issues such as pest control, forest restoration etc should be enhanced with information from research. These needs arise from the fact that small growers feel that they are largely operating in isolation and do not have access to information and training that could improve their operations. The development of information networks that small growers are able to link into could improve not only the efficiency of their operations, but also provide information that they can use to minimise negative environmental impacts.

PRINCIPLE		RECOMMENDATION	
3	Tenure and indigenous rights <i>The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.</i>		
3.1	Customary or legal tenure or use rights shall maintain control over land used for forestry plantations operated by individual community members.	3.1	The local <i>Nkosi</i> and the Tribal Authority maintain control over land and resource allocation within specific tribal wards. However they should be advised on national and provincial legislation through guidelines provided by the relevant government departments.
3.2	Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights.	3.2	When disputes arise, the individuals involved attempt to resolve the dispute. Should this be unsuccessful, the case is referred to the <i>Induna</i> within whose area the dispute has arisen. Should the <i>Induna</i> be unable to resolve the dispute, it is taken before the <i>Nkosi</i> and Tribal Authority who then decide on the matter.
3.3	Establishment and management of plantation forests shall not threaten the resource rights, sites of cultural, ecological, economic or religious significance to local people. Sites of cultural heritage and spiritual importance are protected and traditional rights of access, to land used for plantation forestry, for recreational, cultural and spiritual needs are respected by plantation owners.	3.3	Changes in land use (such as establishment of plantation forests) by community members should be monitored and managed by the local Tribal Authority, to ensure that activities of individual households do not infringe sites of significance to local people.
3.4	Indigenous people shall control natural forest and plantation management on their lands unless they delegate control with informed consent to other agencies.	3.4	In the case of commercial forestry companies establishing plantations on communal tenure land in association with local community members, the tribal authority still holds overall control of the land and land ownership remains vested with the Ngonyama Trust.

INFORMATION BOX 3

All common property tenure land is held in trust for the nation by the Ngonyama Trust. This land may not be sold or private tenure awarded to any individuals. Land use allocations of less than 10ha are awarded and managed by the local Tribal Authority. However, should individuals apply for land allocation for more than 10ha these applications are supposed to be referred to the Ngonyama Trust. This enables the protection of legal and customary rights of local people. Commercial forestry companies have required letters from the Tribal Authority confirming “ownership” of the land by the individual with whom they are entering into an out-grower venture. It is however important that the limitations of these letters be recognised, in that in accordance with customary law, the land remains a community asset and it is only the use rights that are awarded to individuals. Furthermore the allocation of land rights by local traditional leaders reduces the likelihood of threat to sites of spiritual and cultural significance.

PRINCIPLE		RECOMMENDATION	
4	Community relations and workers rights <i>Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.</i>		
4.1	Plantations management operations shall maintain or enhance the long term social and economic well being of workers and the local community.	4.1	Negative impacts potentially arising from the plantations must be minimised, while positive direct (eg employment) and indirect (eg support enterprises) impacts should be encouraged and supported within the local community.
4.2	Forest management shall meet or exceed all laws and regulations of employees, workers, their families, and the local community.	4.2	It is the responsibility of individual plantation owners to ensure that they meet all laws and regulations covering health and safety. Where they lack information they should ensure that the attempt to gain the necessary information and skills.
4.3	Appropriate mechanisms must be applied for the resolution of grievances and for providing compensation in the case of loss or damage affecting the legal or customary property rights, resources or livelihoods of local peoples.	4.3	When disputes arise, the individuals involved attempt to resolve the dispute. Should this be unsuccessful, the case is referred to the <i>Induna</i> within whose area the dispute has arisen. Should the <i>Induna</i> be unable to resolve the dispute, it is taken before the <i>Nkosi</i> and Tribal Authority who then decide on the matter.

INFORMATION BOX 4

In many cases growers do not harvest their plantations themselves, but rather contract in someone who has the necessary equipment and skill. In many instances these contractors are not from the local community. Efforts should be made to establish local contracting enterprises to undertake activities such as harvesting, and thereby retain the economic benefits from these activities within the local community. The same rationale should be applied to job opportunities, local people should be given preference in employment opportunities, and where skills are lacking, training should be sought for local community members so that they develop the necessary skills to fill the positions available. Training should not only involve training of local labour, but also training of plantation owners themselves in aspects such as laws and regulation requirements, plantation management, and basic business and labour management skills. The responsibility to implement this principle should lie with the plantation owner. Where skills are lacking among community members, the plantation owners should attempt to source training opportunities. In order to effectively implement this principle it would therefore be necessary for small growers to form partnerships with commercial forestry operations or training institutions who provide relevant training. DWAF could initiate this process by undertaking a facilitation role.

PRINCIPLE		RECOMMENDATION	
5	Distribution of benefits from forests <i>Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits</i>		
5.1	Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest. Management of plantation and natural forests operations shall encourage efficient use of products and services, to ensure sustainability, and a wide range of environmental and social benefits, eg responsible use of non-timber forest products and services, and minimize waste generation.	5.1	Management and utilization of plantation and natural forests by individuals must not foreclose on utilization opportunities or benefits for other community members particularly disadvantaged individuals. These opportunities could include sustainable harvesting of medicinal plants, firewood, or species of nutritional value.
5.2	Diversification and maximization of range of goods and services obtainable from the forests on a sustainable basis.	5.2	Opportunities for development of non-timber products and services should be encouraged to maximise benefits obtained from the plantations, not only for the plantation owners but also made available to the local communities. Examples of this could include the development of bee keeping enterprises within the plantations. These enterprises could generate both employment opportunities and a local supply of honey for sale within the community.

INFORMATION BOX 5

Primary objective of small scale forest growers is to maximise returns from their forestry activities, as conditions of financial and resource scarcity compels them to take full advantage of available resources. For example wood cleared from the plantation during maintenance operations is used as firewood and is not left to waste. However, a lack of information regarding opportunities or a scarcity of resources to invest in processing limits the potential of small growers to take efficient use of opportunities to take advantage of forests ability to generate multiple products and services. Furthermore, even where the knowledge of opportunities exist, the remoteness and lack of market access of small grower operations frequently make development of these opportunities unviable. For example, the skill of wood carving is common among these communities, however lack of access to a retail market means that these skills are only applied to the production of furniture for the household itself. Furthermore growers have little formal training in forest management and optimization of resources and opportunities. They have however indicated great interest in developing their skills in this field.

PRINCIPLE		RECOMMENDATION	
6	Environmental impact <i>Critical ecosystem functions and processes are maintained and secured.</i>		

PRINCIPLE		RECOMMENDATION	
6.1	Environmental and social impact assessments are undertaken for new plantation developments.	6.1	An impact assessment system is developed that is appropriate to the small growers scale of operation and average literacy ability. This assessment is undertaken by the local community environmental forum, or Tribal Authority representative. Should the results indicate no significant impact, or mitigable impact, the new plantation is approved at a local level. The assistance of DWAF and other capacity building and training organisations is required in order to develop an assessment system and train small growers in the use of the system.
6.2	Identify and document the environmental impacts associated with forest plantation activities.	6.2	Records of outcomes of the assessment must be kept.
6.3	Dispose of all waste in a responsible and legal manner.	6.3	Waste products shall be removed from the plantation site and disposed of at the homestead.
6.4	Document, minimise and control the use of chemical and biological control agents.	6.4	Application of traditional or safe biological control measures for the control of pests and weeds as far as possible, with strict control of chemicals when unavoidable. Information regarding effective measures should be shared among growers and extension services should transmit information to small grower communities regarding latest techniques and options being developed at a commercial level.
6.5	Manage household activities holistically to minimize environmental degradation.	6.5	Environmental management by small growers should not only be applied within the plantation area but the households land allocation including crop lands and homestead area should be managed overall.

