2015

ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT FOR KILIFI SALT LIMITED LAND REFERENCE NUMBER; 28509 C.R NUMBER

Prepared by;

ECO-PLAN KENYA LTD.
Lead Experts – Environmental Impact Assessment/ Audit
P.O. BOX 784
MALINDI

for and on behalf of

KILIFI SALT LIMITED
P.O. BOX 35425-00100
NAIROBI

PRESENTED TO THE NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

TABLE OF CONTENTS

ACRONYMS

AGC	Attorney General's Chambers
AIDS	Acquired Immune Deficiency Syndrome
CBOs	Community Based Organizations
CEDAW	Convention on Elimination of All Forms of Discrimination Against Women
CRC	Convention on the Rights of the Child
CRF	Coast Rights Forum
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
DC	District Commissioner
DO	District Officer
EA	Environmental Audit
EIA	Environmental Impact Assessment
EMCA	Environment Management and Coordination Act
HIV	Human Immuno-deficiency Virus
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICZM	Integrated Coastal Zone Management Plan
ILO	International Labour Organization
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forestry Research Institute
KESAMA	Kenya Salt Manufacturer's Association
KNCHR	Kenya National Commission on Human Rights
CGK	County Government of Kilifi
MENR	Ministry of Environment and Natural Resources
MOH	Ministry of Health
MOW	Ministry of Works
MOWI	Ministry of Water and Irrigation
NEMA	National Environment Management Authority
NHIF	National Hospital Insurance Fund
NSSF	National Social Security Fund

LIST OF PLATES

LIST OF TABLES

LIST OF ANNEXESU

DECLARATION

This Environmental Impact Assessment report has been carried out with due diligence and in accordance with The Environmental Management and Co-Ordination Act, No 8 of 1999 (EMCA 1999) as read with The Environmental (Impact Assessment and Audit) Regulations of 2003 and relevant legislations on the environment in the Republic of Kenya.

PROJECT TITLE: ENVIRONMENTAL IMPACT ASSESSMENT PROJECT REPORT FOR PROPOSED SALT FARM DEVELOPMENT ON PLOT 28509 KILIFI CR 59576

PROPONENT: KILIFI SALT LIMITED
P.O BOX 35425-00100
NAIROBI-KENYA

Signature: ……..Dated: ……

LEAD EXPERT: GEOFFREY NJOROGE

REGISTERED (EIA/EA Lead Expert No 1048)

Signature: ……Dated: ……

EXECUTIVE SUMMARY

This Environmental Impact Assessment report represents the proposed Salt Farming Development earmarked for construction on plot 28509; Kilifi. The project entails the construction of;

- **Office Block**
- **Area for Resorvoir;470 Acres**
- **Area for Condenser;381 Acres**
- **Area for Crystallizer and Refinery;105 acres**
- **5 Staff Quarters each containing 3 bedrooms, a lounge area with a dining and kitchen**
- **Parking for Heavy Commercial Vehicles**

Pursuant to section 58 of the Environmental Management and Coordination Act, (EMCA) 1999, the National Environment Management Authority (NEMA) currently requires developers to prepare Environmental Impact Assessment (EIA) reports for developments that have a potential of resulting to negative environmental impacts. The proposed project is one of the projects specified by the Authority to undergo Environmental Impact Assessment due to its potential to disturb the environment in one way or the other. The project will entail the construction

The Kenya National Commission of Human Rights undertook a public inquiry in July 2005 into allegations of human rights violations arising from the activities of salt manufacturing companies in Magarini Division of Malindi District. An Inquiry was formed and sat between July 4 and 8 of July 2005, at Marereni Sports Grounds, Malindi. The Inquiry's terms of reference were:

(a) To investigate the veracity or otherwise of allegations by the community of Magarini to the effect that salt manufacturing companies operating in the area had committed egregious human rights violations against the community; and that those violations were committed with the collusion of or as a result of inaction by a number of public institutions, including the Provincial Administration, the Police, government ministries/ departments responsible for land, labour and environment, and the local government in the area. Specifically, the Inquiry was to investigate complaints relating to:

- Evictions from land which the community perceived as belonging to it;
- Health complications arising from salt manufacturing firms;
- Violations of workers' rights;
- Role of Police and Provincial Administration in harassment of residents; and
- Environmental degradation.

