The Impacts of the ISO 14 000 Management System on Sustainable Forest Management in South Africa

Graham von Maltitz

Instruments for sustainable private sector forestry, South Africa

The Impacts of the ISO 14 000 Management System on Sustainable Forest Management in South Africa

Graham von Maltitz

2000

A report prepared as part of the South Africa Country Study for the international collaborative research project steered by IIED:
Instruments for sustainable private sector forestry

Partners in the South Africa Country study:
CSIR-Environmentek
International Institute for Environment and Development (IIED)
In association with:
Department for Water Affairs and Forestry
Forestry South Africa

Production of this report has been made possible by the financial support of the
UK Department for International Development
and the European Commission

Citation: von Maltitz, G. 2000. *The impacts of the ISO 14000 management system on sustainable forest management in South Africa*. Instruments for sustainable private sector forestry, South Africa series. International Institute for Environment and Development and CSIR-Environmentek, London and Pretoria.

Contacts for the lead author: Graham von Maltitz, Environmentek CSIR, PO Box 395, Pretoria 0001, South Africa. Email: gvmalt@csir.co.za, Tel: +27 12 841 3640, Fax: +27 12 841 2228

About this report: This report is one of a series prepared as part of a collaborative research project on instruments for sustainable private sector forestry in South Africa. The reports in this series are listed below.

Instruments for sustainable private sector forestry, South Africa – report series

Overview and synthesis

- Mayers, J., Evans, J. and Foy, T. 2001. *Raising the stakes: impacts of privatisation, certification and partnerships in South African forestry*. This report draws on all the studies below and widespread consultation in South Africa. It analyses the impacts to date of privatisation, certification, outgrower schemes and company-community partnerships and presents conclusions and a set of options and next steps for all the main stakeholder groups.

Redistribution of opportunities and assets in forestry

- Khosa, M. 2000. *Forestry contracting in South Africa*. This study of trends in outsourcing and contracting in the South African forest industry seeks to deepen understanding of the national context within which contracting is an increasing practice, and examines possible options for outsourcing.

- Heyl, L., von Maltitz, G., Evans, J. and Segoale, R. 2000. *Issues and opportunities for small-scale sawmilling in South Africa: an Eastern Cape case study*. This report describes the scale, structure and market niche of the small sawmilling subsector, with a focus on the Eastern Cape Province.

- Horn, J. 2000. *The role of small-scale sawmilling in household and community livelihoods: case studies in the Eastern Cape*. This study focuses on the livelihoods of small-scale sawmillers in the Eastern Cape, using a case study approach.

- Bethlehem, L. 2001. *Bringing democracy to the forests: developments in South Africa's forestry policy and legislation.* This paper describes the policy and legislative changes in the forest sector, and sets recent initiatives in the context of a drive towards sustainable and equitable forest management.

Forest certification in South Africa

- Frost, B., Mayers, J. and Roberts, S. 2002. *Growing credibility: impact of certification on forests and people in South Africa.* This is an overview of all the certification studies with additional supply chain analysis.

- Scott, D. 2000. *Environmental aspects of the forest management certification process*. This report by a member of FSC certification audit teams examines the audit inspection instrument and provides commentary on how it is used.

- Clarke, J. 2000. *Social and environmental aspects of the forest management certification process: a discussion of social assessment components in South Africa*. This report, drawing on audit experience, tackles the ability of FSC certification and the certification process to improve the wellbeing of workers and communities dependent on plantations.

- Hamman, J. 2000. *Forestry certification: social aspects*. Also by a member of FSC inspection teams, this report analyses the composition and focus of the audit teams and highlights issues which can compromise the positive impact of certification.

- Dunne, N 2000. *The Impact of Environmental Certification on the South African Forest Products Supply Chain.* This study traces the route of FSC certified timber from mill to market, seeking to understand the impact of certification on traders and retailers in South Africa and the UK.

- von Maltitz, G. 2000. *The impacts of the ISO 14000 management system on sustainable forest management in South Africa*. This is a study focussing on one company's decision to adopt ISO accreditation, comparing the impacts of the ISO system with those of FSC certification.

- Crawford Cousins, C. 2000. *The impacts of stakeholder consultation in the FSC certification process on sustainable forest management in South Africa.* Focussing on the Stakeholder consultation process within FSC certification, this report highlights key assumptions about the efficacy of consultation.

Outgrower schemes and community-company partnerships

- Zingel, J. 2000. *Between the woods and the water: tree outgrower schemes in KwaZulu-Natal - the policy and legislative environment for outgrowing at the regional leve*l. This report discusses the environment surrounding trends in outgrower development, both past and future.

- Cairns, R. 2000. *Outgrower timber schemes in KwaZulu-Natal: do they build sustainable rural livelihoods and what interventions should be made?* Focussing on case studies of outgrower households, this examines the role played by schemes in rural livehoods.

- Ojwang, A. 2000. *Community-company Partnerships in forestry in South Africa: an examination of trends*. This is a broad overview of types of partnerships in Southern Africa, with comparisons between forestry and other sectors.