INFORMATION BOX 6

There appears to date to have been little consideration of environmental impacts other than those that affect plantation production. This can be partly attributed to lack of understanding and partly to the fact that in circumstances where land and resource shortages and high poverty levels characterise the local population (as in the case of most small grower communities), it is difficult to limit resource use opportunities on the grounds of environmental impacts, when they are arising as a result of a households attempt to meet its survival needs. However if small grower communities are informed and the benefits of holistic environmental management explained, and techniques taught to them, then it may be possible to develop systems which growers feel also meet their needs and are therefore implementable.

PRINCIPLE		RECOMMENDATION	
7	Management plan <i>A management plan appropriate to the scale and intensity of the operations shall be written, implemented and kept up to date. Long term objectives for management shall be clearly stated.</i>		
7.1	Documented guidelines are developed and implemented to minimize negative impacts on the environment.	7.	With assistance of DWAF and other training organizations, management guidelines are developed and implemented (see Information Box 7).
7.2	Management objectives for plantations, including conservation and restoration of natural forests, must be clearly demonstrated in an implementation plan.		
7.3	Mitigatory measures are developed and implemented for manageable impacts.		
7.4	Emergency procedures must be developed for situations such as fires and chemical pollution.		
7.5	Corrective and preventative action systems must be developed to minimize, prevent or mitigate negative impacts on the environment.		
7.6	The management system must be regularly reviewed and updated.		
7.7	An organised system must be developed for management of all records.		
7.8	Recognition, enhancement and management of forest services and resources (eg watersheds, fisheries etc).		
7.9	Training of employees must be provided to ensure adequate skills exist for implementation of management requirements.	7.9	Plantation owners must ensure that they provide opportunities for their employees to attend training courses available to the small scale sector.

INFORMATION BOX 7

Out-grower schemes such as Sappi Project Grow and Khulenathi (Mondi) have already developed a set of management guidelines for the small growers in their schemes. With the support of DWAF and the assistance of training organizations and Sappi and Mondi, these management plans and guidelines should be adapted and developed further to provide suitable guidelines that will inform and guide the small scale forest growers in general. The new management plans should reflect both the minimum requirements of the newly developed national standards for sustainable forest management, as well as reflect the range of scale and intensity of forest operations among small growers. It should therefore be possible for small growers, following a brief training process to apply the generic management plan to their scale and type of operation. Without this support it is unlikely that a large sector of the small scale forest growers, given their limited resources and capacity, will be able to meet the criteria of Principle 7.

PRINCIPLE		RECOMMENDATION	
8	Monitoring and assessment <i>Monitoring shall be conducted appropriate to the scale and intensity of forestry operations to assess the condition of the forests, effectiveness of management activities, and impacts to the social and natural environments.</i>		
8.1	Monitoring activities should be consistent and replicable over time to allow comparison of results and assessment of change.	8.1	A monitoring system needs to be developed that is appropriate to the scale of operation and average literacy ability of small growers. The assistance of DWAF and other capacity building and training organisations is required in order to develop a monitoring system and train small growers in the use of the system.
8.2	The results of monitoring should be documented and incorporated into the revision of the management plan.	8.2	Records produced during the monitoring process must be kept and there must be evidence of management actions that are taken in reaction to the outcomes of the monitoring process.

INFORMATION BOX 8

Literacy levels among growers are generally low and as a result there is little or no record keeping by households. Independent growers are therefore disadvantaged in this respect and have very limited capacity and understanding of the requirements and implications of preparing and adhering to management plans and monitoring strategies. Furthermore, the independent growers have largely been developing their plantations on a trial and error basis. Extension services to independent growers are minimal and together with the low literacy levels means that growers have a limited ability to extract technical information regarding successful plantation operations from manuals or textbooks. A strategy for small growers with limited literacy ability needs to be developed using for example a system of diagrams and flow diagrams that is easy for growers to follow and complete. Growers have indicated their desire for monitoring and management systems that will help them to improve their efficiency and user friendly systems are therefore likely to gain support and be implemented.

PRINCIPLE		RECOMMENDATION	
9	Compliance with national policy and the legislative framework <i>Forest management shall respect all applicable laws of the country in which they occur</i>		

PRINCIPLE		RECOMMENDATION	
9.1	Management of plantation and natural forests shall respect all applicable national laws, international treaties and agreements to which the country is a signatory.	9.1	Plantation owners are responsible for ensuring that they are aware and follow all local, national and international laws or treaties governing the development of plantation forests.
9.2	Institutions responsible for policy implementation are properly resourced and equipped so as to carry out their responsibility effectively.	9.3	New policy cannot be developed in isolation, a strategy for resourcing the responsible department in order to implement the policies needs to be developed.
9.3	Plantation owners and local communities have access to appropriate advice and support in order to adhere to laws, administrative requirements, and internationally binding agreements.	9.3	Relevant government departments should provide an extension service to develop an information base among small grower communities. Where these departments lack resources and capacity, they should identify alternate sources, such as commercial forestry operations or training institutions, through which the information can be made available to small growers.

INFORMATION BOX 9

Current forestry legislation stipulates that development of forestry plantations can only be undertaken with the issuing of a permit from DWAF. Permit applications for plantations of less than 10ha should be dealt with by the local DWAF office while those larger than 10ha need to be approved by the provincial DWAF office. The permit process requires the undertaking of an environmental impact assessment (EIA). Sappi Project Grow reports that it has submitted a number of permit applications and submitted them to DWAF, however to date no small grower permits have been approved. In the interim, new plantations are being developed by small growers. The process of permit approval by DWAF is therefore creating a significant obstacle in terms of small growers being able to meet national standards. The causes of this delay in awarding of permits to small growers needs to be investigated and resolved if the this principle is to be implementable. Furthermore, the requirements of the permit application need to be reviewed so that the reflect the scale of operation for which permits are applied. For example the undertaking of an environmental impact assessment by a qualified individual for each permit application of less than 10ha (and some as small as 0.5ha) is not economically viable for the growers. The scope of the requirements for these EIAs need to be revised to reflect the scale of operation. In addition, the opportunity for the development of an impact assessment system that is appropriate to the small growers scale of operation and average literacy ability needs to be explored. In the case of permit applications of less than 10ha, this assessment could potentially be undertaken by the local environmental management forum, or Tribal Authority representative. Should the results indicate no significant impact, or mitigable impact, the new plantation could be granted. Should uncertainties arise, DWAF could request further investigations on specific aspects of the application, or where significant impacts are suspected and EIA could be requested.

5.2 Indicators for verification of compliance with standards

The identification of indicators and verifiers for national standards for sustainable forest management are hampered by three key factors:

- lack of a complete information base
- lack of an understanding of how to interpret specific data and changes
- lack of knowledge of how indicators might be used under different scales of forest management, different tenures, regional variations and forest types.

The South African Committee for Sustainable Forest Management (CSFM) is in the process of developing a set of national standards, and has commissioned a detailed study to identify and develop a set of indicators and verifiable standards for forest management. This national initiative will need to take into consideration a range of factors in order to develop an integrated and holistic set of standards. These include:

- the diversity of scales of forest management,
- different tenures,
- regional variations, and
- diversity of forest types.

While this study, investigating standards relevant to small scale forest growers, focussed mainly on principles and criteria it has also highlighted factors that will need to be considered during the determination of national indicators and verifiers.