(b) To arrive at the findings on the matters in question and to make such orders and/or recommendations as would be necessary to improve or remedy the human rights situation in this area. According to the Kenya National Commission on Human Rights Act, the Inquiry could:

- Order compensation for persons whose rights were violated (Section 19(2)(b);
- Order the release of any unlawfully detained or restricted person (section 19(1)(a);
- Make such other orders deemed necessary for promoting or protecting the human rights of a complainant (section 16(i);

Commence and prosecute appropriate proceedings in the High Court under section 84(1) of the Constitution for appropriate orders, writs or directions (section 25(b);

- Conciliate the parties in question where and to the extent that would be possible and appropriate (Section 16(h);

• Recommend that the Attorney General or other relevant authorities should prosecute public servants suspected of negligence or found negligent in the violation of human rights (section 25(a)(i);
• Recommend to the petitioner, Government, or other body against which the complaint was made appropriate methods of settling the complaint(s) (Section 16(d);
• Recommend to Parliament provision of compensation to victims of human rights violations or their families (Section 16(d);
• Recommend to the President as appropriate on the matters in question (Section 25(f); and
• Recommend to the petitioner other judicial course(s) of action (Section 25(d).

2. Findings, Decisions and Recommendations

The findings, decisions and recommendations made by the Public Inquiry is summarized below. Decisions of the Inquiry amount to orders or imperatives, which the party to whom they are addressed must comply with in terms of the law. The recommendations also amount to advisories to institutions/individuals to which they should comply.

Land

First finding:

Post-colonial governments of Kenya perpetuated colonial injustices against the community by leasing their land to salt manufacturing companies without ensuring that the people had recourse to alternative and equally valuable settlements. The Inquiry found that the legal basis, which allowed the state not to compensate the people for land leased to the salt manufacturing companies, was an unjust law because the community had had de facto ownership and use of the land in question for many generations. This law notwithstanding, the community was unaware that it was occupying the lands in question illegally.

Regarding this finding, the panel recommended:

• That the Government should make an accurate inventory of communities or descendants thereof; and

• That the process of adjudication under the Land Titles Act (now Cap. 282), be re-opened to enable indigenous communities or descendants thereof to present their claims; or

• That as an alternative to the above recommendation, areas deemed to be government land under that Act, be re-designated as trust land and be subjected to systematic adjudication under the Land Adjudication Act (Cap 284).

Finding two:

Some of the salt manufacturing companies have been breaching both the general and special conditions attached to their grants. These terms and conditions are, in many cases, far too generous to the salt companies, thereby giving them space to overstep their mandates. For example, Kurawa Salt Company sub-let its land to another company in disregard of the terms of its lease. Other companies have built dykes, which have interfered with the free flow of water from the sea. The Inquiry also found out that most of these companies do not utilize all the land leased to them, and land rates being charged are not commensurate with the current land value.

The Inquiry's decisions regarding this finding were:

• That salt manufacturing companies, which have breached the terms and conditions of their grants must be penalized according to the law. The leasehold of Kurawa Salt Company must be terminated since the company is in breach of its grant. All other companies should be investigated and penalized for grant breaches; and

• That the rates paid by salt companies must be revised to conform to the current value of land. The Inquiry recommends that the Government should renegotiate the terms and conditions of the leases held by salt companies, including

revising the land sizes granted to levels necessary for their core business.

Finding three:

Where the salt manufacturing companies sought to compensate the community, compensation covered only standing crops, permanent trees and houses and excluded land. However, the compensation was assessed at woefully inadequate levels. The Inquiry thus found the basis for the assessment of crops and property for purposes of compensation, grossly unjust. Many members of the community have, to date, not been compensated for crops or property that was destroyed or taken over.

The Inquiry's decisions regarding this finding:

- All persons or groups of people, who have not been compensated for losses accruing on land from which they have been evicted, or otherwise removed, should be compensated;
- That cases of persons who declined compensation or who contested levels of compensation for losses accruing on land from which they were evicted, or otherwise removed, should be reviewed and appropriate redress offered; and
- That the Government, and in particular the Ministry of Agriculture, must review the framework which it uses to compensate crops. This should be aligned with the market value of such crops, which indeed is in consonance with the Constitution of Kenya, section 75, which provides for "... full and prompt compensation..." for property taken over by the state.

However, where compensation was made in terms of the then existing law, no further action(s) should be taken.

