

Sustainable Oil Palm: Implementing the Principles and Criteria of the Roundtable Within the Framework of ISO 14001

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The Roundtable on Sustainable Palm Oil (RSPO) has generated enormous interest amongst stakeholders throughout the Palm Oil supply chain. The potential incentives to achieve sustainability are a catalyst for the industry, as a whole, to raise its performance to meet public expectations of environmental stewardship and social responsibility. Although the RSPO's principles and criteria for sustainable palm oil have been released, the way forward is far from certain because important issues such as the processes for implementation, continuous improvement and verification have yet to be resolved.

This paper outlines a practical approach to implementing the RSPO Principles and Criteria within an ISO14001 Environmental Management System (EMS) framework. The processes are described for integrating the Principles and Criteria with an EMS, taking examples from an operational system at New Britain Palm Oil in Papua New Guinea. This case study emphasises the benefits of the ISO14001 risk-based approach to environmental management and demonstrates how the Criteria may be used as a benchmark against which to evaluate continuous improvement. The question of verification is addressed through the system of ISO14001 Third Party Certification.

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INTRODUCTION

The notion of sustainability has been around for quite some time, but it was not until recently that the world faced up to the fact that our natural resources are finite and the world does indeed have *limits to growth* (Meadows et al,1972). In the early 70s, Meadow's book sparked much interest, controversy and scepticism but now concern over environment issues suggest that perhaps the *limits to growth* predictions may be realised.

Some 15 years later the World Commission on Environment and Development (1987) defined sustainable development as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The delegates to the Earth Summit in Rio de Janeiro (1992) refined this definition by linking economic growth (profit), environmental protection (planet) and social equity (people) in a blue print for sustainability in the 21st century.

Sustainable development is undoubtedly one of the biggest challenges facing mankind and politicians and leaders have now moved on from the discussions at Rio of policy formulation and strategy for official development concepts to broad discussions at the Rio Plus 10 Conference in Johannesburg (2002) to the implementation of sustainable development. The oil palm industry has recognised the importance of this challenge and for the past three years

has been working towards the establishment of a set of Principles and Criteria for defining sustainable palm oil for adoption by its producers. A number of external factors have influenced this new direction for the industry and are likely to continue to influence change into the future.

Drivers for Change

Once the oil palm is planted then palm oil production is the business of minimising field losses in order to maximise profits. Success in the plantation is based on establishing and imposing good agricultural practices and early handbooks focussed on the skills necessary to achieve a reduction in losses and an increase in yields (Bevan and Gray 1977; Pushparajah and Soon 1981; Turner and Gillbanks 1974; Vaderweyen 1952). Control of costs and increasing productivity drove most change with environmental benefits left to serendipity.

The introduction of barn owls for rat control is often used to demonstrate an environmentally friendly approach to pest control (Lee and Ho 2000). It was, however, driven by the economic necessity to reduce fruit losses rather than sustainable development. (Duckett 1981; Smal 1989). Cost control still continues to influence the introduction of owls into the plantation system (Adidharma 2002; Fee, Cheong *et al.* 1994; Heru, Siburian *et al.* 2000; Wan 2000).

Pushparajah (1997) stated that sustainable land management was built on five pillars: productivity, viability, stability, protection and acceptability and these same pillars have each driven change within the oil palm industry at different times. In more recent years stakeholder awareness of environmental issues within the oil palm supply chain has made “acceptability” a prime driver for change.

Public Awareness

As public awareness of environmental issues has grown, legislation has become stronger and in itself has driven change. Early attempts at land application of Palm Oil Mill Effluent were not regarded as pioneering sustainable technology but as practical disposal solutions to meet new water discharge regulations (Huan 1987; Palaniappan, Omar *et al.* 1983), and at least one author points out that the penalties imposed were an obstacle to sustainable development in the oil palm industry (Bakti 1990).

Corporate Awareness

A detectable shift in focus can also be seen with oil palm producers, planters and engineers. Most industry practices now reflect these changes and for the first time the fifth edition of the “The Oil Palm” (Corley and Tinker 2003) makes reference to such terms as environment and sustainability. A review of the literature of the oil palm industry’s approach to mill effluent over the last 30 years also shows this change in attitude (Lord, Tavaperry *et al.* 2003) with the effluent now viewed as a valuable resource commodity rather than a nuisance waste.