- Andrew, M., Fabricius, C. and Timmermans, H. 2000. *An overview of private sector community partnerships in forestry and other natural resources in Eastern Cape*. Focussing at a provincial level, this report captures partnership trends in the Eastern Cape, drawing on five case studies.

- Sisitka, L. 2000. *Private sector community forestry partnerships in the Eastern Cape: the Lambazi case study.* This case study examines the relationships between stakeholders and actors in a corporate-initiated scheme

- Cocks, M., Matsiliza, B. and Fabricius, C. 2000. *Private sector community forestry partnerships in the Eastern Cape: the Longweni woodlot case study*. This report examines community preferences and options for the use of a woodlot in the context of opportunities provided in the forest restructuring process.

- Sisitka, L. 2000. *Private sector community forestry partnerships in the Eastern Cape: the Umzimkulu case study*. This is a study of a corporate-community joint venture project in a part of the province that has good afforestation potential.

- Cocks, M., Matsiliza, B. and Fabricius, C. 2000. *Private sector community forestry partnerships in the Eastern Cape: the Manubi woodlot case study*. This study examines issues around partnerships and joint forest management around a state-conserved indigenous forest

- Ham, C. 2000. *The importance of woodlots to local communities, small scale entrepreneurs and indigenous forest conservation*. Comparing issues and opportunities arising around two woodlots, this study highlights the relative importance of government-planted woodlots to different community interest groups.

Copies of the CD containing the above reports can be obtained from:
Forestry and Land Use Programme, International Institute for Environment and Development,
3 Endsleigh Street, London, WC1H 0DD, UK.
Tel: +44 207 388 2117 Fax: +44 207 388 2826 e-mail: forestry@iied.org
http://www.iied.org
and The Librarian, Environmentek CSIR, PO Box 395, Pretoria 0001, South Africa.
Tel +27 12 841 3640 Fax: +27 12 841 2689

Abstract

The implementation of the *International Organization for Standards* (ISO) series of environmental standards (ISO 14000) within the South African forestry industry will, over time, result in a forestry management standard equal to, or superior to, the levels demanded by the *Forest Stewardship Council* (FSC) certification. This is despite the fact that the two systems have very different philosophies and starting points, and despite the fact that ISO does not impose any pre-defined performance levels that must be met. Two aspects within the ISO system and the environment in which forestry operates within South Africa are the reason for this. ISO, as a management system ensures that there is discipline over the management of environmental issues, it also uses systems approaches to ensure continuous improvement. The combination of the South African forestry and environmental policy, the fact that we have a strong environmental NGO sector, and the fact that South African forestry is plantation forestry are all issues that will lead to a unique ISO implementation within the country.

ISO 14000 is not a product certification. As such it does not help companies market their products where 'green labeling' is becoming the norm. It is probably for this reason that ISO implementation is greater in companies supplying predominantly to the pulp and paper sector, with companies supplying hard wood timber to international markets opting for FSC. Unless market forces change, companies supplying saw timber will need a certification system other than ISO to satisfy market requirements. ISO may, however, still be implemented as a tool to reach and maintain other certification levels of environmental management.

ISO and FSC are not competing systems, but rather complementary approaches. FSC does not require an ISO *Environmental Management System* (EMS), but does require that companies have an EMS system. ISO could be a powerful mechanism to help companies both achieve and maintain FSC certification.

Introduction

This Study is part of a larger study on Instruments for Sustainable Private Sector Forestry. This work is a contribution to the certification theme, which aims to assess the impact of certification on forests, stakeholders, markets and companies. The ISO 14 000 environmental management system has been adopted by SAPPI, one of South Africa's leading forestry companies, with more companies planning to follow suit.

The study has been conducted through a series of interview and reference to limited key literature.

What is ISO

The International Organization of Standards (ISO) is an international NGO established in 1947. Its aim is to develop industrial standards. The ISO 9000 standard for Quality Management developed in 1987 and the ISO 14000 environmental standards developed 10 years later, differ from most ISO standards in that they are generic management system standard rather than a specific product standard. ISO 14000 is a series of environmental standards, the following of which are important for sustainable forestry management (SFM):

- ISO 14001 Environmental Management Systems – Specifications and guidelines for use.
- ISO 14004 Environmental management systems – general guidelines on principles, systems and supporting technologies
- ISO 14061 Information to assist forestry organizations in the use of Environmental Management Systems standards ISO 14001 and 14004 (1998-12-15).

Appendix 2 gives a summary of the standards in the ISO 14000 series.

The ISO 14000 series is a procedure standard, not a performance standard. ISO 14001 certification certifies that a company has an environmental management system (EMS) in place that adheres to ISO requirements. As such it does not provide a "green label" or certification of a product or level of environmental performance. The ISO system can be applied to any industry and is not forestry specific. ISO 14061 gives guidelines on applying ISO 14001 and 14004 to forestry production.