Finding four:

The settlement schemes instituted by the Government as a way of redressing the land question were themselves fraught with corruption. For example, well-connected individuals were

allocated this land. The process of setting up schemes and settling the landless should however be finalized.

On this finding, the Inquiry recommends:

• That only genuine squatters should be resettled on land schemes for persons removed from the land leased out to salt manufacturing companies. Allocation of land to persons suspected not to have been displaced should be investigated and such land repossessed and given to genuine squatters;

• That the Government should establish new settlement schemes strictly for the landless indigenous communities out of land recovered from salt manufacturing companies or elsewhere; and

• That the Government must ensure that settlement schemes designed to resettle such persons or groups will not instead be appropriated by well-well-connected individuals with no right to such resettlement.

Public Administration (Provincial Administration and Police)

Finding five:

Both the Provincial Administration and Police breached fundamental human rights and violated individual and community rights by unnecessarily destroying property while evicting members of the community from the land, which was leased to salt manufacturing companies.

The Inquiry, therefore, reached the following decision:

• That the Police and the Attorney General should conduct investigations on all public officers who have violated human rights through evictions or destruction of property in Magarini, and that these persons should, as appropriate, be prosecuted.

Finding six:

The Provincial Administration and the Police colluded with the salt manufacturing companies by misusing their powers to illegally harass, arrest, and/or incarcerate members of the

community. People were arrested on spurious charges amounting to illegal detention and the police used to threaten those who chose not to leave certain land.

The Inquiry, therefore, recommended that:

• A peace and reconciliation initiative be undertaken to facilitate healing within the Magarini community. The community, (including victims and the violators), should conduct discussions with the aim of reconciling with one another. The salt manufacturing companies and the people must co-exist, and this should be the aim of this initiative;

• The Attorney-General should investigate the criminal culpability of, and prosecute the public officials who might have abetted the injustice in Magarini;

• Individuals who have been arrested and incarcerated illegally should use judicial and quasi-judicial avenues to seek redress, including compensation; and

• That laws and codes of conduct (such as the Public Officer Ethics Act, 2003), should be enforced to ensure that public officers realize that they owe their allegiance to the people and not to specific interests, which undermine the general will or public good.

Labour

Finding seven:

Workers employed in salt manufacturing companies work under extremely poor conditions. Workers who harvest salt and those who work in the factories are not provided with appropriate work attire and equipment such as gloves, boots, helmets, overcoats, scrapers and basins.

The transportation to and from the workplace is also inappropriate. For example, they have to travel by uninsured vehicles most of the time.

In view of this finding, the Inquiry decided:

• That salt manufacturing companies must ensure that workers are provided with the appropriate clothing to mitigate the adversities in the work environment and that this should be accomplished within six months of this decision.

The appropriate type of clothing should be determined through consultations between workers, the salt companies and the Labour Department, with due regard to factors like weather, nature of work, personal hygiene and gender.

In arriving at this decision, the Inquiry noted with appreciation, the fact that salt manufacturing companies by and large did not contest the veracity of claims for non-provision of clothes and equipment, and that they indeed agreed to provide their workers with the appropriate clothing and equipment;

• That the salt companies must ensure they provide implements necessary for harvesting salt and that this should be done at no cost to the worker(s); and

• That the Labour Department must ensure compliance with the above orders.

Finding eight:

The health and safety of workers in these companies is undermined by company practices and ineffective government inspection regimes. While it is the duty of the Ministry of Labour and the Department of Occupational Health and Safety to check on working conditions, poor maintenance of machines has led to unacceptably high numbers of accidents in the factories. Toilet facilities for workers are also inadequate.

The Inquiry's decisions in regard to the above finding were that:

• Malindi Salt Company and Krystaline Salt company, which were both operating without a certificate of registration from the

Occupational Health and Safety Department, contrary to Section 9 of the Factories Act, should comply with the law within three months;

• Salt companies must provide sanitation facilities appropriate for both male and female workers. And that they must be placed at accessible locations, particularly for workers harvesting salt. Companies may consider using mobile toilets; but in any case, they must ensure that effluent from toilets does not contaminate the salt ponds; and

• The use of basins to transport salt must be reviewed with the aim of either replacing them with more appropriate modes of transport, or determining the maximum load, which may at any one time be safely carried in a basin. The Government through the Ministry of Labour must take the lead in this process.