Customer Awareness

Sophistication in choice has eventually led some consumers to seek proof of sustainability along the whole length of the supply chain (Ibrahim 2003) and this consumer acceptability has

driven companies to actively engage in sustainable practices (Yee 2003). This growing awareness has prompted the oil palm industry to look at its own practices critically and has responded by setting up a transparent “Roundtable” to look at ways and means to improve performance and establish criteria for growing oil palms sustainably.

Such shifts have led to a widening in the scope of oil palm practices, which has taken them beyond a purely agricultural skills base. Current “Best” practices, summarised in Table 1, reflect sensible agricultural measures and so many are not new. What is different is the addition of a social and political dimension, albeit at a local level. The term Environmentally Sustainable Practices is being used to define these local solutions.

Table 1	Examples of Environmentally Sustainable Practices
1	Formulate a corporate environmental policy
2	Develop an Environmental Management System (EMS)
3	Set performance standards for all aspects of the industry
4	Carry out environmental impact assessment to evaluate new developments for the ability to sustain future land use
5	Provide management plans on biodiversity and identify and conserve High Conservation Value Forest
6	Adopt zero burn techniques.
7	Maintain genetically diverse germplasm within breeding programs and then subsequently exploit genotype x environment interaction
8	Implement a precision agriculture program
9	Establish soil conservation and erosion control measures
10	Investigate methods to Increase fertiliser efficiency and minimize losses
11	Capture the nutrients from empty fruit bunches (EFB) and Palm Oil Mill Effluent (POME) through land application and compost
12	Adopt Integrated Pest Management practices (IPM) within the plantations
13	Trunk inject insecticides where possible when treating infestations.
14	Develop local weed control strategies by planning all herbicide applications
15	Reduce soil compaction within the plantation in particular adopt low-pressure tyres.
16	Conserve riparian reserves
17	Ensure high milling efficiency and product quality
18	Improve efficiency and reduce waste in milling and refining (aim for Zero discharge of effluent from palm oil mills)
19	Promote energy efficiency at all levels within the plantation and service departments
20	Improve transport efficiency both in field and between plantation and mills through the adoption of a transport policy
21	Identify sources of pollution and target their reduction
22	Manage water and waterways to prevent pollution.
23	Reduce emission to air
24	Establish Occupational Safety & Health Management
25	Improve social contribution to rural economy

Modified in part from (Yee 2003); (Leng 2003) and (Weng, Jalani *et al.* 2003)

As a result of discussion with one of its longstanding customers, NBPOL saw an opportunity to differentiate its products within the market place and strengthen its environmental management standards (Thompson 2003) and at the same time adopt the planned approach across its entire operation. NBPOL embarked on a path to publicly demonstrate sustainability

through the adoption of an internationally recognised process, ISO 14001. The International Standard ISO 14001 had previously been recommended for adoption in the Malaysian Oil Palm industry as a model for sustainable development following evaluation of its economic benefits (Chan 1996; Chan 1997; Chan 2000; GLT and Chen 2003).

This paper outlines how NBPOL achieved ISO 14001 accreditation, how this management system has been incorporated into the company's culture and describes the modifications required to integrate the RSPO Principles and Criteria (RSPO, 2005) with the management system framework.

THE ADOPTION OF A SYSTEMATIC FRAMEWORK

The International Standards Organisation (ISO) has been developing voluntary standards since 1947. Most of the ISO standards are applied to particular products, but the ISO 14000 "family" of international standards is one exception as it is concerned with the establishment of a process to assist organisations to implement an environmental management system and thereby improve their environmental performance. ISO 14001 is the specification for an Environmental Management System (EMS) that can be audited for certification purposes or for self-declaration.

This standard is designed to have universal application, irrespective of the type, size or maturity of an organisation. ISO 14001 promotes a systematic approach to assessment and management of environmental issues and continual improvement of environmental performance.