5.2.1 *Indicators and verifiers*

Indicators are defined as any verifiable component of the system used to infer attributes of the sustainability of the resource and its utilization. Indicators also need to provide verifiable measures of change in criteria over time, while verifiers are data or information facilitate the assessment of indicators (Everard and Lawes 2000). Indicators should as far as possible provide a quantifiable target towards which forest managers can aim their management activities. The management strategies of the small growers operations in general are not based on detailed record keeping or documentation of processes and outcomes. This poses a challenge to establishing verification of compliance. Indicators and verifiers in the context of small growers should therefore ideally focus on output or outcomes, rather than evidence (eg written records) of processes that have been followed. Therefore, in the case of small grower operations, the determination of indicators and verifiers will need to consider the technical capacity of small growers if they are going to:

- (a) be realistically achievable by small growers striving to meet the standards, and
- (b) accurately reflect the extent to which small growers are meeting the requirements for sustainable forest management.

5.2.2 *Interpretation of compliance*

The technical knowledge base of small growers is limited due to lack of formal training and support structures. The ability of these small growers to interpret the technicalities sustainable management strategies, and of indicators and verifiers is therefore limited which in turn potentially limits their ability to conform or meet criteria which are based on technical information. For example, potential indicators for protection of biodiversity are listed as (Everard and Lawes 2000):

- amount of genetic variation within and between populations of representative species
- extent of native habitats which have genetic resource conservation plans, prepared and implemented.

As mentioned, indicators have been defined as quantifiable targets towards which forest managers can aim their management activities. However it is doubtful whether most small growers will have the technical skills necessary to interpret these so that they would be able to guide and shape their management activities accordingly. However, given the fact that the set of national standards are required to guide forest management of such a wide range of stakeholders, and that a single tier set of standards has been encouraged in this project (see section 1), it is unlikely that such technicalities will be able to be avoided in the standards. The solution to the challenge of enabling small growers to meet the standards therefore lies in the interpretation of compliance, and the verifiers which are applied in measurement of compliance. Interpretation of compliance will not only have to take into consideration the technical capacity of the growers, but also the conditions under which they live and operate. For example strict implementation of criteria such as alien plant eradication (Principle 1.3 and information box 1.1) may remove natural resources that the local households depend on (eg wattle for firewood) and may in fact increase pressure on remaining indigenous natural resources (eg natural forests).

The development of indicators and verifiers should therefore be aimed at a generic but high standard of requirements, and may not be able to directly reflect the great diversity within which the standards will be applied. The solution to this challenge rather lies in the interpretation of the verifiers for measurement of compliance with the standards. Auditors or monitors will have to be well briefed on the particular conditions within which the standards are being applied and come to agreement on what the acceptable standards are for those circumstances. For example it would not be possible to expect small growers to be in a position to provide the same level of technical evidence of compliance with standards as a large scale commercial operation. However the key factor would be that the output and condition of the environment of both operations should reflect similar levels of sustainability.

6. RECOMMENDATIONS FOR COLLECTIVE ORGANISATION OF SMALL GROWERS

The collective organization of small growers into, for example, farming co-operatives could assist in addressing production constraints experienced by independent growers as well as increase the potential to meet national standards and potentially achieve certification.

- *Overcoming production constraints*
Small growers operating independently report a number of challenges and constraints faced in producing and marketing their timber. These challenges and constraints include:
 - < Weak buying power in purchase of inputs due to small quantities purchased, resulting in higher prices paid.
 - < Poor marketability of timber due to small quantities produced.
 - < Limited access to financial assistance eg loans or credit facilities.
 - < Few opportunities to network for sharing information and learning from each other.

Co-operative management schemes could help to overcome current challenges by pulling together groups of small growers who can then benefit from the improved economies of scale from being a member of a larger group. These benefits could be both material (eg. financial, sharing of equipment) and non-material (eg. sharing of information and skills).

- *Meeting national standards*
A number of the principles and criteria require the management of forest resource at a level of land management units. Given the small land allocations of small scale growers (mainly less than 5ha), the effectiveness of management at a small scale as well as the economies of scale would likely make management less effective. The collective management of larger land units could potentially improve the ecological and financial viability of sustainable forest management initiatives by small growers. In addition a collective organization could potentially have improved access to information and resources, that would be difficult to achieve as individuals. This improved access could also result in improved capacity of small growers to meet national standards and contribute to sustainable forest management.

6.1 Experiences from an existing small grower co-operative

Investigations revealed that a small grower co-operative has been established, by the growers themselves, in the Kwambonambi district. The co-operative has 101 members and controls approximately 100ha. The growers reported that this co-operative, which was formed in 1965, was formed for three main reasons:

- An attempt to improve the social and economic well-being of a portion of the communities households, by engaging in financially profitable forestry operations.
- To build an institution which would improve the buying power of the local farmers.

- To optimise chances of accessing a market with an increased timber tonnage as a co-operative as compared to individuals growers' limited production levels.

The co-operative was formed by individuals voluntarily paying a R2 membership fee. The members elected a committee (annually), and a constitution was developed to guide the management of the co-operative. The co-operative has recently been officially registered and it is believed that will give it more power to it to be more active in forestry industry.

Initially all members had equal shares in the co-operative. However, over time shares have been traded and some members bought the shares of others. Dividends are therefore paid out depending on the number of shares owned by individuals. New members wishing to join simply need to satisfy two requirements:

- they have to be from the local community, and
- they need to pay a membership fee of R50.

New members have continued to join over time, however the land originally allocated for the co-operative has not been able to increase in size proportionate to the increase in membership numbers. Financial returns for members have therefore dwindled. Nevertheless, the growers reported a number of additional non-financial benefits derived from the cooperative:

- Members receive a sum of money every time timber is harvested.
- Benefits are transferred to the widows whose husbands were members of the co-op. This improves the financial security of an often marginalised section of the population whose security is weak in a society where land tenure is dominated by men.
- Employment is created through the plantation operations and this is awarded to members only.
- People derive a range of material benefits as well as information and experience, for example, people have developed their own plantations based on knowledge gained from membership to the co-operative.

Non-member growers have also benefited from the co-operative, which has allowed them to market their timber through the co-operative and make purchases through the co-operative, thereby benefiting from the increased strength in buying power.

A number of problems had also been associated with the co-operative:

- Misuse of funds by the committee has been recorded, and was therefore decided to include a member of the Tribal Authority to work with a chairperson and a treasurer in financial management.
- Timber transport and harvesting costs are high and the co-operative does not have its own equipment and transport. It relies on contractors to undertake these tasks which reduces profit margins.
- Losses have been experienced when timber has on occasion been stolen from the loading site while waiting for hired transport to collect it and take it to the mills.

A number of lessons on collective organization can be learned from the experience gained by the small growers in the operation of the Kwambonambi Co-operative:

- Progress of a co-operative is hampered by lack of knowledge both in plantation forestry as well as in the formation and operation of co-operatives and business knowledge in

general. It would also be advisable to have people who have sound knowledge in these fields on the committee.

- A co-operative must be able to raise a certain amount of funding to sustain its operations before any income is earned. Funding is difficult to access and cannot be relied on as the co-operative has little it can use as collateral for loans. Co-operative members must therefore understand that they will have to wait a number of years before they see financial returns
- Community members elected to the committee must have a certain level of basic literacy skills, in order to fulfill their responsibilities. They must also be in a position to enforce the constitution and have a vision of scope and long term objectives for the operation.

Figure 4: Members of the Kwambonambi Co-operative together with project team members at the co-operative's plantation



6.2 Recommendations for collective organization of small growers

The interests of small growers could be advanced by means of collective organization at two levels:

- a localised level between individual growers (eg. Co-operatives)
- regional and national levels (eg. Growers associations)

6.2.1 Local level organization

The example of the Kwambonambi Co-operative clearly demonstrates the potential and willingness of small scale growers to organise themselves collectively. The Kwambonambi Co-operative was formed independently, during the difficult apartheid era in South Africa, and has survived over 35 years. Representatives from the three other case study communities indicated that they had heard of the Kwambonambi Co-operative and were interested in investigating a similar system themselves.