Finding nine

In many aspects, salt manufacturing is a seasonal business. For this reason, the salt manufacturing companies may not be able to employ all their workers on fulltime basis. Instead, they have sought to employ the minimum possible number(s) of workers on contract, with most being on casual terms. However, the companies continue to abuse piece rate employment by paying workers excessively low wages for specified work.

Regarding this finding, the Inquiry made the following decisions:

• That the Department of Labour, in conjunction with stakeholders in the salt sector, must develop an acceptable common standard for measuring piece rate work for salt harvesters within one year; and

• That the Labour Department must ensure that the terms of persons working on casual basis fall within the requirements of the law to prevent them from being exploited by the salt companies.

Further, the Inquiry recommended:

• That for work not of seasonal nature, salt-manufacturing companies should employ workers on contractual and not casual basis. In the Inquiry's view, contracted employees will offer more value to the companies and, will in turn reap better benefits; and

• That in relation to salt harvesting, which has been stated as seasonal, the salt manufacturing companies should consider contracting some workers to perform the said work on a continuing basis.

These arrangements could even include the possibility of staggering payments to workers in such a manner that they would receive regular monthly emoluments instead of seasonal payments.

Finding ten:

The workers have limited opportunity to participate in collective bargaining processes. The limitations are occasioned by the salt manufacturing companies, which discourage them from joining trade unions. The situation is exacerbated by the absence of or ineffective recruitment strategies of trade unions.

The inquiry's decision regarding this finding was:

• That salt manufacturing companies, as employers, must be bound by Kenyan laws, which require employers not to deny workers the right of association for purposes of collective bargaining.

The Inquiry recommended:

That labour organizations and trade unions should ensure that salt workers have the requisite information and education to determine to organize themselves for purposes of joining their chosen trade unions. This education should happen on a continuous basis.

Finding eleven:

The Government departments responsible for labour matters do not have enough resources to carry out their duties effectively. A combined Labour and the Occupational Health and Safety Departments, had only two staff members assigned to serve three districts without basic infrastructural support resources like vehicles and functional offices. This meant the officers could not effectively supervise the salt companies.

The Inquiry, therefore, decided:

• That the Department of Labour and the Occupational Health and Safety Department should prepare a district-wide inspection plan to be effected on a continuing basis. This plan should be funded on priority basis by the Ministry of Labour.

Further, the Inquiry recommended:

• That the Ministry of Labour should rationalize its resources to enable it carry out its mandate(s) effectively (including those of addressing workers' grievances, inspecting salt companies and providing awareness/capacities to employees and employers); and

• That the Government should factor in this rationalization into all subsequent national budgets.

Finding twelve:

Overall, the policy and legislative framework, which governs labour relations in Kenya is archaic and therefore an inadequate basis for protecting workers rights and facilitating good labour relations. It is for this reason that the salt companies have continued to engage in unfair labour practices while still remaining within the bounds of law.

In this regard, the Inquiry recommended:

• That the policy and legislative framework governing labour relations in Kenya should be overhauled as a matter of urgency. The proposals made by the Task Force on Labour Laws established by the Government in 2001 should be scrutinized and consequently, enacted as a matter of urgency.

The environment

Finding thirteen:

Fresh water sources from which the surrounding community traditionally drew its water have been contaminated by underground salt seepages and other activities resulting from the salt manufacturing companies' actions. For example, agents of Krystaline Salt Company had on at least one instance, reportedly dumped salt into a fresh water source, apparently to frustrate the community's inclination not to be removed from the land in question.

As a result of the consequent salinisation, the community's right to access the only non-salty water source around was undermined, forcing them to ferry fresh water from long distances at a greater cost.

In view of this finding, the Inquiry decided that:

• The Ministry of Water and Resource Management and the County Government of Kilifi should carry out a hydrological assessment to establish surface and ground water sources in the area. And that once established, such areas be secured and guarded by the community, salt companies and the County Council for the good of the people;

• NEMA and the Public Health officers in Malindi should ensure that the companies implement an appropriate waste water treatment system in accordance with the Environmental Management and Coordination Act;

• Further investigations should be undertaken by NEMA to identify salt manufacturing companies whose activities have

despoiled fresh water sources. Such companies must be surcharged and involved in initiatives to provide alternative sources of fresh water to the community; and

• Salt manufacturing companies, which in breach of the law, discharge untreated effluent into the environment must be investigated and prosecuted.