ISO is a systems approach to continual improvement in environmental management. In essence it consists of environmental policy; planning; implementation and operation; checking and corrective action; and management review (see figure 1). Management systems and documentation form an important component of ISO.

ISO 14001 provides guidelines on what must be contained within an EMS. The company being certified defines for itself the performance standards that will be met; these are not defined by ISO. The company can choose to have self-declaration of ISO, in which case only internal auditing of the process is involved. Second-party auditing, for instance by a company to whom they are supplying timber, or full third party independent auditing which is required for ISO certification. Both ISO 9000 and ISO 14000 auditing and certification are carried

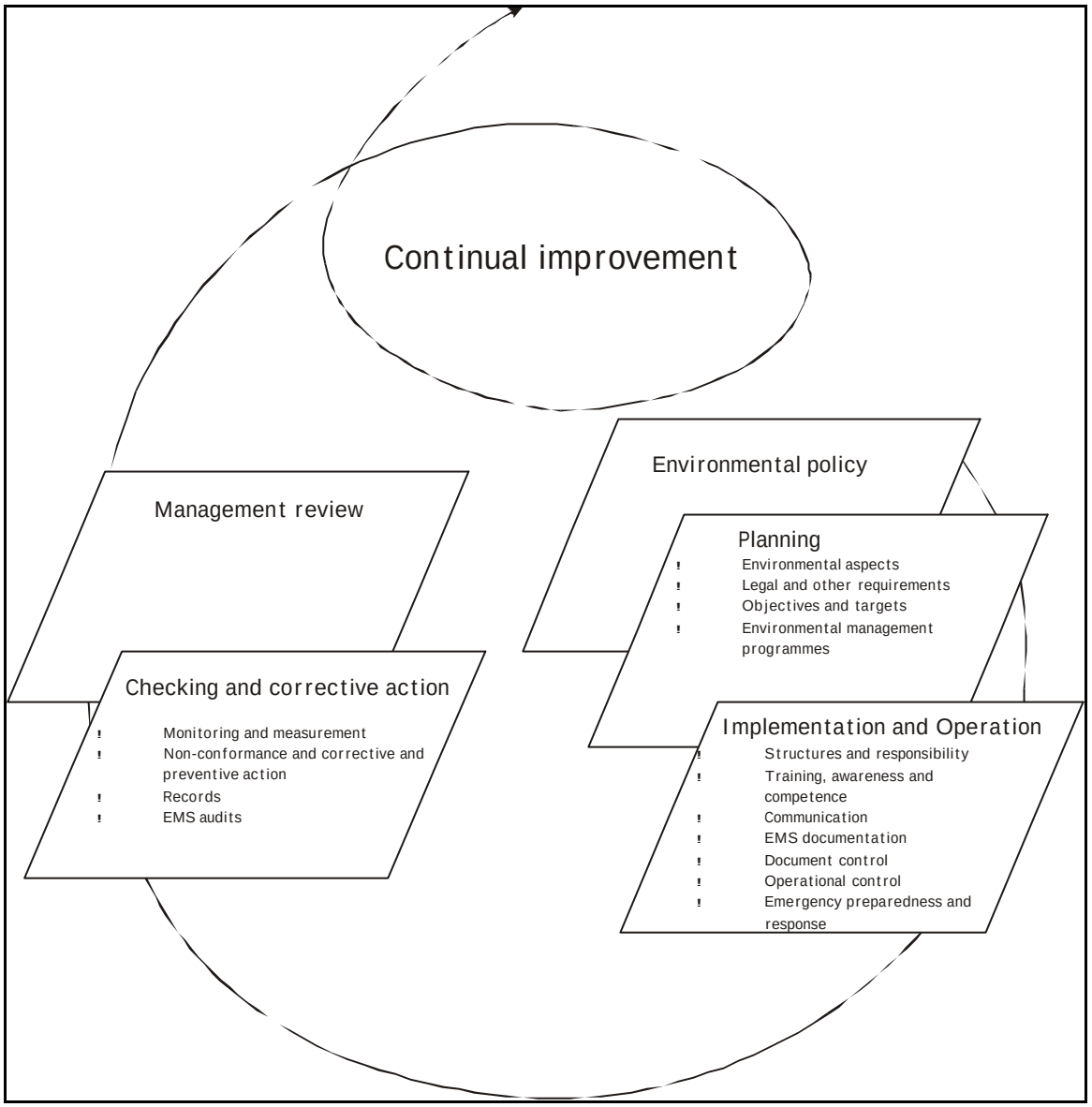

Figure 1. An overview of the ISO EMS system

out independently of ISO by certification bodies under their own responsibility. ISO *per se* does not carry out or provide certification. Within South Africa the SABS is able to perform third party certification of ISO 14000. International companies could also be used for conducting the third party certification.

ISO need not be applied to an entire organization, instead the organization can "ring fence" activities that are included or excluded from ISO. For instance within SAPPI timber the long-hall transportation section has been excluded from what is otherwise a total ISO implementation. The fact that a company can claim that it is ISO certified, when in truth only sections are ISO compliant can be misleading to the public and is a potential weakness in the forestry context.

