



Environmental Policy, Practice and Education in Swaziland Industries: Challenges and prospects

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Abstract

Industry is an essential production sector, though environmental degradation of various forms is attributed to it. Irrespective of existing environmental legislation, some industries persistently pose risks to the environment due to failure to comply with existing environmental legislation. However, industry is increasingly being challenged to adhere to environmental legislation and the challenges are both internal and external. Internal challenges include the quest to maximise production and respond to workers' demands for better wages. The internal operations of industry are also expected to guarantee the health and safety of workers. External challenges include mainly global environmental conventions and protocols. Locally, the challenge is mainly to comply with existing environmental policies and regulations.

Environmental responsibility is doubtful in some of the local industries in Swaziland, especially the small and locally owned. This study suggests that non-compliance with environmental legislation is attributed to lack of environmental expertise and knowledge, suggesting a need for an environmental education programme for industry. The government of Swaziland, through the undertaking of an environmental education training needs survey (reported here), has noted the importance of environmental education for industries. The survey provided a 'consultation forum' to establish environmental training needs in industry. Common training needs established include the need to educate industry on national environmental policies and guidelines for compliance as well as build capacity of industry personnel to respond to environmental issues and risks. The results of the survey have been crucial in the national initiative to develop an environmental education course for industry, which is now being undertaken with the support of the Southern African Development Community Regional Environmental Education Programme (SADC REEP) Course Development Network.

Introduction

Swaziland, like other sub-Saharan African countries, is attempting to intensify economic growth to fulfil the basic needs of the Swazi population. Following the western model of economic development, the country is pursuing growth through an industrialisation programme rooted on an agricultural sector that is undergoing technological changes. Undoubtedly, the projected growth would put tremendous pressure and stress on the country's

environment. Industrialisation is often placed among the most crucial activities causing land degradation, air and water pollution as well as other forms of environmental degradation (Gourlay, 1992).

While there is still an ongoing tension between the pro-growth campaigners and environmental protectionists, a point of convergence seems to have been found within the concept of sustainable development. The role played by industry aptly portrays this tension. The role of industry is often viewed as paradoxical in the sense that industry is a major creator of wealth, while on the other hand it is a major polluter and consumer of environmental resources (Lotz & Mkandawire, 1999). Within this paradox, industry can still fulfil its wealth creation mandate while it adheres to environmental concerns if production is carried out in a sustainable manner. Sustainable development may lack a concise and universal definition, but it is generally accepted that it embodies issues of positive socio-economic change rooted in prolonged utilisation of natural resources to enable and improve health, environment and livelihoods of people in a way that development options of future generations are not compromised (SADC REEP, 2002). Sustainable development is not reflected as a panacea to the paradoxical role industry plays in development in this paper. It is a recognised 'contested terrain', but a critical reflection on the concept of sustainable development is not within the scope of the paper (see for example Hattingh, 2002, for an in-depth critique of the concept of sustainable development).

Swaziland, like many of the countries in the world, has put in place policy measures to guide the use of natural resources (for production) on a sustainable basis. The policy guidelines have been supported by a series of environmental awareness campaigns and environmental education programmes targeted predominantly at citizens at national and local levels.

This paper seeks to highlight the significance of environmental education in facilitating environmental policy practice in industry settings. This will be done by an initial review of the various challenges experienced by industry precipitating problems of compliance with existing environmental legislation. The paper then raises environmental policy practice and environmental education issues emerging from the presentation of results of an environmental education training needs survey conducted by the Swaziland Environmental Authority (SEA) with a sample of local industries in 2001.

It must be stated from the onset that since the ground-breaking SEA Act of 1992 (Government of Swaziland, 1992), Swaziland has steadily promulgated important pieces of environmental legislation, regulations and action plans. These include the SEA Act itself, the 1994 Swaziland Environmental Action Plan (SEAP) (Government of Swaziland, 1994), the 2000 Environmental Audit and Assessment Regulations (SEA, 2002a), the 2000 Waste Management Bill (Government of Swaziland, 2000) and the 2002 Swaziland Environmental Management Act (Government of Swaziland, 2002). These policies and regulations are currently deemed adequate to guide production and utilisation of natural resources to achieve sustainable development. The problem currently being experienced is the process of putting these policies into practice. There is a noticeable slow start in the practice aspect of the environmental policies evidenced by a high degree of non-compliance within industry. Explanations to the slow start on issues of policy practice within industry maybe found in the current challenges faced by

industries in developing countries, which shape attitudes towards issues of compliance to existing environmental management legislation.