Further, The Inquiry recommended:

• That the County Government of Kilifi, the Ministry of Water, the salt companies and the local communities pool their resources, including Constituency Development Funds and Local Authority Transfer funds, to support the provision of reliable and fresh water to the local centres through water pipelines.

Finding fourteen:

Mangrove trees, coastal forests and woodlands were destroyed to pave-way for the construction of salt-harvesting ponds. Some mangrove trees also died due to the high salinity in the locality. This was caused by the dykes restricting the free flow of water to and from the sea, thereby harming the habitats of many types of fish.

The Inquiry decided:

• That the clearing of mangrove trees by both the salt manufacturing companies and the communities should stop and a set-back line from the mangrove forests to the salt ponds be established. That all salt ponds within the defined set-back line be decommissioned and rehabilitated; and

• That all dykes, which restrict the flow of water to and from the sea, be removed within six months of this decision.

Finding fifteen:

While the salt companies had prepared annual environmental audit reports, the reports did not have useful metrics for measuring their environmental and social performance. No

standards were available to measure adherence to environmental and social performance. Further, institutions such as the Malindi District Environment Committee, and community based environmental organisations, did not impact on the supervision and management of environmental issues due to lack of capacity.

The Inquiry recommended that:

• NEMA, in collaboration with the salt manufacturing companies, community based organisations and other relevant players, should within a period of one year, establish environmental quality standards for the salt manufacturing sector;

• NEMA, CBOs, the KNCHR and other interested players should strengthen the capacities of the various key players in environmental management;

• The salt companies should establish a salt manufacturing sector restoration fund for supporting the rehabilitation of degraded areas, in accordance with Section 25 of the Environment Management and Coordination Act.

Corporate citizenship

Finding sixteen:

The salt manufacturing companies have confused corporate citizenship with charity. Virtually, all the companies in question have at one point or another participated in ad hoc initiatives that support community projects like providing for schools and public institutions such as the Provincial Administration and the Police. They have also been contributing resources in support of national events like Madaraka Day celebrations.

The Inquiry recommended:

• That individual salt manufacturing companies, with the support of KESAMA, should liaise with communities on the

nature of projects to be supported, and that this be incorporated into the companies' long-term plans.

Finding seventeen:

Salt manufacturing is an essential and important element in the Magarini economy. For example, it has enabled the employment of as many as 2,000 casual and contract employees from the area.

The Inquiry recommended:

• That the Government should prepare resource plans and ensure that Magarini has a facilitative environment within which investors may operate effectively. Telecommunication and the supply of power should be prioritized; and

• That the Government and salt manufacturers should investigate and implement other resource-friendly options for salt harvesting and involve the community. One option could enable the community to become salt "out-growers" working within cooperative frameworks.

CHAPTER 1: BACKGROUND AND RATIONALE FOR THE EIA

1.1 Background and rationale for the EIA

Kilifi Salt limited hereinafter referred to as the proponent intends to put up a Salt Farm on plot number 28509 C.R 59576; Kilifi. The project entails construction of;

- **Office Block**
- **Area for Resorvoir;470 Acres**
- **Area for Condenser;381 Acres**
- **Area for Crystallizer and Refinery;105 acres**
- **5 Staff Quarters each containing 3 bedrooms, a longe area with the dining and kitchen**
- **Parking for Heavy Commercial Vehicles**

The proposed project is envisaged to create environmental material change during its implementation cycle. The units will create a consumption unit that; consumes utilities and generates wastes. These activities have a bearing on environmental quality including straining infrastructural facilities and social amenities.

To comply with the legal requirement stipulated in the Environmental Management and Coordination Act 1999 and the subsequent legal supplement of 2003. The proponent engaged registered experts to prepare this report to ensure compliance with the law.

2.2 Objectives and Scope of the Proposed Project

The main objective of this EIA project report was to identify potential negative impacts occasioned by implementation of the project. This is based on analysis of baseline conditions of the proposed site, evaluation of the construction process and projecting of envisaged impacts. The report also provides mitigation measures to ameliorate potential negative impacts.