Many of the small scale forest growers in the Richards Bay area are also small scale sugar producers, and are familiar with the co-operative sugar producing systems developed in the South African sugar industry. In the sugar industry, small scale sugar producers work together in co-operatives, purchasing inputs, sharing equipment and collectively selling their tonnage to the sugar mills. Co-operative farming has therefore increased market power both in terms of purchasing and marketing, while reducing operating costs. A generic constitution and set of rules have been developed within the sugar industry as a basis for the formation of small scale farmers' associations. This system has also been successfully applied in other farming systems such as fruit and vegetable production (Sokhela *pers comm.* 2001).

The key components of this generic constitution are:

- Broad objectives: The broad objective of the co-operative would primarily include furthering the economic interests of its members.
- Specific objectives:
 - promote efficient production
 - provide a forum for information generation and sharing
 - establish a fund for loans to members, or a recognised forum through which credit can be negotiated
- Powers: The co-operative is allocated such powers as are necessary or conducive to it carrying out its objectives, including financial administration.
- Subscription: Subscriptions are determined by the co-operative itself.
- Financial Benefits: Benefits paid to members are determined by the committee in association with the co-operative membership.
- Committee: The committee responsible for management of the co-operative, shall comprise small growers from the area who are members of the co-operative. Where necessary non-members may be represented on the committee to provide specialist assistance both in the field of production and administration (eg financial).

The strength of any grower co-operative will be determined by the degree of support given by its members and the extent of recognition of outside institutions. The more effective the co-operative, the greater will be its support and recognition. It is therefore important that an informed and transparent process is followed for the establishment and management of small grower co-operatives. Given the limited capacity currently existing within the grower

communities, and the problems experienced in the Kwambonambi example, significant support and capacity building will initially be required for the establishment of these co-operatives. This conclusion has been re-affirmed by the small grower project committee.

6.2.2. Regional and national associations

Once small scale timber growers have been able to organise themselves collectively at a local level, the potential for development of regional associations and possibly national representation will be created. Representatives from efficiently functioning local co-operatives could form regional or provincial associations, which in turn could have representation at national level associations. This level of representation could assist creating awareness and recognition of constraints and challenges faced by small growers, and aid the allocation of resources to assist in addressing these challenges. Representation at these levels could also ensure that the constraints and capacity limitations of small scale growers is recognised and taken into consideration in the development of management, marketing and control initiatives, including standards for sustainable forest management. In turn the associations could act as a communication channel, providing a network for a transfer of information and knowledge back to the growers at local levels. This again could improve the potential of small growers to meet national standards requirements by generating information at a local level that could increase capacity of small growers.

6.2.3 Constraints to the collective organization of small growers

The greatest constraints currently faced by small growers are limited capacity, lack of information, and a scarcity of resources to invest in the development of ventures such as the establishment of co-operatives. If small grower communities in general are going to have a realistic chance of meeting the standards set at a national level, and thereby contribute to sustainable forest management, they will require direct assistance to overcome these significant constraints.

7. CODES OF BEST PRACTICE FOR THE DEVELOPMENT OF STANDARDS

7.1 Cornerstones of best practices

Seven cornerstone issues underpin a code of best practices for the development of standards for sustainable forest management by small growers. These seven cornerstones are:

- Consultation and transparency
- Empowerment
- Partnerships
- Diversity
- Environmental, social, economic and political sustainability
- Market requirements
- Revision

7.1.1 *Consultation and transparency*

To ensure credibility and support for the standards it is important the process of development of the standards is consultative and transparent. If this is achieved, stakeholders will have little cause to be suspicious of the product and therefore a stakeholder participation process is required that runs parallel to the development of the set of principles criteria. This participation process needs to be characterised by a two way communication channel, allowing both for stakeholder input, and feedback to stakeholders. This inclusive and communicative process will aid the transparency of development of the guidelines, and ensure that they are relevant to and required by the intended users.

7.1.2 *Empowerment and capacity building*

It cannot be assumed that all stakeholder groups have the necessary capacity to constructively take part in the stakeholder participation. If lack of capacity among stakeholder groups exists and is not identified, these groups could become isolated and destructive to the process. A precursor to the process of stakeholder participation should therefore be a stakeholder briefing and assessment. The range of interests and capacities among stakeholders needs to be identified, capacity building initiatives launched to empower stakeholders to participate, and a participation process designed that will be inclusive of all parties.

7.1.3 *Partnerships*

The key to the development of effective standards is partnership in which stakeholders recognise their interdependence the problems of establishing a sustainable forest management system. However, the key to long term partnerships is trust between the stakeholders, a criterion that appears to currently be lacking in the forestry sector, both indigenous and plantation forestry. For example, small growers are suspicious of large commercial operations, distrusting the motivations behind the awarding in proportionately larger shares of harvesting 'tickets' to white commercial farmers than to

black small growers. The implementation of these guidelines could assist in overcoming current obstacles and aid in the establishment of new partnerships and strengthen existing partnerships.

7.1.4 Diversity

One of the most important facts to consider in the development of standards is the considerable diversity in social, political and environmental aspects of forest management to which the standards will need to apply. Identification of this diversity prior to the process of standards determination is essential. Not only will this diversity determine the range of stakeholders that need to be integrated into the process, but will also determine the scope of the topics that need to be incorporated into the development of standards for sustainable forest management.

7.1.6 Environmental, social, economic and political sustainability

A sound and verifiable information base is required on environmental, social, economic and political determinants and indicators of sustainability. Each of these criteria are strong influences on the achievability of sustainability, and detail on their effects are required as baseline information for the development of the standards.

7.1.5 Market requirements

Market influences are a strong influence on production objectives and related environmental management systems. The market influences, both in terms of demands and preferences must therefore be taken into consideration into the determination of standards and the management system into which the standards are incorporated will need to withstand the pressures exerted by the markets. Pressures will be exerted by both formal trading markets (eg national or international timber and pulp trade) as well as informal trade markets, such as the informal markets dealing in non-timber forest products such as medicinal plants.

7.1.7 Revision

The context within which the standards will operate are not static, but rather dynamic social, environmental, political and economic systems. Therefore the standards will require continuous revision and updating in order to remain contemporary and effective. Furthermore, revision will be required to identify shortcomings or gaps in the set of standards, likely to be manifest as inability to achieve sustainability of forest management.

7.2 Study process followed in practice

The study process followed was determined by the terms of reference of this particular study. It therefore focussed specifically on certain issues and omitted others, and did not directly follow the codes of best practice discussed in section 8.1. For example the study focussed on a particular stakeholder group (small scale growers) and only on plantation forestry. The underlying principles, for example participation, empowerment and revision, were however applied in this process. A brief overview of the process applied in this study is provided in this section, while details of the process are provided in Appendix C.

7.2.1 Development of generic set of standards

A review was undertaken of literature dealing with standard setting for plantation forestry. In particular, a record was made of the range of certification standards that have been developed by institutions such as FSC, SGS, and ITTO. These set of standards were integrated to develop a generic set of principles and criteria that could be used as a baseline for refining into a set of standards specifically relevant to small growers in KwaZulu-Natal.

7.2.2 Selection of study area and grower communities

The original terms of reference in the project proposal identified Richards Bay district as the study area. The district of Richards Bay includes a number of tribal wards, most of which engage in production of forest plantations. Partnerships were formed with key role players involved in forestry in the Richards Bay district, and their expert opinion and information was used to identify four grower communities to be approached to take part in the study. Key role players (eg. Sappi and NCT) provided valuable information on characteristics of small grower activities (in order to include a diversity in the sample) as well as important background information such as political stability of communities. These role players the assisted in introducing the study team to the communities with which they (NCT) already had contact.