The ISO 14001 system in brief

ISO 14061 gives detailed guidelines on how ISO should be implemented within forestry organizations. This section will draw extensively on data provided in the ISO 14061 documentation (ISO 1998).

An initial issue in setting up an ISO system is defining the scope of the implementation. A company can only establish systems for aspect of the forestry process where it has control. In South Africa where most commercial forestry is on privately owned land this is far less complicated than where there are a mix of tenure systems. There is likely to be greater complexity if companies form community partnerships for forestry implementation. Inclusion of outgrower schemes into company ISO systems will also provide additional complexities. ISO can be applied to an entire organization or specific components.

In essence ISO has 5 components as illustrated in Figure 1.

Environmental policy

The company must develop an environmental policy and have management commit to the policy. Dr Dave Everard of SAPPI confirms that merely having a formalized policy that management has committed its self to is a powerful tool in guarding against environmental mis-management.

The policy must commits the company to complying with national legislation and can commit to national and international voluntary standards. For example the forest industry in South Africa has developed an internal set of forestry standards, and SAPPI in their environmental policy, commits to these. A vast number of international standards and sets of criteria and indicators have been developed for the forest industry and the companies could also commit to any of these.

Planning

Planning relates to the following EMS elements: environmental aspects, legal and other requirements, environmental objectives and targets.

- Environmental aspects

Environmental aspects are a list of the aspect of activities that are likely to have an environmental impact. For instance the aspect of harvesting will have impacts of change in forest extent, species composition, etc.

ISO requires that aspects are identified, and then a rating system (developed by the company) is used to assess the significance of the aspect in term of its likely impact. This rating will be a function of potential impact, extent, probability, and frequency. Normally some form of severity index is developed. Although ISO does not enforce stakeholder involvement, this would greatly enhance the vigor of this process. When conducting a certification, the SABS employs forestry specialists to ensure that the most relevant aspects have been included. It therefore implies that a company cannot simply select the aspects that it is comfortable with including.

- Legal and other requirements

ISO specifies that the company must identify and have access to all the relevant national and local legal requirements and legislation. If there is sound environmental legislation in a country, then ISO certification is a sound mechanism to ensure that companies are adhering to the national legislation.

- Environmental objectives and targets

Environmental objectives and targets are set internally by the company. ISO does not insist on instant conformity, but rather a series of realistic targets to close the gap between current non-conformity and the company's ultimate environmental objectives. Consideration of legal requirements is important in setting targets. In this section taking into consideration views of stakeholders is a requirement. The system does, however, not insist on stakeholder participation. These objectives also need not be shares with stakeholders. It is obvious that this section must be in line with the stated environmental policy.

An interesting permutation comes in when the policy and objectives specify that the process will be open and participative. In this instance the company's adherence to its own defined policy and targets for participation is audited for compliance. If this is part of the ISO implementation then it starts to move to a truly powerful process of ensuring stakeholder regulation of the organizations environmental policy.

National environmental criteria or targets can easily be included at this point, and if legislated would need to be included.

- Environmental management program

This is defined simply as a program for ensuring that the organization establishes and maintains a program to achieve its targets.

Implementation and operation

ISO requires that the organization implements a number of systems and procedures to ensure that it meets its environmental policies and targets. These include:

- Structure and responsibility
- Training, awareness and competence
- Communication
- EMS documentation
- Document control
- Operational control
- Emergency preparedness and response.

Checking and corrective action
Procedures must be established to ensure that there is:

- Monitoring and measurement. This means that monitoring and measurement procedures must be established, and these must be consistent with their policy, objectives and targets
- Corrective action for non-conformity and preventative action
- Records.
- EMS audits.

Management review

Management review of the EMS must be conducted to ensure that the system is still meeting its objectives, is up to date with legislation etc. This feeds back into the system to ensure it is up to date and effective.

ISO 14001 implementation in South Africa

Within South Africa ISO has been fully implemented by SAPPI forests and SAPPI's experience with ISO will be used extensively as a case study for the rest of the discussions. In addition to ISO, SAPPI has FSC certification on two of its plantations where predominantly saw logs are produced. SAFCOL, which has FSC certification on all its forests has largely implemented ISO, but as yet has not applied for certification due to uncertainties of the current re-structuring process. Mondi, the third large forestry company within South Africa has chosen to use FSC for its plantations, but has drawn from ISO in developing some of its EMS.

With the exception of small quantities of indigenous hardwood being harvested in the southern Cape and Amatols, all timber and pulp production is from planted plantations of exotic species such as pine, eucalyptus or Australian acacias (wattle). Indigenous forests are not components of the production systems on forest estates, and are usually totally conserved. Depending on the plantation, production is used predominantly either for pulp and paper or for saw logs. In the case of SAPPI, most production is for pulp and paper as this is SAPPI's core business. SAFCOL and Mondi have a far greater saw log production.

What are the reasons for ISO 14000 implementation?