2.3 Terms of Reference

In working to achieve the objectives, the following areas shall be our points of consideration*(attached is a copy of approved tor)*

- Analyze the bio-physical conditions on-site.
- Present a socio-economic and cultural evaluation of the proposed development area and its surroundings.
- Describe policy regulations,lrdgal and adminstrative framework
- Assess the drainage structure, particularly with respect to existing natural drainage channels, proposed man-made drainage/water features or any proposed changes in topography. Potential impacts of increased surface runoff and sediment loading will also be addressed.
- Describe the construction methods to be employed during the proposed works.
- Develop a framework for mitigation measures and monitoring enviromental issues.
- Outline the various alternatives to development.
- Determine the method, level and location of the sewage treatment facility and th e potential impacts of disposal on the environment.
- Give the timelines/scheduling for individual tasks to be undertaken.
- Discuss public participation and various stakeholders involved.
- Detail Environmental Monitoring and Management Plan.

2.4 Methodology

In working to realize the report objectives, several methods were employed. These included the following;

- Environment screening, in which the project was identified as among those requiring EIA under schedule 2 of EMCA, 1999,

- Environmental scoping that provided the key environmental issues,
- Desk studies and interviews,
- Physical inspection of the site and surrounding areas,
- Reporting

CHAPTER 2: LEGAL AND REGULATORY FRAMEWORK

2.0 Introduction

The Government regulates construction projects through various statutes. The purpose is to ensure that structures meet the expected standards on zoning requirements, safety, health and convenience to the occupants.

The laws have comprehensive provisions that cover both the structure and activities undertaken therein. These ensure:

Orderly development, Compatibility, Safety requirements and Standard service expected

The major regulations governing housing development include:

1) The Environment Management and Coordination Act, 1999
2) The Public Health Act Cap.242
3) The Physical Planning Act Cap.286
4) The Factories Act Cap.514
5) The Local Government Act Cap.265
6) The Building Codes (adoptive by laws) order 1968
7) The Employment Act (Cap 226)
8) Trade Disputes Act (Cap 234)
9) Trade Unions Act (Cap 233)
10) Sessional Paper No.6 of 1999

The various legal statutes;

2.1 The Environment Management and Coordination Act, 1999

According to section 58 and 138 of (EMCA) and section 3 of the environmental (Impact Assessment and Audit) Regulations 2003 (Legal No. 101, construction projects have a bearing on environmental quality including destroying the physical environment and destruction of habitats for biotic organisms.

Their operations have risk prone zones. Performance and execution of services must be monitored, regulated and assessed to ensure high standards and compliance with set regulations. It is therefore important that these activities be exhaustively guided to eliminate risks, hazards and minimize pollution.

2.2 Public Health Act (Cap. 242)

The Act regulates safety, health and orderly development. Section 115 prohibits conditions that could subject occupants to nuisance. The Local Authority is mandated under this provision to ensure that all premises are kept clean to prevent occurrences that could create inconveniences to residents. The nuisance as per the act is listed as:

- Vessels that could be injurious.
- Drillings liable to promote infections.
- Emissions from septic tanks, water closets, dustbins, urinals, cess pools, among others that pose offensive smell.
- Noxious water flowing from premises.
- Accumulation of stones or timber that is likely to harbor rats.
- Overcrowded dwellings that impair light and good ventilation.
- Chimneys sending forth smoke in quantities that pose danger to health.

The Act promotes safety provisions expected within buildings. It empowers the medical officer of health to close any premise considered as a nuisance to the public and which poses danger to public life. The Act empowers local councils to prepare by laws to:

- Control the construction of buildings.
- Control space about dwellings.

- ❖ Control the height of buildings.
- ❖ Prohibit erection of temporary buildings.
- ❖ Ensure adequate provision for fire escape.

It comprehensively covers aspects that ensure safety of construction and operational premises within the Councils and other Local Authorities.

2.3 Local Authority Act (Cap. 265)

Section 160 helps Local Authorities ensure effective utilization of the sewage systems. Section 170, allows the right to access to private property at all times by Local Authorities, its officers and servants for purposes of inspection, maintenance and alteration or repairs of sewage and drainage, fix charges for use of sewers and drains and require connecting premises to meet the related costs.

Section 265 also requires that all charges due for sewage sanitary and refuse removal shall be recovered jointly and severally from the owner and occupier of the premises in respect of which the services were rendered. This in part allows for application of the "polluter-pays-principle".