Challenges Facing Industry

The paradoxical role played by industry has already been noted – while gearing itself to intensify production, industry is increasingly challenged to act and produce in an environmentally responsible manner. In the past, industrial activities have impacted heavily on the biophysical environment. This trend has continued unabated in southern African contexts and in Swaziland, until recently when citizens and industries themselves realised the adverse consequences of environmental degradation and depletion of natural resources caused by industrial production systems. Much of this conscientisation within southern African industry settings, has been influenced by global trends and developments. The changes have, however, been crucial since they have ushered in a redefinition of corporate governance in a manner that now also responds to environmental issues and social concerns (IDSA, 2002). Previously, corporate governance confined itself to production decisions and mechanisms to maximise returns. Yet now it is rapidly becoming clear that the fiduciary duty of corporate governors is no longer confined to operations of the company but also to the entire environment. This preamble indicates that industry has to respond to challenges emanating from events happening outside industry (external challenges) and those emanating from within (internal challenges).

External challenges

A number of external forces frequently challenge industry to conduct its operations in an environmentally sound manner. Prominent among these forces or challenges are global environmental conventions and international agreements aimed at minimising adverse effects of development on the environment. Agenda 21 requires industry to conduct its operations in a sustainable way not only socially and economically but also environmentally, and Agenda 21 introduced the concept of eco-efficiency. Chemical pollution from agriculture is controlled by the Persistent Organic Pollutants (PoPs) convention, while air pollution from industries is controlled by, among others, the Montreal Protocol. Conservation of natural flora, fauna and general landscape is guided by the Convention on Biodiversity and the Convention to Combat Desertification (CCD).

While many local industries in Swaziland are failing to show evidence of Agenda 21 requirements, there is a clear indication that industry is beginning to realise the adverse impacts of industrial operations on the environment. Elsewhere, industries established without environmental accountability attracted the attention of NGOs in their submission to the Brundtland Commission of 1987. Based on the submission of the NGOs, the Commission, in its report, called for Corporate Accountability as a legal obligation of industry to ensure that industrial products and operations are in the interest of society as a whole.

Another challenge to industry is found in the King I and II Reports (IDSA, 1994; 2002). The King II Report, in particular, proposes integrated sustainability reporting based on the triple-bottom line concept that is critical to environmental accountability within industry.

Integrated sustainability reporting based on the triple-bottom line concept requires industry to report broadly on non-financial aspects of industrial activities and products. While significant to issues of social and economic concerns, these modes of reporting have undoubtedly relevance to environmental accountability within industry. Environmental management is, in fact, described as one of the non-financial dimensions of corporate governance in the King II Report (IDSA, 2002). Reporting on non-financial matters in activities seems to have had a positive reception since a number of companies worldwide have already started to implement it. In South Africa, for example, all companies listed on the Johannesburg Stock Exchange are required to comply with the King II requirements for corporate governance and integrated sustainability reporting.

Industry and company operations in Swaziland are still regulated by the Company Act No. 7 of 1912; however, where environmental issues are concerned the government of Swaziland calls for compliance with the recent environmental laws. These laws have benefited from international environmental conventions and protocols. The SEA Act of 1992 (Government of Swaziland, 1992) and the Environmental Management Act of 2002 (Government of Swaziland, 2002), challenge local industry to pursue its day-to-day operations while being mindful of the national environmental protection and sustainability agenda. The recently launched GMA Corporate Reporting Awards pioneered by Governance and Management for Africa acts as an incentive to local industry to be environmentally friendly in its operations. Local industry has also been introduced to the triple-bottom line concept at a Corporate Governance Symposium on February 2003.

Internal challenges

The biggest challenge faced by industry is to intensify production and to maximise profits in response to company shareholder pressure as well as demands for better working conditions and reasonable wages for the workers. When this challenge is pursued without regard to environmental concerns, it may result in extreme and irreversible environmental damage. Some sectors of industry are still struggling to reconcile the issues of production with conservation in the utilisation of natural resources. Fortunately, existing environmental policies and regulations provide guidelines on how industries may go about utilising natural resources in a sustainable manner.

Inside the industrial set-up measures need to be put in place to mitigate negative impacts of industrial operations particularly on the workers. Regulations on Occupational Health and Safety (OHS) seek to limit dust, heat and chemical emissions within industry to ensure the health and safety of workers. When such standards are achieved inside industry they also benefit the environment outside.

