Study on the Corporate Environmental Responsibility in the Coastal Area
of the Douala-bonaberi Industrial Zone, Republic of Cameroon

Ayuk ELVIS MBI¹ and Xiao-mei GUO²,*

¹Ocean and Coastal Management Institute, Xiamen University, P.R. China
²School of Management, Xiamen University, P.R. China
*Corresponding author

Keywords: Coastal sustainability, Cooperate environmental responsibility, Sustainability action plan, Industrial Zone.

Abstract. The coastal zone is a very vulnerable area where many conflicting interests exist. Based on analysis of an assessment of the state of environmental degradation in the coastal City of Douala by industrial activities, and the attempted solutions through institutional, legal and regulatory frameworks, the authors applied an integrative approach for corporate environmental responsibility in several interviews with four case companies in the area of study. It is found that though much has been done by these corporations in line with Cameroon’s institutional and legal and regulatory policies on environment and the coast, much still need to be done. The author suggested that an Environmental and Coastal Sustainability Action Plan should be redefined for corporate decision making.

Introduction

Located on the Atlantic coastline of the Republic of Cameroon, the Douala-Bonaberi Industrial Zone enjoyed the fastest growing rate of urbanization in the country. A total of about 236 major manufacturing industries are located along the coast of Cameroon[1]. Among them, over 90% are located in the Douala-Bonaberi industrial zone. These industries include: food processing, textiles and accessories, electricity, water and gas, mechanical and electrical appliances, chemical and mining, building and transport material, paper and pulp, wood processing, agro industrial and diverse manufacturing plants. Rapid expansion in the industrial zone has provoked certain observable environmental problems on the lagoon complex and the wetlands.

The effects are impaired water quality in the contamination of surface and ground water sources, public health hazards, wetland loss, subsidence, flooding etc[2,3]. Industrial pollutants such as lead, cadmium, mercury, aluminum etc. that springs from industrial actions on the coast of Cameroon seems to have inflicted a wide range of problems to security, health and environmental excellence. Streams that flow through the Bassa industrial zone and pour into Atlantic Ocean on the coast of Cameroon are highly polluted. Fongwe et al.[4] stated that the coastal layout listed the highest grade of aluminum contamination in Cameroon in the months of May and June in the year 2000. Researchers discovered that aluminum wastes contributed the greater part to the infections.

Coastal activities, such as industry, agriculture, sand mining, coastal urbanization, deforestation etc., have altered the natural conditions and processes, degrading coastal resources and habitats. The effects have serious socio-economic consequences[5]. Environmentalists have since publicized the worsening state of pollution in the city Douala and its environment. The experts say this is due to the increasing concentration of industrial plants and poor handling of industrial wastes especially by companies that deal in petroleum, plastic, metal and chemical products [6]. In alliance with global agencies and non-governmental groups, Cameroon has taken significant initiatives to curb industrial pollution.

Demographic explosion, poor wastes management and the ever declining margin between industrial zones and inhabited areas have caused severe coastal, environmental and societal issues. Although household waste plays an important role in pollution, there is sufficient indication that
industrial waste alone is estimated at about 2,187 metric tons per year in biochemical oxygen demand with a corresponding 48,000 metric tons per year in suspended solids in the Cameroon’s coastline cosmopolitan of Douala alone[7].

Uncontrolled urbanization by the government and poor waste management systems by corporations has resulted to water, air and land depreciation in Douala. Heavy industrial water users produce large quantities of wastes products and they rely on watercourses to dispose the wastes [8]. Most industries operating in Douala discharge untreated and toxic effluents directly on open residential lands and into canals, streams, and rivers that end up causing widespread deterioration in the water quality and the health of the coastal ecosystem. Coastal and upstream non-point sources of pollution from agricultural and hazardous waste sites constitute sources of contamination of both surface and groundwater sources [9].

Marine pollution on the coast of Douala is very complex in nature, which stems from land wastes, oil spills, sewage water, invasive species and metal wastes from mines. The oil spills come from the National Corporation for Petroleum Storage and Distribution hydrocarbon plants located on the coast and factories located in the Douala and Bonaberi coastal straits. The Douala autonomous seaport which is in the study area and serves the needs of most of the nations in the central African sub-region, is also one of the largest in Africa. Millions of tons of fossil fuel waste, oil and other wastes are discharged from ships into the ocean on daily basis[8]. As regard to the industrial pollution along the coastline of Cameroon, the primary concern is that the high level of industrialization of the cities of Douala and its environs, with the inevitable generation of industrial effluents might lead to biological consequences in the coastal aquatic environment [10].

This paper intends to scan the edges that have been formulated by these industries through government’s legal and regulatory structure to control industrial pollution and to present and elucidate on business environmental machineries on the proposed sustainability action plan. The following section is structured as followed: firstly the design of the study, secondly, the results and discussion, and finally the conclusions.

**Design of the Study**

Corporate Environmental Responsibility (CER) is defined as “continuous commitment by industry to act in an environmentally friendly manner and contribute to overall environmental improvement while carrying out its business”[11]. CER takes many forms, depending on a company’s priorities and perceived needs, which are influenced by numerous factors such as company size, products and operations. To effectively explore the CER performance, several constituents are identified. However, CER is not only a pretty new concept in Cameroon, but in many other African countries as well. As a result, industries conduct their operations in a haphazard manner with little or no compliance to age-long established regulations and policies.

The main objective of this paper is to examine the purpose, need and practical techniques for the establishment of a new environmental and coastal sustainability action plan, based on the components of CER. The plan should lay out a strategy to compel industries to charge themselves with effective sustainable practices with in-built administrative tools absorbed in the business decision making process.