Key Elements

The ISO 14001 standard follows a "Plan – Do – Check – Act" management model, which is an iterative process that enables an organisation to establish, implement and maintain its environmental policy. The standard can be viewed as an organising framework that is made up of five main elements: Policy, Planning, Implementation, Measurement and Evaluation and Review and Improvement. These five elements are supported by sub-elements that make up the framework.

THE PROCESS OF ISO14001 IMPLEMENTATION

Commitment and Environmental Policy

The ISO 14001 standard is non-prescriptive and does not specify the standard of environmental performance for an organisation to achieve. However, it does require the organisation to make three major commitments

1. Compliance with all legislation
2. Prevention of pollution
3. Continuous improvement

The magnitude of these commitments often leads companies with extensive operations to opt for EMS by increment, focusing on one particular aspect of the operation at a time. However,

NBPOL wanted all of its operations to have a common point of origin and for accreditation to unify all aspects. It simultaneously adopted ISO 14001 principles within all 12 plantations, 5 mills, refinery, bulk terminal, cattle operation, seed business, transport fleet, construction workshops and welfare facilities. NBPOL's strategy was to make environmental management an integral part of the company's overall management system. To do so across such diverse operations would require a commitment to a systematic approach and the development of a flexible Environmental Management System.

Accreditation of an EMS can either be out sourced to consultants to write a prescriptive manual or it can be undertaken in-house under the guidance of a consultant. NBPOL viewed the establishment of an EMS as a serious change in business culture and one that should involve all of its operational managers (Thompson 2003). This latter option although more interactive and, in theory, more likely to generate ownership has the draw back of being slower and runs the risk of losing emphasis and direction. To prevent this NBPOL approached the project with a definite time scale, a two-year deadline, and from the onset proceeded to set objectives, targets and review milestones.

With over 33,000 ha and 6,500 employees, NBPOL recognised the need for a company representative to champion the process and to be accountable for all stages of its evolution. In addition it appointed an external consultant, Environmental Management & Monitoring Pty Ltd, to interpret ISO 14001 requirements and to assist in steering the company through the necessary documentation.

Communication was vital throughout all stages and to assist in this NBPOL set up a company newsletter that is now in its fourth year and carries not only ISO 14001 features but other company issues on a monthly basis. Staged awareness classes and workshops on environmental issues were also a prerequisite to ensure that management was made aware of the issues and process they were committing to.

A review of the company environmental policy is required but in NBPOL's experience this process was virtually continuous and the policy evolved as the EMS was implemented. Time and effort were required to ensure that the policy accurately reflected the company's commitments and NBPOL achieved this through open review with all managers.

Standards and Benchmarking – the Initial Audit.

The first step along the path of EMS development is to audit a representative sample of all the company's activities and evaluate the environmental performance against applicable standards and ISO 14001 requirements. In this case the consultant used PNG Environmental Codes of Practice (DEC, 1997; DEC, 1997a; PNGFA, 1996) and the International Finance Corporation and World Bank Guidelines (IFC, 1998a; IFC, 1998b; IFC, 1998c; World Bank, 1998). The company's operations were physically inspected and the results recorded. This allowed the company to determine the scale of the issues involved and to start defining resource requirements for improving environmental performance.

Some items discovered during this "Benchmarking Audit" required immediate action but for the majority there was a need to plan their improvement on a priority basis over a longer time frame due to the costs involved. ISO 14001 actively promotes priority scheduling of remedial work by the creation of specific improvement plans. One concept that has proven difficult to

comprehend is that ISO 14001 allows an organisation to enter into the process of establishing an EMS at any level, even if there is a lot wrong. In NBPOL there was an initial temptation to try and correct everything on a “today basis” even though provision is made within the system to allocate resources so that corrective action can be undertaken in a timely manner and not unduly affect the bottom line.

The Environmental Aspects and Impacts Register – a Risk-Based Approach to Prioritisation of Key Issues

Once the shock of the benchmarking audit is over, the systematic examination of all activities within the company must begin. An Aspects and Impacts register, which is pivotal to a successful EMS must be developed. Within the register each activity is scrutinised to determine all processes and practices associated with its operation and then each of these aspects is further examined to establish the likely environmental impacts. The Aspects within the register need to be ranked in order to assess any potential threat they may pose. A numerical score is allocated according to their inherent risk (Severity Score). This can then be amended to assess the damage potential if such a risk occurred (Risk Score).