These challenges demonstrate that industries have a responsibility towards environmental protection and sustainability. Industries also have to adhere to national environmental legislation in general and should be seen to be acting in compliance with existing environmental policies and regulations in particular.

Issues of Compliance Within Local Industry

The industrial sector appears to be aware of its responsibility to operate within specific environmental guidelines and standards. However, the level of awareness seems to differ from industry to industry, explained by the observed differences in levels of compliance with existing environmental regulations. The problem of compliance may be attributed to lack of information and expertise in dealing with environmental issues and the requirements of legislation for compliance. In developing countries, many of the industries, especially the smaller operations, lack the financial resources to engage environmental expertise, since bills for conducting Environmental Impact Assessments (EIAs) and Mitigation Plans are ever-escalating.

The difficulties experienced by industry on issues of compliance highlight the need for a prolonged environmental education programme in the entire sector of industry. An environmental education programme for industry may benefit the country in a number of ways. Firstly, it would create an 'environmentally literate' industrial sector. Secondly, there will be an industrial sector that is well conversant with national environmental policies and regulations. Thirdly, compliance with existing environmental policies and regulations will be enhanced within the industry. Lastly, an environmental education programme would provide training of industrial personnel to establish and implement environmental management programmes.

The Environmental Management Act of 2002 mandates the SEA to control pollution and impose penalties on non-compliance. As an interim measure, the SEA has made provision for processes that will create awareness within industry before the commencement of prosecution for non-compliance. This presents an opportunity for industry to be conscientised about its environmental responsibility and be provided with the necessary information on available structures to assist industry to pursue its environmental responsibilities. In this strategy, environmental education is to be the focus. To this end, the SEA has already consulted industry about the introduction of an environmental education course through an environmental education training needs survey. The survey highlighted important environmental education issues, which are currently being used by course developers to contribute to the formulation of an environmental education course for industries in Swaziland.

The Environmental Education Training Needs Survey

It is important to note that the study reported here was intended to be a 'consultative forum', established by the SEA mainly to ascertain the training needs of industry. Therefore, it may fail to 'qualify' as a typical academic survey in many respects. For instance, the sample size and choice of sample may be flawed in academic terms. Likewise, the methods of data analysis were somewhat 'crude', and led to basic statements. Issues of validation of data were never considered since the idea was simply to ascertain training needs of industry as rapidly as possible. Moreover, simple relative qualitative statements are used where comparison of situations is made, instead of quantified indicators and scales. The survey, nevertheless, yielded useful insights that may inform further research, and that are being used in the design of an environmental education course for industry.

A sample of 30 industries was randomly selected among nine categories of industry. A questionnaire and general discussions were used to acquire information. The industries were composed of the following categories: forest plantations; sugar industries; textile and clothing; building and construction; chemicals and oils; transport, manufacturing; financial; and hotels. Consultative meetings were also held with government and non-government development agencies. Respondents to the survey were drawn mainly from senior and middle management where company training policies and needs are decided. As mentioned earlier, the survey sought to ascertain the need for environmental education within industry as well as to inform the process of development of an environmental education course for industry. To achieve this, the survey acquired information on the following: importance of environment to industry; level of environmental awareness within the industry; compliance with environmental policies and regulations; environmental management initiatives within the industry; and general environmental education training needs.

Results of the Survey

The results of the survey will be reported according to the information categories mentioned above.

Importance of the environment to industry

Close to 70% of the sampled industries considered the environment a strategic and critical entity not only to production but also to the entire question of human sources of livelihood. These industries were particularly the big multi-national companies benefiting from the fact that environmental management systems were conceptualised and led from their head offices situated in other parts of the world. The head office sites of these multi-nationals are also characterised by very active environmental pressure groups. These companies are aware of the importance of adherence to existing environmental legislation as well as the benefits and incentives of compliance. The companies are of the view that environmental issues are of significance to company operations and their significance will actually increase in the near future. The remaining 30% of the industries have a lower regard for the significance of environmental issues in their operations. These companies are predominantly small and medium enterprises, and are owned by local entrepreneurs. As opposed to the big companies, environmental issues are not strategic to the small companies and they do not envisage them gaining significance in the near future.