Forestry as an industry has a large environmental footprint. In South Africa it is typically relatively pristine grassland or in some instances woodland that are converted to plantation forestry. In addition to bio-diversity loss from these habitat types, aforestation impacts negatively on stream flow from mountain catchment areas. These habitat modifications, impacts on biodiversity and changes in hydrology have resulted in forestry coming under increased public pressure from environmentalists.

Market forces

In the pulp and paper market, product certification is less of an issue than for hardwood saw timber, and only a very small percentage of the world's pulp comes from certified forests. There is however increasing demand from end users that can show that environmental standards are being met. SAPPI reports increasing demand for statements relating to their environmental practices and policies from clients and the end users of their products. In this regard they find that their ISO implementation

adequately meets consumer requirements. They feel that at present ISO certification is more likely to provide market access than a price premium on pulp.

The international hardwood market is starting to demand environmental certification of timber. Although certification does not give a price premium, it does provide market access to markets closed to uncertified timber. The ISO standard does not provide certification or “green labeling” of products and therefore in its self does not meet market requirements for certification of timber. The ISO EMS systems will, however, assist companies both reach and maintain the environmental standards needed for certification. SAPPI has chosen to obtain FSC certification for forests involved in hard wood production for the export timber market. Their ISO implementation has made obtaining FSC certification relatively simple, and ensures that their forests maintain the FSC standard.

It would appear that market forces within the pulp and paper industry are a greater incentive for the ISO route than in the saw log industry where some form of product certification is being demanded.

Easy to sell to management

ISO is a management system, and operates in a similar manner to other business systems such as financial systems. As such management within an organization easily understands the ISO concept. John Scotcher of SAPPI argues that in organizations with as large an environmental footprint as forestry it is just as important for the organization to have an environmental system as it is for it to have a financial or personnel system.

There is increased government legislation for sustainable environmental management. When SAPPI conducted a legal review it found that there where 26 pieces of legislation that had relevance to environmental aspects of their management. Prior to the discipline imposed by the ISO process they had been un-aware that they had been in violation of some environmental legislation.

Green movement pressure

Within South Africa there is a strong anti forestry lobby from some elements within the environmental movements. SAPPI has found that ISO implementation has reduced this pressure, and they now claim that many of the environmental groups recognize the effort they are putting into sound environmental management. Obviously ISO implementation will not stop reactions from groups that are fundamentally apposed to any form of aforestation.

Internal efficiency

The ISO rigger can lead to increased efficiency of the use of resources in environmental management. The clear structured approach applied to environmental management focuses resources on important issues. For instance in SAPPI they now have a policy that weed (alien) eradication will only be started in new areas if they are able to fully control aliens in already cleared areas. SAPPI is also in the process of reviewing their traditional environmental budgetary process so as to gain greater efficiency between plantations.

Risk reduction
Clear environmental policies aimed at reducing environmental mishaps clearly reduces the risk of expensive environmental disasters. The SABS suggests that ISO

implementation can drastically reduce the cost of insurance payments, and SAPPI confirms that Lloyds were willing to reduce their premiums as a consequence of ISO certification.

Maintenance of FSC certification

The three main South African forestry companies all confirm that maintaining FSC certification is more difficult than obtaining the certification. FSC also requires an EMS to be in place. The well thought out ISO system and its mechanisms for continuous improvement are and effective mechanism for maintaining a forest at FSC levels. Since ISO is a highly formalized system it is unlikely to simply disappear through lack of maintenance or due to a champion leaving the company.

Continues improvement

The ISO process has two mechanisms to ensure continuous improvement. Firstly it is an iterative process where analysis of results and policy review takes place on a regular basis. Secondly, the system monitors non-conformance and has a process in place to review how preventative issues can be improved to prevent a re-occurrence. All reported non-conformances should be reviewed during audits to ensure that they have been effectively dealt with.

Low entry barriers

ISO can be implemented in an organization with limited resources. It can initially be implemented with no, or only internal auditing, and over time be grown to full scale certification. Since targets are internally set the organization can slowly improve its performance whilst still having realistic short-term targets. A criticism of the FSC method is that although certification is an incentive for well managed forests, the gap may be too big for poorly managed forests and they may give up rather than try for the FSC certification.

<u>Cost of ISO implementation and certification</u>

It is difficult to calculate the real costs associated in ISO implementation as many of the environmental management cost would be born regardless of ISO implementation. In addition there are efficiency gains, reductions in wastage and reductions in environmental mitigation costs as a result of ISO implementation. This is recognized by the insurance industries who may also reduce insurance costs. Although difficult to prove, the ISO implementation could result in a net saving over the long term.

Box 1 Incentives for ISO certification. Source: Tim Cadman M.A. - Will timber certification deliver sustainable forest management?