In the absence of any guidelines for implementing ISO 14001 for palm oil production and processing, the company had to consider all of the potential, as well as actual environmental impacts, that result directly from its operations or indirectly due to its suppliers and contractors. NBPOL’s approach was to divide the company into teams representing each of the various company operations. After training each team generated, evaluated and scored their associated environmental Aspects and Impacts. Once identified, the Aspects together with each of their Impacts can then be evaluated and scored by the same team.

The benefit of this risk-based approach to assessment and compilation of a “risk register” is the experiential learning for staff involved in the process. With appropriate facilitation they can readily identify the impacts associated with their area of responsibility and by means of a risk assessment tool are able to complete a qualitative risk assessment. The resultant risk scores are used to rank the environmental impacts in order of importance and to assign priority for management and inclusion in an improvement plan. It has the added benefit of allowing staff to participate in the process from the earliest stage and to gain ownership of the program. In many cases plantation and mill managers were working outside of their traditional comfort zone and deft guidance is required at this stage.

Management Guidelines

Once a list of Aspects and Impacts had been compiled and ranked, it was necessary to place these in context. NBPOL had previously developed guidance notes for use in its mills and plantations but these had become outdated and did not accurately reflect current practices. The company had only recently (in 1998) set about documenting its management practices for agrochemicals, by assessing the way pesticides were used, stored and disposed of. NBPOL sought to minimise environmental contamination, increase sprayer productivity and incorporate Occupational Health and Safety measures into the workplace.

This “planned approach” was the company’s first attempt to merge the principles of People, Planet and Profit and implement an environmentally sustainable practice. The approach worked increasing both productivity and profitability whilst at the same time bringing

Occupational Health and Safety and environmental issues under the direct control of the plantation managers. This was to become the benchmark for future guidelines

NBPOL saw the opportunity to use the ISO 14001 implementation process to not only capture and review new ideas and practices but also to document Occupational Health and Safety, environmental controls and sustainable practices for each activity. This was a large task and had NBPOL not sought and obtained ownership of the process from its operational managers at an early stage this part of the project would have floundered and the project sunk.

In their final form the resulting documents were called Management Guidelines and 20 were written (Table 2). Each activity within the guidelines was broken down into tasks and for each task there is a definition, a standard to achieve and the normal practice to follow. The guidelines cover all the company's activities from new developments to replants and mill reception to refinery.

These guidelines required the inclusion of the salient Aspects and Impacts and the attendant risk scores and rankings to be added before they made the transition from an agricultural (or engineering) practice to an environmental one. The Aspect's Severity Scores and Risk Score were used to determine the degree of concern by linking them to the definitions of environmental harm (General, Material or Serious) found in the new PNG Environment Act (2000). In this manner the management of environmental issues is embedded within the guidelines for managing day-to-day operations.

Table 2 List of New Britain Palm Oil Management Guidelines

MG 01	Plantation Management Guidelines - New Development Practices
MG 02	Plantation Management Guidelines - Nursery Practices
MG 03	Plantation Management Guidelines - Pesticides Practices
MG 04	Plantation Management Guidelines – Upkeep Practices
MG 05	Plantation Management Guidelines - Harvesting Practices
MG 06	Milling Management Guidelines – CPO Milling Practices
MG 07	Milling Management Guidelines – PKO Milling Practices
MG 08	Refinery Management Guidelines – Palm Oil Refining Practices
MG 09	Bulk Handling Management Guidelines – Bulk Terminal Practices
MG 10	Central Stores Management Guidelines – Materials Handling
MG 11	Transport Management Guidelines – Mosa Transport Practices
MG 12	Services Management Guidelines – Construction Practices
MG 13	Services Management Guidelines – Hydrocarbon Use Practices
MG 14	Services Management Guidelines – Compound Practices
MG 15	Services Management Notes - Waste Disposal Practices
MG 16	Research Management Guidelines – Composting Practices
MG 17	Research Management Guidelines - Tissue Culturing Practices
MG 18	Research Management Guidelines - Seed Production Practices
MG 19	Research Management Guidelines - Bunch Analysis Practice
MG 20	Cattle Management Guidelines – Cattle & Abattoir Practices

Environmental Improvement Plans and Emergency Response Procedures

Two further items were required to turn the Management Guidelines into ISO 14001 documents. These were Environmental Improvement Plans and Emergency Response Procedures.