7.2.3 Stakeholder identification

Once the four communities were decided on the role players also provided valuable introductions into the community. Contacts were made with individuals from each community and the study team was introduced. These individuals provided information on stakeholder groups within each community and specific characteristics of forestry activities within each community. This information was used to confirm the suitability of the selected communities as case studies in the project. An indication of willingness to participate in the study was also obtained from these community contacts.

7.2.4 Stakeholder engagement

Permission then had to be obtained from the local tribal authorities to engage with the local growers and conduct the case studies in each of the ward areas. Appointments were made to present the study team at a session at each of the Tribal Authorities. The individual contacts (described in 7.2.3), provided a brief introduction of the study team and their objectives. The study team was then required to explain the reason and motivation for the study in detail so that the Tribal Authority could make an informed decision on the suitability of the study to their wards. Once permission was obtained to undertake the study, community facilitators were engaged to accompany and introduce the study team to growers within each of the communities. This is an important process and cannot be rushed. Recognition of local customs and traditions are important if the study is to proceed and if quality information is to be obtained. In the Zulu culture, within which this study was conducted, outsiders are usually viewed with suspicion and locals will not easily engage with them. Local facilitators therefore provide the necessary introductions and credibility to the team. Insensitivity to these aspects could prove a fatal flaw to the engagement and standards setting process.

7.2.5 Briefing of stakeholders

The concept of national standards, based on principles and criteria, for sustainable forest management was new to the four communities in which the case studies were conducted. In order for these stakeholder communities to take part effectively, briefing process had to be undertaken to empower them with the information base required for them to be able to engage in an informed decision making process. Due to time constraints of the project it was not possible to provide a detailed information base on environmental, social, economic and political determinants and indicators of sustainability. Indigenous and local knowledge on these issues was relied on to a large extent. However when specific issues on these aspects were raised, additional information was provided. Briefing primarily dealt with details regarding national standards setting, the objectives principles and criteria, and the relationship with sustainable forest management.

7.2.6 Testing of standards

A number of interviews were held with small growers in each of the four communities. Interviews were either conducted with individual growers, or in groups forums. The interviews were used to present the principles and criteria to the growers and to generate discussion around relevance, achievability or shortcomings of the principles and criteria. Growers also raised constraints to their current operations, highlighting issues that could improve efficiency and sustainability of their operations if addressed. These fora were also used to get the growers to nominate representative for a committee with whom the study team would meet with in future.

7.2.7 Revision of standards

The study team reviewed the list of generic principles and criteria in the context of the information obtained from the interviews with small growers. The list of principles and criteria were then revised, adapting those that were pertinent but not relevant in the way they were originally described. Some criteria were also omitted altogether and replaced by more pertinent criteria.

7.2.8 Testing of revised standards with stakeholders

The revised set of principles and criteria were workshopped with the small growers committee, which comprised of two to four representatives from each of the four case study communities. Furthermore, the committee also raised their ideas on remedial action or assistance that would be needed in order to make relevant criteria achievable.

This small grower forum proved effective as it not only provided an opportunity to meet with all the grower communities simultaneously, but also prompted discussion and interaction between the grower communities themselves, something which had not been undertaken previously.

7.2.9 Revision of standards and recommendations

Again the principles and criteria were refined in light of the input from the growers committee. Recommendations for capacity building or parallel activities that would be

required to empower small growers to enable them to conform with the set of standards were further developed.

7.2.10 Final review of standards and recommendations with stakeholders

A final workshop was held with the grower committee to review the draft set of principles and criteria and associated recommendations.

8. CONCLUSION

Some of the principles and criteria included in this report may not be of high relevance to the small grower sector, and the achievability of some criteria may be difficult. However small growers operate in the same marketing, retail and environmental systems as larger commercialised operations and should therefore **operate under the same set of rules**. Furthermore, small growers reject being singled out, and often feel that their categorization as small growers infers inferiority to larger commercial operations. Small growers reportedly would like to be recognised as competitive and competent forestry producers. The development of a different set of standards for small growers could therefore be interpreted as a continuation of this differentiation in perceptions of small growers versus their larger commercial counterparts. It is therefore recommended that a **single-tier** set of standards be developed for the forestry sector, rather than a 2-tier system with a separate set of standards developed for the small grower sector. Attention should rather be paid to the **development of capacity** among small growers in order for them to meet the standards set.

The social and environmental **impacts arise out of plantation forestry regardless of the scale** of operation. The findings of this study indicate that because of these impacts, the broad spectrum principles have relevance to forestry operations regardless of their scale. Criteria also describe broad environmental or social values that need to be maintained. However, in addition, criteria are also formulated to provide assessment on the degree of compliance within a given operating situation. Therefore variations in scales and technology applied between large and small scale operations begin to affect the relevance and achievability of the criteria. This differentiation increases as issues become more specific at the indicator level. Variation in the provision of measurable verifiers are the most explicit, and interpretation of compliance at the indicator and verifiable level is where the diversity in the **scale and range of forest operating systems needs to be accommodated**. The key to a potentially effective set of standards is therefore **flexibility in terms of the interpretation** of what constitutes compliance and the range and diversity reflected in the indicators and verifiers that are acknowledged as compliance. Assessment needs to focus on **output rather than process**, viz. the end product environment reflects the extent compliance and success. The quality of the forest environment should be of an acceptable standard **regardless of the scale of production**.

However the lack of long term studies to provide holistic baseline information at this stage limits the identification of indicators and verifiers. **Research is required** to provide baseline information on forest and environmental responses to harvesting and management impacts. Furthermore given the **dynamic context** within which the standards will be applied, ie. changes to social, natural and economic environments, the standards and in particular the indicators and verifiers will need to be constantly **reviewed and modified** in order to remain relevant.

Findings of the small grower case studies indicate that small growers support the implementation of sustainable forest management standards. However a large proportion of the

small growers appear to lack the capacity to implement the standards. This **gap between intent and capacity** could significantly hamper the implementation of the standards for sustainable forest management by the small scale forest grower sector. An essential part of the standards setting process will therefore need to be a **capacity building** process among small growers, in order to **empower** them with the skills and resources necessary to implement the required management strategies. Furthermore, forest systems are impacted on by a range of externalities which are largely beyond the influence of small growers. The primary externality is **poverty** in the rural small grower communities. A scarcity of resources, both financial and natural, as well as a lack of awareness and understanding of the impacts of the resource use patterns widely results in unsustainable land use patterns in rural areas. While standards for sustainable forest management may improve current conditions opportunities for the expansion of this initiative to the development of **standards for sustainable land use management** should also be investigated to address environmental sustainability holistically.

While this study was undertaken in the Richards Bay district of KwaZulu-Natal, it could provide valuable insight for projects investigating the development of standards for sustainable forest management in other developing areas outside of South Africa. However a number of factors also limit the relevance of aspects of the study not only to other developing countries, but even within South Africa. The key limiting aspect is the uniqueness of the traditional tribal management system in the study area. The Richards Bay area is a region where the traditional powers of the tribal authorities remain relatively strong. However in many other areas of KwaZulu-Natal and other provinces of South Africa, the advent of democracy in 1994 saw the gradual change in the powers of traditional governance institutions such as tribal authorities. Governance in many rural areas is now through democratically elected councils. Management of land and natural resources in these tribal wards could be undertaken in significantly different ways to those reported in the case studies of this project. However despite these limitations to the applicability of many aspects of this study to other areas, the fundamental principles of participation, empowerment, transparency, partnerships, diversity and revision will be widely applicable to the development of standards for sustainable forest management.