For the study, the following questions are formulated to help the researcher evaluate corporate responsibility in the Douala-Bonaberi industrial region based on the components of CER [11]. These questions and subsequent answers will lay the foundation for the new coastal and environmental action plan for the study area.

1. Environmental commitment awareness (ECA): Corporate perception of ECA and policies adopted to demonstrate it
2. Stakeholder engagement: Useful elements of general participation and the extent to which stakeholder ideas and perceptions are assimilated in decision making
3. Measurement, Reporting and Auditing: Steps taken to adequately measure environmental performance
4. Transparency: how business decision makers satisfy societal hopes and measures taken to be translucent in its procedures
5. Commitment to continuous Improvement (CI): Commitments and provisions in the company to improve Environmental performance on continuous basis
6. Beyond Compliance: Demonstrated willingness to perform overhead institutional, legal and regulatory acquiescence

Key indicators of each of the components of CER are also included. The set of questions devised in each tool or theory were intended to realistically quantify corporate accountability and alertness to environmental concerns in the study area. For statistical analysis, the authors used a five-level Likert scale and assigned a mathematical value on a scale of 100 to each of the level: does not exist, weak, need significant improvement, could be improve and strong.

The scale was used to evaluate the extent of responsible commitment that industries attached to environmental and coastal sustainability. If a company depicts a weak opinion on a corresponding CER component or tool, then it is a serious threat to nature and steps should be taken urgently to redress the situation. That component or tool should be reconsidered and treated as a new theory or approach to environmental and coastal sustainability. Company may score different values on different components. In either case, this will help the company to identify areas where it needs to improve.

Data collected was based on field trips and unstructured interviews with respondents from the case company, as well as publicly available documentation such as relevant literature, indigenous consultancy reports and government documents.

**Result and Analysis**

Based on the site visits and archival records, there are many companies on the zone, most are from four industry: Brewery and Food Drinks Industries. Agro-Pastoral Industries. Building/Petroleum Engineering Industries. Maritime/Ports related industries. Four companies one from each of industry were examined. The companies are chosen on the size and their impacts on the environment. Cameroon Development Corporation (CDC) is the largest agro-pastoral corporation with several plantations, product processing plants, maintenance and storage sites, while Austin Maritime & Engineering Company (AMES) Austin Maritime was from the building, construction and petroleum engineering companies in the study area. Douala Autonomous Ports Authority (PAD) PAD operates on the ports and the marine space while Guinness Cameroon S.A represents the brewery and food drinks companies. above, a total of four persons were interview during personal conversations. Four respondents who represents the four case companies were chosen for personal interview based on their extensive work experience and purported knowledge on strategies employed on issues of industrial pollution and corporate management in their respective companies. To avoid bias and assure the validity in the information discussions were held with two lecturers of the universities of Douala and Buea respectively. In addition to that greater bulk of data was received through secondary sources, in published materials and consultancy reports. Results of applying the assessment tool for four case companies are given in table 1.

The agricultural company CDC scored just twenty percent in an Environmental Commitment and Stakeholder Engagement, suggesting that the company needs to embrace new theories or approaches to be environmentally friendly in the future. CDC must also make significant improvement to measure and report its environmental problems as well as how such information is audited.

The score of Austin Maritime Engineering Company Limited is almost zero in all the important elements of CER, the company can be assumed to be a serious threat to the environment and the coastal habitats. Management must launch a journey of corporate responsibility by first committing
itself and creating awareness campaigns through its internal and external operations. Choosing appropriate tools to do so can ensure full responsibility in its operations.

By scoring 40% in Commitment, Awareness and stakeholder’s participation, it is important to note that Guinness Cameroon has taken important steps to pledge itself to environmentally good practices and stakeholder participation. However, Guinness Cameroon must also try to be transparent and stake to continuous improvement strategies.

Table 1. Result of the Assessment tool applied on Case companies

<table>
<thead>
<tr>
<th>Corporate Opinion</th>
<th>Does not exist</th>
<th>Weak</th>
<th>Needs significant improvement</th>
<th>Could Be improved</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result for CDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Commitment and Awareness</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Engagement</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement, Reporting and Auditing</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to Continuous Improvements</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beyond Compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result for AMES</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Commitment and Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement, Reporting and Auditing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to Continuous Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beyond Compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result for PAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Commitment and Awareness</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement, Reporting and Auditing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to Continuous Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beyond Compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scoring just 20% in commitment and awareness, it reveals that the organization is poorly committed to environment and little or nothing is done to encourage stakeholder engagement. Measuring, reporting, auditing and transparency remains a serious issue. Therefore, the company must adopt the new approaches of corporate responsibility for environmental and coastal sustainability.

Summary

The research examined the components of CER to Corporate practices in the Douala-Bonaberi industrial zone which is affected with industrial effluents due to urban demographic explosion. It was depressing to discern that the reaction to corporate environmentalism by the case companies studied was too poor and less satisfactory. Though legal framework has been set up by the government of Cameroon, more efforts should be put to increase the awareness of CER. An Environmental and Coastal Sustainability Action Plan should be redefined for corporate decision making on environmental issues. Such efforts may take the form of training of personnel’s, information network readily available to the industry. There is a need for a concerted effort between public administration,
economic operators and non-governmental organizations, as well as the local society, when CER adoption in industries in the Douala-Bonaberi industrial zone is concerned. Further research should be carried out to find out how each component or approach can be quantifiably measured, reported and audited.

Acknowledgement

This research was financially supported by the Canada China Scholarship Exchange Program (CCSEP).

References