Each Management Guideline contains specific Aspect improvement plans but these were required to be incorporated into a single, central, document to become part of the Company's Improvement Plan. NBPOL set targets and objectives for improving each Aspect and Impact included in the guidelines and in many cases this required a monitoring program to assess the sustainability of the practice or the gathering of new data. The process is of course ongoing and reflects the ISO 14001 commitment to continuous improvement.

Continuous Improvement

ISO 14001 demands commitment to continuous improvement but rather frustratingly doesn't say how to achieve it. After the first benchmarking audit there were a list of items which required attention and the sensible approach was to place all these items into the improvement plan and tackle them one by one until the list was exhausted. But to maintain the momentum of this improvement plan and to demonstrate that the process is continuous the action points from the subsequent audit visits needed capturing. NBPOL has made wider use of the ISO 14001 non-conformance citations and their corrective action requests (CAR) than is strictly required to form part of this plan.

NBPOL's environmental improvement plan is in 3 parts:

1. Monthly improvements as a result of cited non-conformance records
2. Environmental objectives arising from periodic management guideline reviews.
3. Specific issues, which are raised centrally or from ISO accredited audits.

Monthly improvements as a result of cited non-conformance records are compiled and placed on a calendar for tracking purposes. The Environmental Objectives and Improvement targets are found in each of the 20 Management Guidelines and NBPOL reviews these annually. Specific issues are normally raised centrally by the environment team and cover items that are widespread such as bunding of hydrocarbon bulk fuel tanks and water use permits or local issues of high importance like medical waste disposal.

Infringements or deviations found by ISO 14001 auditors result in the issue of Corrective Action Requests (further differentiated into minor and major actions based on the degree of potential environmental risk). These together form the final part of the continuous improvement program. There are still a number of areas in which NBPOL has yet to make significant improvements (balancing energy inputs and outputs and evaluating High Conservation Value Forests) and these are targeted for action.

As the auditing process at NBPOL has matured, attention has focussed away from the negative aspects (pollution and absence of documentation) onto the positive and beneficial impacts of NBPOL practices. The following list of published NBPOL solutions to sustainability illustrate continuous improvement: harvesting and mechanised collection systems (Graham and Soupa 2000; Shedden and Hoare 2003); plantation development (Graham and Mamando 2003); zero effluent discharge (Lord, Hoare *et al.* 2002); composting EFB for nursery use (Lord,

Tavaperry *et al.* 2003); integration of cattle (Mann, Hoare *et al.* 2002); pesticides and integrated pest management (Page and Lord 2004); milling improvements (Wheller 2003) and management strategies (Thompson 2003).

In many cases the benefits of implementing an EMS are not tangible. However the individual solutions adopted by NBPOL and outlined above are all measurable and returns show promise. For example herbicide usage in NBPOL plantations has decreased 45% since 1998 despite increases in total hectareage and utilising EFB composting methods for nurseries has not only reduced the residency time of seedling and produced uniform growth but has also cut nursery costs by 42% (Lord, Tavaperry *et al.* 2003). Advances in techniques used for establishment of new developments and on replants show reductions in erosion rates of between 50 and 80% and changes in labour organisation have increased harvester productivity to levels above 2.3 tonnes of FFB per man-day (Shedden and Hoare 2003)

INTEGRATING THE RSPO PRINCIPLES AND CRITERIA WITH ISO 14001

The RSPO Principles and Criteria provide important guidance on what sustainability means for oil palm growers and millers. The high level definition is “sustainable palm oil production is comprised of legal, economically viable, environmentally appropriate and socially beneficial management and operations”. We have taken the Principles and Criteria and interpreted how they should be meshed with the ISO 14001 framework for enabling their uniform application throughout the company’s operations. Considerable use was made of the Draft Guidance Notes (RSPO, 2005). This is very much a work in progress and discussion on the implementation of each of the Principles and Criteria is as follows.