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APPENDIX A

Principles and Criteria Matrix

ABBREVIATIONS USED

- FSC - The Forest Stewardship Council
- PEFC - Pan European Forest Certification
- RA - The Rainforest Alliance (Smart Wood Program)
- SCS - Scientific Certification Systems
- SGS - Société Générale de Surveillance
- SA - The Soil Association
- COFLOR - Certificate of Origin of Forest Raw Material
- ITTO - International Tropical Timber Organisation
- IWGF - International Working Group on Forests
- Mont. - Montreal Process Criteria (Santiago Declaration)
- Tara. - Tarapoto (Peru, Amazon)

PRINCIPLE	FSC	PEFC	RA	SCS	SGS	SA	Coflor	IWGF	ITTO	Mont.	Tara.
1. Compliance with legislation, agreements and treaties	T	?	?	?	T	?	T	T	T	T	T
1.1 Policies	T	?	?	?	T	?	T	T	T	T	T
1.2 Register of legislation	T	?	?	?	T	?	T	T	T	T	T
1.3 Communication mechanisms; and	T	?	?	?	T	?	?	T	T	T	T
1.4 Policing and reviewing	T	?	?	?	T	?	?	T	T	T	T
2. Maintenance of socio-economic functions and conditions	?	T	?	T	?	?	?	T	T	T	?
3. Tenure and use rights and responsibilities	T	?	?	?	T	T	?	?	T	?	?
4. Community relations and worker's rights	T	?	T	T	T	T	?	?	T	?	?
5. Indigenous people rights	T	?	?	?	T	T	?	T	T	?	?
6. Benefits from the forest	T	T	T	T	T	T	?	T	T	T	T
6.1 Ensure economic viability; and	T	?	T	T	T	T	T	T	T	?	?
6.2 A wide range of environmental and social benefits	T	?	T	?	T	T	T	T	T	?	?
7. Environmental impact of forest management	T	?	T	T	T	T	?	?	T	?	T
7.1 Conserve biological diversity and its associated values;	T	T	T	T	T	T	T	T	T	T	T
7.2 Water and soil resources; and	T	T	T	T	T	T	T	T	T	T	T
7.3 Unique and fragile ecosystems and landscapes	T	?	?	?	T	T	?	?	?	?	?
8. Forests management systems	T	T	T	T	T	T	?	?	T	?	?
8.1 Management plan;	T	?	T	T	T	T	?	?	T	?	?
8.2 Training;	T	?	?	?	T	?	?	?	?	?	?
9. Monitoring of performance and mechanisms for progressive	T	?	T	T	T	T	?	?	?	?	?
10. Maintenance of forest ecosystem health and vitality	T	T	?	T	T	?	?	T	T	T	?
11. Plantation management	T	T	T	T	T	T	T	T	T	T	T
12. Maintenance of forest contribution to global carbon cycles	?	T	?	?	?	?	?	T	T	T	?



APPENDIX B
Individual and Group Questionnaires

INDIVIDUAL QUESTIONNAIRE
 A collaborative study by the Institute of Natural Resources
 and the Natural Resources Institute (UK)
 Funded by DfID

Name of Respondent..... Date.....
 Respondent's designation: Owner / Other (list).....
 Name of owner if not respondent
 Location/district

(A) SCALE OF OPERATION

- 1 Size of plantation (ha) Total..... Sub-divisions (1).....(2).....(3).....
- 2 Forest type (1)..... (2).....
- 3 Date when first established
- 4 Number and type of commercial products harvested:
 Type..... Sold to.....
- 5 Years per harvest cycle
- 6 Number and type of non-commercial products harvested
 Type..... Use
- 7 On what basis was this piece of land selected for the plantation?
- 8 What issues were taken into consideration during the selection of this site?
 8.1 Environmental:
- 8.2 Social:
- 9 Was consultation with neighbouring land users undertaken prior to development?

(B) POLICY ISSUES

- 1 Compliance with all local and national regulations.**
 - 1.1.3 Are you aware of any rules and or policies regulating your forest activities?
 - 1.1.1 If yes, what are they?
 - 1.1.2 How did you find out about this?
 - 1.1.3 Are you aware that you may not plant trees within 50m of water courses?
 - 1.1.4 How does this rule affect you?.....
 - 1.2 Do you inform your employees and contractors of these regulations?
 - 1.3 Do you meet these regulations?
 - 1.3.1 If no, why?
 - 1.3.2 And if yes, how?
 - 1.4 Do you have a permit for your plantation from the Department of Water Affairs and Forestry?.....
 - 1.4.1 If no, are you aware that you require a permit?.....
 - 1.4.2 If yes and no permit, why do you not have one?.....
 - 1.4.3 If you do have a permit, what procedure did you have to follow to acquire it?.....
- 2 Compliance with relevant binding international agreements.**
 - 2.1 Are you aware of any international requirements that you should comply with?.....
 - 2.1.1 If yes what are they?.....
 - 2.2 How did you here about this?.....
 - 2.3 Do you meet these requirements?.....
 - 2.3.1 If no, why not?.....
 - 2.3.2 If not relevant, how could they be changed to be more relevant to your operation?
 - 2.3.3 And if yes, how (evidence)?
- 3 Demonstrate long-term commitment**
 - 3.1 Do you subscribe to any policy stating commitment to forest management practices consistence with any acceptable P & C on certification?
 - 3.1.1 If yes, what policy?
 - 3.1.2 If no, why do you not subscribe to policies?.....
 - 3.1.2 What would make you subscribe to them?.....
 - 3.2 If a national policy was developed would you subscribe to this policy voluntarily?
 - 3.2.1 Why
 - 3.3 If subscribing to the policy cost extra money or inputs would you subscribe voluntarily?
 - 3.3.1 Why

3.3.2 What would be required to make it possible/viable for you to subscribe?

SUMMARY

To what extent does policy and regulations affect your forestry activities? Do you think it is necessary for policies do regulate/guide forestry activities of small growers like yourselves? If yes why? If no, why not?

(C) SOCIAL ISSUES

1 Land tenure and rights responsibilities

- 1.3 What are your rights with regard to the tenure and long-term rights to land use?
 - 1.1.1 Are there any documents demonstrating legal and long-term rights to use resources?
 - 1.1.2 If no, why?
 - 1.1.3 And if yes, what documents?
- 1.2 What will be the tribal authority's reaction should you decide not to grow forest plantations on the land?...
 - 1.2.2 Does this affect the way you manage your land?
 - 1.2.2 If yes, how does it affect it?
- 1.3 Are there any other people or stakeholders who have tenure use or would like rights over the resources on this land, other than the trees (eg mushrooms etc)?
 - 1.3.1 Did all these rights holders consent to your management activities?
If no, why not?
 - 1.3.2 Do you believe other community members should have a say over how this land is used?.....
 - 1.3.3 Why?
- 1.4 Have any disputes over tenure and use rights been experienced?
 - 1.4.1 If yes, what mechanisms have been employed to resolve such disputes?.....
- 1.5 Should your long term tenure rights be guaranteed, how would your management of the land change? (List specific actions and why).....

SUMMARY

To what extent is the issue of tenure and land rights a factor for your forestry activities. If yes, what are the most important factors that you think should be considered?