Level of environmental awareness within industry

The level of environmental awareness within industry was found to be average, especially among the senior and middle managers. However, non-managerial staff rated very low on awareness of environmental issues. This discrepancy is explained by the fact that invitations to environmental awareness workshops are extended only to senior and middle managers who also ensure the implementation of environmental legislation within their respective companies. Companies were also found to engage part-time officers on matters pertaining to the

environment, while others relied on consultants to undertake environmentally related tasks. Environmental impact assessments (EIAs) and mitigation plans were found to be reserved exclusively for consultants. This clearly demonstrated that environmental matters and issues are still treated on an *ad hoc* basis. Hopefully, this situation will be addressed by the Environmental Management Act of 2002.

Compliance with environmental policies and regulations within industry

Information on compliance proved difficult to acquire. However, the survey established that the majority of industries are not familiar with existing national environmental legislation, despite the fact that they have seen or heard about the legislation documents. Familiarity with legislation has more to do with understanding the legislation and the ability to put in place practices and measures that adhere to the dictates of the legislation. Admittedly, environmental legislation is new in Swaziland, dating back to as recent as 1992. Findings of the survey suggest that industry has used this as a justification for its non-compliance.

The survey also established that environmental responsibility at company level is influenced by market forces, particularly the need to satisfy consumer demands. It was noted that environmental compliance often took a back seat as pressures of production were the main focus of company plans. In such cases governmental environmental policies were found to have a limited influence in shaping company production tendencies. This is explained by the wide-scale partial or non-compliance among industries. Public environmental concerns and voluntary environmental standards also had limited influence on company production tendencies.

Environmental management initiatives within industry

The survey established that most companies regard the recognition of environmental issues in their operations as a marketing strategy that enhances the image of the industry amongst local citizens. Hence most companies regarded mere provision of donations and sponsorship to community environment activities as an important environmental gesture indicative of industry concern for the environment. Donations and sponsorships are marketing strategies and are easily externalised as image-making strategies which do not reflect the internal mindset of the industry as far as environmental management is concerned. Admittedly, there has been an increase in the number of companies observed conducting EIAs and mitigation plans when commencing and/or expanding their operations. However, this is as far as the Environmental Audit and Assessment Regulations dictate. As indicated above, these assessments are normally conducted by consultants or other forms of temporarily engaged experts. This reduces the impact of these activities in terms of changing company mindsets.

Few companies were found to be pursuing environmental management initiatives beyond the initial reviews. The big companies were found to be striving for better environmental management systems (EMSs). For instance, Simunye Sugar Corporation has an ISO 14001 certificate. The small industries did not report any environmental management initiatives and were not using any environmental management standards in their operations.

Environmental management budgets within industry

A disproportionately small budget was dedicated to environmental management in most industries with an environmental budget. The companies with an environmental management budget were mainly the bigger multinational corporations. The budget ranged between R10 000 and R100 000 (about US\$1 400 and US\$14 000) per annum, depending on the size of the industry and level of environmental awareness. Large portions of the environmental budgets were used for donations to local environmental groups and activities, while the remainder was for engaging temporary environmental expertise. Most small companies did not have any budgeted funds for environmental management.

Environmental Education training needs identified

The industrial sector in Swaziland agreed to the implementation of an environmental education programme for industry as they felt that industry was left out in previous environmental education initiatives. The survey identified a number of training needs as expressed by representatives of the various sectors of the industry. These needs are important for informing an environmental education for industry course development process (mentioned above). Moreover, the needs highlight issues the SEA and the National Environmental Education Programme (NEEP) need to follow up on, as they strive to control the degradation of the environment by industry and other sectors of production. The needs identified are presented according to the various industrial categories consulted in the survey in Table 1.

Table 1. Industry categories and environmental education and training needs

Industry Category	Environmental Education Training Needs/Issues
Forestry Plantations	<ul style="list-style-type: none"> • Environmental awareness raising among field officers, staff and company residents • Training of managers on environmental management processes and policies • Development of a nature reserve within the plantation • Encouragement of ecotourism within company
Sugar Industries	<ul style="list-style-type: none"> • Information on environmental legislation and policies • Basic environmental awareness • Education on environmental management systems and their fragmentation
Financial Services	<ul style="list-style-type: none"> • Developing environmental standards for financing developments • Formulation of environmental guidelines to provide insurance for development projects and structures
Chemical, Oils and Transport	<ul style="list-style-type: none"> • Ideas on collection/recycling of used oil • Awareness raising among service stations, factories, workshops and general clientele

Table 1 (cont.)