Principle 1 – Commitment to transparency. The RSPO requirements for this principle are consistent with the ISO 14001 “Communication” sub-element, with the exception that ISO 14001 does not specifically mention the reporting of information on social issues. This was addressed by including the reporting of social issues in the EMS communication procedure, thereby meeting the requirements of Criteria 1.1 and 1.2.

Principle 2 – Compliance with applicable laws and regulations. This is a mandatory requirement of ISO 14001 that is checked by internal and external auditors. It is important to note that ISO states that appropriate information about legal and other requirements should be communicated to all persons working for or on behalf of the organisation. This brings contractors and smallholders into the management system. RSPO has additional requirements that specifically relate to the right to use the land and “free, prior and informed consent”, associated with land development. These additional requirements can be included in a statement that explains the company’s procedure for land acquisition. For example, NBPOL’s Management Guideline MG01 “New Development Practices” includes a section on Land Acquisition Procedures, that meets the requirements of Criteria 2.2 and 2.3. This needs to be backed up by information and documents that show legal ownership or lease of the land. Any agreement that relates to customary use of the land also should be included in the land tenure information.

Principle 3 – Commitment to long-term economic and financial viability. This commitment is additional to the requirements of the ISO 14001 standard. The Corporate Environmental Policy should be amended to include this additional commitment. The information from the Draft Guidance Notes on Criterion 3.1 was included in NBPOL’s Management Guideline MG

02 Nursery Practices (The use of only Certified planting material and the implementation of sustainable nursery practices). NBPOL's operating procedures that are included in the Management Guidelines for Harvesting (MG05) and Milling (MGs 06-09) meet the requirements of Criterion 3.2, which relates to product quality.

Principle 4 – Use of appropriate best practices by growers and millers. The ISO 14001 guideline (ISO 14004, 2004) does not specifically refer to “best practices”. However, the recently developed NBPOL Management Guidelines are based on industry best practice and meet all of the requirements of Criteria 4.1 – 4.7. In particular, each Guideline makes specific reference to relevant health and safety issues. In addition NBPOL is in the process of developing a safety management plan. ISO 14001 has specific requirements for “competence, training and awareness” that are consistent with Criterion 4.8. An important requirement of Criterion 4.8 is the training of smallholders. In NBPOL's case, the PNG Oil Palm Industry Corporation, which is funded by a levy on producers, provides extension services and training to smallholders. In addition, NBPOL employs a manager to liaise directly with smallholders.

Principle 5 – Environmental responsibility and conservation of natural resources and biodiversity. The core of the ISO EMS is the Environmental Aspects and Impacts Register, which is a risk assessment of all the company's activities from land development through to shipping of palm products. The process of developing this risk register requires the company to consider, evaluate and prioritise all of the risks associated with its operations. NBPOL's Environmental Aspects and Impacts Register addresses all of the issues that are outlined in Criteria 5.1 – 5.6. The ISO 14001 standard requires the preparation of management plans and environmental improvement plans for reducing the negative environmental impacts associated with the significant issues. These improvement plans include objectives and targets that are subject to audits.

Principle 6 – Responsible consideration of employees and individuals and communities affected by growers and mills. At first glance, the requirements of RSPO Principle 6 appear to be additional to those of the ISO 14001 management system specification, but on closer inspection of the Criteria and Guidance, there is a fair degree of correspondence between the two. Criterion 6.1, which relates to social impact assessment and management, should be evaluated during the Initial Benchmarking Audit with reference to the IFC Social Review Guideline (IFC, 1998). If significant social issues are identified during the audit, a management plan should be prepared.

Criteria 6.2 and 6.3 relate to methods of open and transparent communication and a system for documenting and dealing with grievances and complaints. These requirements are included in the ISO 14001 “Communications sub-element” that was referred to in Principle 1. Criterion 6.4 deals with negotiations concerning compensation for loss of legal or customary rights and also must be conducted in a process that is transparent, documented and fosters open dialogue between both parties. If an individual or group makes a claim against the company, this would be registered by NBPOL's Communication Procedure. This procedure allows tracking the progress of such a claim through to completion.