Clearly the advantage of ISO over other forms of accreditation schemes is its reliance on organisations defining their own management systems, and relying on government processes that, while moving towards ecological sustainability, may not actually deliver such an outcome. There are other advantages as well. The following is a list of some of them identified by industry consultants:

* Companies certified under ISO 14000 may point to this certification as evidence of progressive environmental policy and thus gain a competitive edge in marketing their products;

* Although ISO 14000 implementation is voluntary, certification under the standards may become a legal prerequisite to bid on contracts and maintain market shares in the European Union and other parts of the world;

* An ISO 14000 EMS may help to save corporations time and money by improving operations and facilitating relations with government agencies;

* ISO 14000 certification may relieve corporations of some regulatory burdens. Under Washington State Department of Ecology guidelines, for example, facilities required to prepare Pollution Prevention Plans or Five Year Plan Updates may fulfill these requirements by showing that they have an ISO 14000 EMS in place.

* Certification under the standards may also encourage greater leniency in government enforcement actions following an accident or environmental violation, as such certification could be held up as evidence of a firm's efforts to be environmentally responsible (EI, 1997).

In the case of SAPPI, ISO implementation resulted in the environmental section expanding from a staff of 4 to a staff of 12. These staff manage the bureaucratic aspects of the ISO system, though most implementation takes place on the individual plantations and is managed by the plantation managers. The bigger cost was, however, the cost of additional infrastructure and structures needed to meet legal requirements for sound environmental management. For instance cost were incurred in constructing suitable infrastructure for the storage of toxic chemicals, and all their fuel depots needed expenditure to ensure that they would contain accidental fuel and oil spills. Waste disposal sites had to be constructed to legal requirements.

The actual costs incurred in the initial third party certification audit and subsequent re-audits are relatively trivial, at about R100 000 per year with the initial assessment about twice that amount.

A number of other costs have been incurred in ISO implementation. These include the use of an external consultant to facilitate and advise on the ISO implementation process, and the use of an external consultant to conduct a stakeholder scoping exercise. SAPPI has a continuous ongoing stakeholder participation process.

SAPPI's history in ISO implementation

SAPPIs history of formal environmental management dates back to about 1988. Prior to this conservation was considered an activity limited to the areas of natural

vegetation. Foresters are, however, often people with a conservation ethic, as it is their love of the outdoors that drew many to the profession in the first place. About this stage SAPPI employees where realizing that SAPPI and forestry in general had a poor environmental image with the public. An internal workshop was convened to investigate this problem. This resulted in the industry setting a set of industry environmental practices. Forestry estates where also graded on an environmental rating system and there was a competition for plantations with the best rating. The Wild Life Society of South Africa donated a trophy.

The first SAPPI environmental policy was set 1n 1990 and in 1993 appointed John Scotcher as an environmental manager. He started to implement a systematic approach to dealing with environmental management. For instance internally conducted impact assessments were made compulsory for all plantings including re-plantings. SAPPI investigated international standards and in particular the British BS7750 standard. This was prior to the introduction of ISO. SAPPI believed that a structured process was needed and linked environmental issues to their foresters Key Result Areas (KRAs).

ISO 1400 was in line with a lot of SAPPI's thinking and they gradually moved toward it. A private consultant was used to facilitate ISO implementation in the organization. A bottom up approach was used where there was a lot of consultation with the staff and foresters in setting up of the system. In 1996 they realized that they needed greater public involvement and the Institute of Natural Resources (INR) was contracted to conduct stakeholder review. Drafts of their ISO system were also sent out for stakeholder review. This level of stakeholder involvement goes beyond the level required by ISO and is not a pre-requisite for ISO. If a company has made it policy to have an open process of stakeholder involvement, then the ISO review will audit that they are adhering to this (self imposed) policy.

As a consequence of ISO implementation SAPPI has developed a stronger and larger environmental management team, which has as one of its main objectives the implementation of ISO. At present this is consists of 12 people. SAPPI has found that maintaining the system is requires greater effort than the initial implementation.

SAPPI forests has chosen to have total ISO 14000 implementation across all its divisions and activities. At present this excludes long haul transportation, which was included after ISO implementation.

SAPPI maintains a live database of I&Aps and runs a consultative and process regarding its environmental policy.

<u>How effective has ISO 1400 been in enhancing SFM in SAPPI?</u>

Changes to company policy

ISO implementation has resulted in a major change in SAPPI's policy toward environmental issues, and the development of a formalized policy. There is strong management team commitment to their environmental policy. Some of this is likely to have happened regardless of ISO implementation as the organization was moving in that direction and had already implemented an environmental policy in 1992.

Changes to company business practices

ISO implementation has had widespread impact on SAPPI's business practices. Environmental issues are incorporated into all management policies and plans. There

are twice yearly environmental third party audits and annual internal audits. ISO implementation has resulted in standardization in environmental practices across the organization. There is a move to integrate environment with health and safety issues, which are looking to implement some of the ISO thinking. SAPPI is placing pressure on suppliers for increase environmental accountability. SAPPI is looking to provide a price premium for wood from small growers who conform to environmental standards, and may in time make this a requirement for purchase. This in time will also be taken to the project grow (out growers in the former QwaZulu). All contractors working within the plantations must meet the standards.

The environmental group got rewarded as the group with greatest impact on SAPPI forests business last year.