2 Community and employee relations

- 2.1 Is there a mechanism for liaison and consultation on resolution of grievances with neighbours or employees?
 - 2.1.1 If yes, what is it?
 - 2.1.2 And if no, why not?
 - 2.1.3 Are there any conflict resolution procedures documented and implemented?.....
- 2.2 What criteria are used to determine who gets employed?
 - 2.2.1 Do local people get preference?.....
Why / Why not?
 - 2.2.2 Are minimum wages paid or on what basis is remuneration calculated?
Why / Why not?
- 2.3 Is there any support given to the local community apart from employing people?
For example are local entrepreneurs encouraged to develop complimentary businesses eg contracting, transport or supply businesses?
- 2.4 What role do the local communities groups have in the plantation, other than employment?
- 2.5 Are there exercises to investigate social impact of forest plantation that it might have on the local communities livelihood?
 - 2.5.1 If yes, what?
 - 2.5.2 And if no, why?
- 2.6 Are you aware of any laws and regulations covering health and safety of employees and their families?
.....
 - 2.6.1 If yes, what are they?
 - 2.6.2 Do you meet and or exceed these requirements? If yes, how?
 - 2.6.3 Are workplace health and safety operational procedures implemented?.....
 - 2.6.4 Is safety equipment, such as helmets and gloves, provided?
If yes, list;.....
If no, why not?.....
- 2.7 Is training provided for employees for effectively carrying-out specific tasks?

- 2.7.1 If yes, what training?
- 2.7.2 If no, why not?
- 2.7.3 If no, would training be beneficial, and what type of training?
- 2.7.4 Would you pay for your employees to be trained? If no why not?.....
- 2.8 What do you consider are the key factors for implementing a good employment practice?

SUMMARY

What are the key factors for ensuring good relations with local communities and households, that will ensure negative impacts are minimised and benefits are maximised? How can these factors be implemented?

Should local people have rights or a say in how the land and its resources area used, if yes how could this be implemented, if no, why not?

3 Benefits from forest services.

- 3.1 Are there any non-timber products which are of significance to the local community livelihoods in the forest plantations?
- 3.1.1 If yes, what?
- 3.1.2 Do you harvest them? And do you allow local people to harvest as well?
- 3.2 Are there any potential impact of forest activities threatening these services and resources?
- 3.2.1 If yes, what (eg spraying of poisons on edible resources)?
- 3.3 Are there any cautious measures directed in minimising such negative impacts on these services and resources?

SUMMARY

How do you rate the importance of social issues with respect to the performance of the forest plantation?

Low medium high

What do you think are the most important social issues? And why?

(D) ENVIRONMENTAL ISSUES

1 Environmental Impact Assessment

- 1.3 Was an environmental assessments done to assess the suitability of this land for forestry before the plantation was developed?
- 1.1.1 If yes, who undertook the assessment and why?
- 1.1.2 What were the findings?
- 1.1.3 How did this influence the development?
- 1.2 Are there any environmental assessment exercises carried-out to determine the condition of forest environment for management purposes?
- 1.2.1 If no, why?
- 1.2.2 If yes, by whom?
- 1.2.3 What are the findings and what actions are taken as a consequence?

SUMMARY

Is there a need for environmental impact assessments at this scale of farming, if no, why not. If yes, how do you thing it should be implemented?

2 Safeguard rare and threatened species and their habitats

- 2.1 Are you aware of any locally and or nationally rare or valuable species (plant or animal) occurring in this area?
- 2.1.1 If yes, what are they?
- 2.1.2 Are any actions taken to ensure impacts arising from forestry activities are minimised?
- 2.2 Would you invest resources to identify and protect rare and threatened species?
- 2.2.1 If no, why not?

SUMMARY

What do you think are key factors to ensure that small scale forestry activities can best be managed and monitored to ensure that it does not result in extinction of rare plants or animals?

3 Develop and implement guidelines for sensitive resources (water, soil, etc)

- 3.1 What environmental impacts have you seen arising from your forestry activities (eg soil erosion, spreading of exotic species)? (list as many as possible - comprehensive list)
- 3.1.1 What is done to control these impacts?
- 3.1.2 What could be done by small growers, and who should (help) do it?

- 3.2 Once negative impacts are identified, eg erosion, are these impacts monitored and the condition assessed?

 3.2.1 If yes how is this monitoring undertaken formally (describe) or informally (describe).
 3.2.2 Are the changes and management activities recorded, why?
 3.2.3 Would it be possible for you to keep these records formally? How?

SUMMARY

What are the key factors that you think should be used to assess the impact of forestry activities in sensitive environments? What benefits do you think could be gained from monitoring and managing these impacts?

4 Use of chemicals

- 4.1 Do you use chemicals in your forest plantation?
 4.1.1 If yes, what chemicals and what are they used for?
 4.2 Are you aware if there is a list of recommended and prohibited chemicals for use in the forest industry?

 4.2.1 If yes, do you have the list?
 4.2.2 How did you here about it?
 4.2.3 And if no, why?
 4.3 Are you aware of any legal requirement with regard to chemical usage?
 4.3.1 If yes, what?
 4.3.2 What appropriate equipment, protective clothing, and training is provided to comply with the minimum legal requirement?
 4.3.3 Is there a mechanism employed to record and regularly analyse trends for chemical use over time?

 4.3.4 Are records of all incidents involving chemicals kept?
 4.3.5 How are chemical containers disposed?
 4.4 What other alternative management practices apart from chemicals are used for the same purpose?

SUMMARY

Do you think the use of chemicals could be harmful and should be controlled? If yes, how could they be controlled?

5 Forest Management System

- 5.1 Do you set management objectives of the forest?
 5.1.1 If yes, list
 5.2 What are the main determinants of harvesting techniques?
 5.2.1 Do they consider social or environmental impacts?
 5.3 Are all forest activities supervised and monitored, to ensure negative impacts are minimised?
 5.4 Do you think monitoring is/would be beneficial? If yes why?.....

SUMMARY

Do you think there is a need for a management planning for this plantation? If yes, why, if no why do you think it is not relevant?

6 Monitoring

- 6.1 Do you record all forest product yields?.....
 6.1.1 If yes, how?
 6.1.2 And if no, why?
 6.2 Do you collect data on growth rate, regeneration and condition of the forest?
 6.2.1 If yes, how?
 6.2.2 And if no, why?
 6.3 Do you monitor environmental and socio-economic impacts of forest operations?
 6.3.1 If yes, how?
 6.3.2 And if no, why?
 6.4 Are there any post-harvest monitoring exercise carried-out to assess field conditions, eg to assess erosion etc?
 6.4.1 If yes, list:
 6.5 Do you collect data on costs, productivity and efficiency of forest management?
 6.5.1 If yes, how?
 6.5.2 And if no, why?
 6.6 Do you monitor the contractor's performance?
 6.6.1 If yes, how?

- 6.6.2 And if no, why?
- 6.7 Do you have improvement mechanisms for performance?
 - 6.7.1 If yes, how?
 - 6.7.2 And if no, why?
- 6.8 Do you have records of monitoring activities?
 - 6.8.1 If yes, how?
 - 6.8.2 And if no, why?
- 6.9 How often do you analyse the results of the monitoring exercises?
 - 6.9.1 Do you incorporate monitoring results into revised forest management system?
 - If yes, how? And if no, why?.....
 - 6.9.2 Based on monitoring results, are opportunities for upgrading management plan identified?
- 6.10 Are new technological developments evaluated and incorporated into revised plans?
- 6.11 Do revised plans respond to the socio-economic and environmental changing conditions?
 - 6.11.1 If yes, how?
 - 6.11.2 And if no, why?
- 6.12 How do you rate the importance of environmental issues with respect to the performance of the forest plantation? Low medium high
 - Why?

SUMMARY

Do you think monitoring of the above mentioned issues would be / is of benefit to your forestry operation? If yes what do you think are the issues that should be monitored and why?
 What would an effective monitoring system be that could be implemented by all small growers?
 If no, why do you think monitoring is not necessary?