Criteria 6.5 – 6.9 relate to worker conditions, rights and child labour, discrimination, sexual harassment and violence against women. NBPOL's employment policy and practices are compliant with the PNG labour laws and meet the requirements of these criteria.

Oil Palm growers and millers are required to deal fairly and transparently with smallholders and other local businesses (Criterion 6.10). The PNG Oil Palm Industry Corporation determines the farm gate price for fresh fruit bunches and NBPOL is obliged to pay for fruit at the prescribed rate. The company employs a manager who liaises with smallholders and provides assistance on matters that they may raise. NBPOL also contributes to local sustainable development (Criterion 6.11) through the NBPOL Foundation (a program of donations to community assistance projects) and a trust fund through which the people of New Britain Province have a 20% share in the company and the money earmarked for education and welfare.

Principle 7 – Responsible development of new plantings. NBPOL’s Management Guideline MG01 “New Development Practices” includes practices that are consistent with the requirements of Criteria 7.1 – 7.7. In addition to these internal controls, the PNG Environment Act (2000) has triggers that relate to the scale and sensitivity of an area and would require a social and environmental impact assessment to be carried out for new developments.

The ISO 14001 standard requires any changes to the scope of the company’s activities to be included in the environmental management system. Before making a decision to develop a new area of land, it should be subject to a risk assessment to identify and prioritise issues of concern. Issues flagged by the risk assessment should be included in the “Aspects and Impacts Register” for management and tracking within the EMS.

Principle 8 – Commitment to continuous improvement in key areas of activity. Continuous improvement is one of the tenets of ISO 14001 and the company must commit to this process in order to achieve Certification. The ISO 14001 EMS provides the controls and discipline for an organisation to set objectives and targets for improvement and to track them through to achievement.

AUDITING AND VERIFICATION

ISO 14001 has comprehensive auditing and verification requirements. The auditing process consists of internal audits, annual management reviews and independent third party certification audits. Auditors must complete a training course and demonstrate competence. An auditor must carry out physical inspections of facilities, installations and processes in order to obtain evidence to verify the company’s environmental performance. In addition, the environmental management system is audited to check that it is working effectively and that all of the required controls are documented and operational.

Companies must carry out internal audits in accordance with a schedule and report the results to the Board. Each year the Board must review the audit results and the effectiveness of the EMS in achieving the company environmental policy. ISO 14001 is a global certification system and this certainly is consistent with what the RSPO process is aiming to achieve.

CONCLUSIONS

The ISO 14001 Environmental Management System framework is flexible, non-prescriptive and universal. A company of any size and at any stage of maturity can implement ISO 14001, provided it meets the three tenets: compliance with legislation, prevention of pollution and continuous improvement. Recent (2004) changes to ISO 14001 have strengthened the

commitment to environmental performance because a company is now required to include the activities of its contractors and suppliers in the EMS, as well as ensure that it makes available the resources for implementing environmental improvement programs. The ISO 14001 risk-based system is ideal for identifying and prioritising key environmental and social issues for inclusion in management plans and improvement programs.

There is a significant degree of correspondence between the RSPO Principles and Criteria and the key ISO 14001 Elements and Sub-elements which enables ready integration within the EMS framework. The RSPO Principles and Criteria provide interpretation of the sustainable palm oil requirements for incorporation within the management system framework. However, it is important to note that standard operating procedures will need to be modified to incorporate the requirements of specific RSPO Principles and Criteria. NBPOL adopted a process that integrated the key environmental issues and management programs with their standard operating procedures. This approach has embedded sustainable palm oil principles within the day-to-day management of activities and a major benefit is consistency of environmental management throughout the company's operations.

The ISO 14001 third party certification process provides independent checks and validation of the environmental management system and adds value for companies through an expert, but impartial review of their environmental performance. The ISO 14001 process helps companies to continuously improve their environmental and social performance, make themselves more transparent to stakeholders, and to substantiate claims for differentiating themselves in the marketplace. These outcomes are consistent with the overall goals of the Roundtable for Sustainable Palm Oil and we conclude that ISO 14001 is the appropriate framework for implementing and demonstrating achievement in sustainable development.

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