Environmental issues are becoming entrenched as a way of life. The bureaucratic checks and controls ensure this. Incentives such as competitions between the plantations, and environmental news letters have also been introduced.

A system of continuous improvement

Any employee or member of the public can report an environmental issue. These reports are sent through the head office and plantation manager. The plantation manager is obliged to deal with the incident, and compliance is checked during the next annual audit. For any incident it is also required that mechanisms for prevention or reduction in intensity of similar incidents in the future are also required.

Strengths and weaknesses of ISO

It is not the objective of this paper to discuss the definitions of SFM or the complexities involved in attempting to determine if SFM is being met. Discussion will be limited to the mechanism that would seem to indicate that ISO is acting as a tool to move companies closer to SFM.

Own targets

ISO 14000 has been criticized as a way where companies can set their own environmental targets and get certified for compliance with their own policy whilst still being environmentally irresponsible. Although there is a lot of validity in this criticism, a well-implemented ISO system in the forestry industry in South Africa will require high standards being met. By definition, the minimum standard that the company would have to be aiming for is the standards as laid down through environmental and forestry legislation. It is true that ISO certification does not indicate that the company has achieved that standards, but rather than it has made commitment to achieving the standards through its own self defined annual targets.

Certification of the EMS not the performance standards

ISO certification gives no indication on the standards being met, or the level of environmental performance. It purely certifies sound implementation of the system, and the organizations commitment to move to more environmentally sound management (that aims to comply at least to the minimum legal requirements).

Ring fencing of activities

A company can chose which of their activities to submit to ISO and which to exclude. This knowledge is seldom made public when companies state that they are ISO

certified. Claiming ISO certification can give a misleading impression that this applies to the total companies operation.

Community and stakeholder participation

ISO does not require strong stakeholder involvement, though scoping of issues from stakeholders is required. If a company's policy requires stakeholder involvement and an open process then this will be required for certification. The problem is that a statement of ISO certification without an accompanying company policy provides no way for an outsider to know if this is the case. Pressure from policy, NGOs and even from within the forestry industry is likely to push at least the larger companies to a relatively open and participative process. SAPPI for instance has taken transparency and consultation way beyond the ISO minimum requirements. SAPPI admits that true local community involvement is difficult and this sentiment has been echoed by SAFCOL and Mondi. SAPPI, Mondi and SAFCOL all report that there are very few or non of their plantations against which land claims have been lodged. This does not negate company's community responsibilities, but does simplify the issue. The situation is however different on the DWAf plantations in the ex-homelands where communities have expressed strong claim to forestry land.

As a means to FSC

If companies have implemented a sound ISO system then it should be easy for them to get FSC certification. SAPPI found FSC certification required few additions above what they currently do. ISO will also help maintain the environmental management at FSC levels. FSC can impose limits that business practice demands cannot be met. SAPPI found this regarding harvesting practices for wet weather.

Bureaucratic

This is both a strength and weakness. With out a doubt ISO creates a large bureaucracy and an associated cost in effort. SAPPI sees this as one ISO's strongest points, Mondi rejects these components of ISO in its EMS implementation.

No label

The international hardwood market is starting to demand a green label. ISO does not meet this market need and hence companies who need labeling either have to use a different system or dual system.

Allows a company to start from a low environmental base

ISO has no "true performance standard" as standards are self-imposed. This not totally true as must at least meet national standards and any other standards to which the company subscribes. It does however allow accompany that is far short of national standards to set its standards in a way that annual improvements are at a level that the company can handle. This is different from FSC where it is an all or nothing.

Results in continuous improvement – likely to give better SFM than FSC in the long run, bit this is dependent on how the system is run. In particular it relies on strong environmental policy in the country, and the companies commitment to an open, transparent and participatory process.

Conclusion

Within South Africa, commercial forestry is almost exclusively industrial plantations of exotic species and it controls most aspects of the forestry operation including the ownership of the land. As such, forestry, companies have a strong industrial affinity and are well suited to the implementation of an industry derived ISO 14000 systems approach to forestry management. FSC, though applicable to forestry plantations, is far more geared to forest exploitation of indigenous forests.

ISO 14000 as a management system does not set environmental standards and targets that must be met by the organization. These are internally set by the organization. As a consequence a criticism of ISO certification is that it does not guarantee that SFM is taking place. This is a very valid criticism, but as long as the following two criteria are met, the structure of ISO will automatically lead to ISO enforcing strong standards for SFM in the companies EMS. Once these standards are set, ISO certification will certify that the company is achieving its EMS targets for achieving standards.

- ISO requires that a company set targets to achieve compliance with national legislation. If there is strong national legislation and legislated national standards, then these are automatically minimum requirements within the ISO system. At present there are not national forestry criteria and indicators and this potentially impacts on both ISO and FSC implementation. The company need not have met the standards to achieve certification, but must show that it has a process and targets in place that will lead to meeting the legislation. The state need not necessarily set the standards, but could simply legislate that companies follow specified approaches that include stakeholder participation in determining of their objectives and goals (see the point below).
- If there is a strong NGO environmental movement in the country, as in South Africa, and if the companies undertake in their policy to involve this sector in setting of standards and targets, then it is reasonable to assume that a high level of SFM will be achieved. An alternative is that the forestry sector as a sector, set standards through a participatory and open approach and that companies make it their policy to adhere to these standard.