(E) GENERAL

- 1 Do you get any advise and training or support from any organisations?**
 - o If yes, from who?
 - 1.2 What support?
 - 1.3 What support would you require to improve the effectiveness of your operation (eg labour training).....
- 2 Are you aware of the international forestry certification standards development and the development of the national standards?**
 - 2.1 If yes, how did you here about it?
 - 2.2 Do you think it's a good thing (will you try to become certified)?
 - If yes/no, why?
- 3 What key issues do you think are indicators of long term sustainable forestry, and why?**
 - 3.1 Environmental
 - 3.2 Social
 - 3.3 Policy
 - 3.4 Other



SMALL SCALE GROWER STANDARDS
Group Discussion Questionnaire
A collaborative study by the Institute of Natural Resources
and the Natural Resources Institute (UK)
Funded by DfID

Name of District/ Tribal Authority

- 1.3 What are the largest and smallest plantation sizes in this area, on average?
- 1.4 What issues were taken into account during the selection of plantation site?
- 3 Is there an awareness of any rules and/ policies regulating forest activities?
- 1.5 Are you aware that you need a permit for your plantation from DWAF?
- 1.6 To what extent does policy and regulations affect your forestry activities?
- 1.7 What are your rights with regard to the tenure and long-term right to land use?
- 1.8 To what extent is the issue of tenure and land rights a factor for your forest activities?
- 1.9 Is there a mechanism for liaison and consultation on resolution of grievances with neighbours and employees?
- 1.10 Are there exercises to investigate social impact of forest plantation that it might have on the local communities livelihood at different forest stages (weeding, etc)?
- 1.11 What is considered the most important factors for ensuring good relationship with local community, that will ensure minimising and maximising negative and positive impacts respectively?
- 1.12 Is there a process to identify a range of non-timber products which are of significant to the local community livelihood in plantations?
- 1.13 Is there a process to ensure that everyone understands the allocation of such benefits?
- 1.14 Is there a process for identifying potential impacts of the forest activities threatening these services and resources?
- 1.15 How do you rate the importance of social issues with respect to the performance of the forest plantation?
Low Medium High
- 16. Is there a need for an environmental management?
- 17. How does forest affect this environmental management?
- 18. Is there a need for an environmental impact assessment at this scale of farming?
- 19. What are the key important factors that a community consider to be useful to assess the impact of forestry activities in sensitive environments?
- 20. In light of the goals you have set for your forestry plantations, what steps/activities are taken to achieve these goal? (management planning)
- 21. How do you assess if these steps are achieving the ultimate goal/objective? (is monitoring a route)
- 22. Is there an understanding of the interaction between forestry and environment?
- 23. How do you rate the importance of environmental issues with respect to the performance of the forest plantation?
Low Medium High
- (W) Do you get any advice and training or support from any organisation? And what sort of training would you need?
- (X) Are you aware of the international and or national forestry certification standards development, and do you support it?

APPENDIX C

Detailed Project Programme

Week 1

- Held meetings with Sappi and NCT both in Pietermaritzburg to discuss the study and its relevance to their small grower operations.

Week 2

- The NCT was contacted:
 - < To investigate what communities would be selected for the study within the Richards Bay area. Four communities were selected that together incorporated a range of production patterns and socio-economic characteristics.
 - < Make contact with key people in these communities, within which he had work experience, that could be used to introduce the project to their communities.
- NCT small grower liaison person contacted key people within the four case study communities and introduced the study concept and scheduled an introductory visit from the INR team.

The four communities identified were Enseleni, Kwambonambi, Empembeni & Port Dunford, and the contact people in each community were the *Induna*, Councilor, *Induna* and a Councilor respectively.

Week 3

- An introductory visit was made to meet with the four contact people. Unfortunately the timing of the visit was not convenient as there was an area function organised by the local Department of Transport. Both the Councilors were attending the function. Contact was still made although there was insufficient time to discuss project details.
- A literature search & review undertaken, to develop questionnaires and a matrix, using resources such as:
 - < Published literature
 - < Internet
 - < Personal communication (NCT and Sappi)

Week 4

- Continued literature search & review to develop questionnaires and a matrix (generic principles and criteria).
- Key community contact people contacted to arrange meetings with their respective tribal authorities in order to negotiate access to work in the communities.

Difficulties in communication channels (ie lack of telephones) made the making of arrangement difficult and consequently time consuming. In addition the meetings had to be arranged to coincide with days that the various tribal authorities convened. Appointments with the tribal authorities on these days also had to be confirmed by the key contact people with the tribal authority.

Week 5

- Finalising a development of questionnaires and a matrix.
- Confirming of meeting dates with tribal authorities.

Week 6

- Meetings held with the Nseleni and Kwambonambi tribal authorities. Key contact people also assumed the responsibility of arranging growers to take part in the surveys. The dates for surveys were finalised with the growers.
- Mobilised and organised all necessary resources for a survey.

Week 7

- Met with other two tribal authorities (Empembeni and Port Dunford) to finalise issue of authority to work in these communities.
- Conducted a group discussion with Nseleni (attended by 14 growers) and KwaMbonambi (attended by 45 growers) communities. In addition, five individual interviews were also conducted with Nseleni growers. It was during surveys where recommendations were made that at least two to a maximum of four representatives from each community need to be elected by growers to sit in a committee together with other representatives from other communities. The key contact people facilitated the elections.
- Visited Sappi Project Grow offices in Kwambonambi to discuss the study and gain insight into their small grower operations and standards setting.

Week 8

- Conducted a group discussion with Port Dunford (attended by 32 growers) community, and three individual interviews with Empembeni community. Unfortunately the continuation of interviews was severely disrupted by the outbreak of a cholera epidemic among rural households throughout the area, which remained prevalent in the area for the duration of this project.
- Engaged in translation of materials from Zulu (local language) to English.

Week 9

- Completed translation of interviews and analysed information in terms of relevance of the generic principle and criteria matrix.
- The matrix was reviewed in the context of the information gathered from the survey.

Week 10

- A copy of the draft proposed South African national standards were obtained and were integrated into the review process. A revised set of principles and criteria was prepared, incorporating those principles and criteria that were considered relevant to small scale operations.
- A milestone report was prepared highlighting proceedings of the study and background on small scale grower operations in the study area. A paper was also prepared for the 2nd FSC International Annual Conference to be held in Mexico, end of November 2000, and one of the project members attended the conference.

Week 11

- Community contact people were contacted to establish details of the elected representatives for the small grower committee. Arrangements were made for a first workshop with the committee at which to discuss the revised principles and criteria. It

was agreed that the workshop would be held in Richards Bay which was a relatively central location with suitable workshop venues. It was also agreed that committee members would be paid a stipend of R30 to cover transport costs to enable them to attend the workshop.

Week 12

- The set of principles and criteria were reviewed and finalised for presentation at the workshop.
- Workshop arrangements were confirmed with attendees. Mobilised and organised all necessary resources for the workshop.

Week 13

- The small scale grower committee attended the workshop to review the revised principles and criteria. In addition, issues concerning assistance required by the small growers in order for them to be in a position to potentially implement the required management systems for sustainable forest management were discussed.
- Information from the workshop was translated from Zulu (local language) to English, following which the project team could assess and interpret the outcomes, and make amendments to the proposed principles and criteria.

Week 14

- Revision and adaption of standards and recommendations.

Week 15

- Little progress could be made during this period as it was Christmas vacations and most people were unavailable.

Week 16

- Arrangements were made for a final small grower committee workshop. All committee members were contacted and dates and venues confirmed.

Week 17

- A final workshop was held with the committee to review the draft set of principles and criteria, and to raise any further issues or recommendations. The committee was in agreement with the standards and only a few new recommendations were raised.
- Final translations were made and the project team reviewed all outcomes.

Week 18

- Preparation of the final draft report of the study.