Industry Category	Environmental Education Training Needs/Issues
Chemical, Oils and Transport	<ul style="list-style-type: none"> • Assistance with the establishment of an environmental declaration among petroleum dealers • Awareness raising among media houses
Hotels	<ul style="list-style-type: none"> • Identification of needs for hotels to undertake environmental protection measures
Manufacturing	<ul style="list-style-type: none"> • Education of consumers of manufacturing goods on recycling • Visibility of SEA to monitor and assist with issues of compliance • Information on existing environmental policies and regulations
Clothing and Textile	<ul style="list-style-type: none"> • Information on existing environmental legislation • Environmental awareness campaigns within the industry • Publication of comprehensive booklets on environmental legislation and policies • Information on environmental standards for exporters
Building and Construction	<ul style="list-style-type: none"> • Educate clients about EIAs and CMPs • Publication of booklets on environmental policies

Emerging Issues

The results of the survey, though giving an idea of the status of the environment within industry, must be treated with caution especially since the survey was conducted by the SEA, a national watch-dog responsible for issues of compliance to environmental management policies and regulations. Industries may have been tempted to be defensive in their responses or may simply have submitted information to impress the SEA. The feeling that the SEA was out to police and apprehend them for non-compliance may not be ignored. In spite of this, valuable insights have been gained from the survey.

The results of the needs assessment survey indicate a convergence on particular training needs which focus on awareness raising, environmental legislation and standards. Based on these results, an inference could be drawn that industry is particularly concerned about issues of compliance and adherence to existing environmental policies, regulations and standards. At the same time there is a common desire within industry for exposure to various environmental management tools and systems. What emerges from the survey are some 'guidelines' for a course that ought to ensure that capacity is built within industry to address the mentioned needs. The challenge is how to come up with such a course without compromising a more critical agenda, characteristic of environmental education activities in Swaziland.

The results also indicate clearly that large and foreign owned companies (the multinationals) are more informed about environmental management issues, particularly when viewed in comparison to the small and locally owned companies. This indicates a strong need for special attention to be paid to small and locally owned companies (small and medium enterprises) when

developing environmental awareness campaigns or environmental education courses. Moreover, opportunities for exposure to various environmental management systems need to be accorded even to the small companies for either adaptation or adoption. It has been noted that environmental awareness campaigns are often targeted at managerial industrial personnel, who are always invited to environmental meetings, seminars and workshops. It would seem that there is also a need to encourage and enhance the participation of non-managerial industrial personnel in national and local environmental awareness campaigns. This may benefit a larger section of the industrial workforce through formal and *ad hoc* non-managerial staff contacts and meetings.

An important emerging issue is that of provision of a strong rationale for the implementation of an environmental education programme within industry especially to facilitate policy practice and enhance industrial compliance with environmental legislation and standards. The environmental education programme and environmental fora must emphasise the importance of environmental protection as an integral part of industrial production.

Conclusion

Compliance with existing environmental policy is critical to the maintenance and protection of the environment. It was noted that external and internal forces are now challenging industry to act more responsibly for the benefit of the environment. Global environmental conventions and protocols have been translated into national policies and regulations to guide utilisation of natural resources and production in a sustainable manner. Moreover, the occupational health and safety challenges and concerns challenge industry to set up appropriate mitigation mechanisms which have immediate relevance to environmental management. While the big multinational corporations have demonstrated a greater degree of compliance with environmental policies and regulations, a majority of other industries experience problems of compliance. The survey partly attributes the non-compliance to a lack of environmental expertise within industry. Without the expertise, industry is constrained from being familiar with existing environmental legislation and policies. Local industries are currently manned by an 'environmentally illiterate' personnel save for the few in managerial positions. As a result, putting national environmental policies into practice within the local industry is curtailed.

The SEA are anxious that the problem of non-compliance does not persist. For this reason, the SEA has attempted to introduce an environmental education course for industry in Swaziland after realising that environmental education can enhance policy practice within industry. An environmental education programme will hopefully help to raise awareness and develop capacity in industry to take actions that are consistent with environmental policies, and through this, contribute to policy practice within the country's industrial sector. Through initial interactions with the SEA, industry appears to have accepted the need for an environmental education course, and has indicated its interest to take part in the development and implementation of an environmental education for industry course provided it meets their needs as raised in the survey.

Notes on Contributors

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