A problem with ISO is that it needs to be read in conjunction with the company's environmental policy before an assessment of its value in terms of environmental performance can be assessed. Since ISO places a lot of emphasis on national legislation, ISO certification between countries will not indicate similar environmental standards. At the company level, because companies set their own standards, ISO certification does not signify comparable standards between companies within a country, but the minimum standards as set by legislation will remain constant.

ISO is not a certification system. If the market wants environmental performance certification, or a 'green label', then forestry companies will have to have a certification system other than ISO in place. ISO can, however, be used in conjunction with a certification system such as FSC and is a powerful mechanism for reaching and maintaining FSC certification standards. This is particularly true for companies where their is a large gap between current practice and FSC requirements.

The strongest benefit of the ISO system is that it uses a systems approach to achieving continuous improvement. In product certification system there is no incentive for a company to be any better than the minimum standard for certification. The ISO approach on the other hand is open ended with the company continually striving to improve its performance. ISO, and a relatively bureaucratic system for imple-

mentation ensures that there is a day to day commitment to environmental issues, rather than environmental issues simply being implemented to gain certification.

Appendix 2 A list of standards forming the ISO 1400 series of standards.
From http://www.inem.org/htdocs/iso/iso14000_intro.html

ISO No.	Title of International Standard / Guideline / Technical Report	Publication Date	Subcommittee
ISO 14001	Environmental management systems - Specification with guidance for use	1 September 1996	SC 1/WG 1
ISO 14004	Environmental management systems - General guidelines on principles, systems and supporting techniques	1 September 1996	SC 1/WG 2
ISO/AWI 14004	Revision of ISO 14004:1996	To be determined	SC 1/WG 2
ISO 14010	Guidelines for environmental auditing - General principles	1 October 1996	SC 2/WG 1
ISO 14011	Guidelines for environmental auditing - Audit procedures - Auditing of environmental management systems	1 October 1996	SC 2/WG 2
ISO 14012	Guidelines for environmental auditing - Qualification criteria for environmental auditors	1 October 1996 Corrected and reprinted 15 October 1998	SC 2/WG 3
ISO/DIS 14015	Environmental management - Environmental assessments of sites and organizations	27 April 2000	SC 2/WG 4
ISO/CD.2 19011	Guidelines on quality and environmental management systems auditing	15 April 2000	JWG TC 207/SC2 & TC 176/SC3
ISO 14020	Environmental labels and declarations - General principles	1 August 1998	SC 3/WG 3
ISO 14020: 1998/DAM1	Draft amendment 1 to ISO 14020:1998	16 December 1998	SC3
ISO 14021	Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)	15 September 1999	SC 3/WG 2
ISO 14024	Environmental labels and declarations - Type I environmental labelling - Principles and procedures	1999	SC 3/WG 1
ISO/TR 14025	Environmental labels and declarations - Type III environmental declarations	15 March 2000	SC 3/WG 1
ISO 14031	Environmental management - Environmental performance evaluation - Guidelines	15 November 1999	SC 4/WG 1 & SC 4/WG 2
ISO/TR 14032	Environmental management - Examples of environmental performance evaluation	1999	SC 4/WG 3
ISO 14040	Environmental management - Life cycle assessment - Principles and framework	15 June 1997	SC 5/WG 1
ISO 14041	Environmental management - Life cycle assessment - Goal and scope definition and inventory analysis	1 October 1998	SC 5/WG 1
ISO 14042	Environmental management - Life cycle assessment - Life cycle impact assessment	1 March 2000	SC 5/WG 4
ISO 14043	Environmental management - Life cycle assessment - Life cycle interpretation	1 March 2000	SC 5/WG 5
ISO/WD TR 14047	Environmental management - Life cycle assessment - Examples of application of ISO 14042	1999	SC 5
ISO/CD 14048	Environmental management - Life cycle assessment - Life cycle assessment data documentation format	1999	SC 5
ISO/TR 14049	Environmental management - Life cycle assessment - Examples of application of ISO 14041 to goal and scope definition and	15 March 2000	SC 5/WG 3

	inventory analysis		
ISO 14050	Environmental management - Vocabulary	1 May 1998	SC 6/WG 1
ISO 14050: 1998/DAM1	Draft amendment 1 to ISO 14050:1998	30 December 1999	SC 6
ISO/TR 14061	Information to assist forestry organizations in the use of Environmental Management System standards ISO 14001 and ISO 14004	15 December 1998	SC 5/WG 5
ISO/AWI 14062	Guidelines for integrating environmental aspects into product development	To be determined	SC 5
ISO Guide 64	Guide for the inclusion of environmental aspects in product standards	March 1997	SC 7/WG 1