2.4 Physical Planning Act, 1996

The Physical Planning Act provides for orderly development. The Act sets designation of development in urban areas into zones. Each zone has a specific use. Developments in areas not designated for the same purpose are supposed to undergo change of user.

In part (IV) the Act empowers local authorities to:-

- Prohibit or control the use and development of land and buildings in the interest of proper and orderly development of the area. Under this provision applications that do not conform to zoning regulations can be disqualified.

- To control and prohibit sub-division of land or existing plots into small areas.
- To consider and approve all development applications and grant all development permission.
- Ensure the proper execution and implementation of approved physical development plans.
- To formulate by-laws to regulate zoning in respect of use and density of development.
- To reserve and maintain all land planned for open spaces and urban forests.

The Act provides for orderly development and respect of existing development plans. It essentially guides the developer on what should be constructed, where, the space to be constructed and the type of buildings.

2.5 The Building Code

The codes complement provisions in the Public Health Act. The building code provides building standards expected within the buildings. Aspects covered include setting of premises, conveniences, siting and space in relation to infrastructure.

The codes define users of building material, height of wall fences and the type of access provisions to ensure that no plot is rendered land locked. The types of soils and their load bearing capacities have also been defined.

The codes provide a basis on which projects could be monitored to achieve the standards set. These codes are the basis on which the contractor to the building shall be measured. The use of concrete, cement and other material must respect provisions given in the building code.

2.6 Factories and Other Places of Work Act (Cap 514)

This Act applies to premises where people are employed. The project shall definitely employ workers (cleaners, gardeners

and watchmen) who should be governed by the operations of this Act.

The Act requires the workplace to be clean with functional drains and sanitary units. It prohibits accumulation of wastes within working rooms, passages or stair cases. Maintenance of ground cleanliness is extended to the wall premises. The building should be painted at least once every five years. To promote safety, the Act prohibits overcrowding. The height of the building should be adequate, properly light and ventilated. Areas where machines and rollers are used should be fenced off.

Areas posing danger or risks within the building should be clearly labeled and should indicate danger and warning to the users. A warning sign in red should be displayed to alert users of imminent danger.

2.7 The Employment Act (Cap 226)

This Act was enacted to consolidate, with amendments, the law relating to employment in Kenya. It deals with the rights and obligations of both the employer and employee. It stipulates, among other provisions, when wages and salaries are due, the right to housing for employees, provisions for severance pay, and the lawful deductions that an employer may make from an employee's wages.

(b) Regulation of wages and Conditions of Employment Act (Cap 229).

This Act provides for the establishment of the Wages Advisory Boards and the Wages Councils for the regulation of remuneration and conditions of employment. It provides for basic minimum wages for different types of employment.

(c) Workmen's Compensation Act (Cap 236).

This Act provides for compensation to workers for injuries suffered in the course of employment, including provisions for medical examination and treatment for such injuries.

2.8 Trade Disputes Act (Cap 234)

This Act provides for settlement of trade disputes generally and for settlement of trade disputes in essential services. It also provides for the establishment of Boards of Inquiry and a standing Industrial Court. It controls and regulates strikes and lock-outs, and makes provision regarding the collection of union dues.

2.9 Trade Unions Act (Cap 233)

This Act gives a right to workers to form associations and/or to join trade unions. It also provides for the registration and control of these unions.

2.10 Sessional Paper No.6 of 1999

The paper gives the Government's stand on environmental protection and management. The paper addresses an integrated approach in environmental management as a basis to achieving sustainable development. The critical obstacle includes poverty and run away population's growth that are seen as factors that accelerate both depletion and misuse of resources.

CHAPTER 3: BASELINE INFROMATION OF THE PROJECT SITE

3.1 Location

Malindi is one of the seven districts in Coast Province. It borders Kilifi District to the South, Tana River District to the Northwest and the Indian Ocean to the East. The district covers an area of 7605 square kilometres, and is divided into three divisions - Malindi, Marafa and Magarini. It has two constituencies - Magarini and Malindi.

The study area is located in Ngomeni area located at the north end of malindi,The geographical co-ordinates are 4^0,50′ 0″ South and 79^0 46′ 46′ 0″ East, in Tsavo .The plot has an area of 1000 acres

Plate 1 showing the proposed site location

The District's coastline stretches 155 km and runs from Mida to Ungawa. It has good beaches, which are suitable for tourism and fishing.

TABLE 1 SHOWING ACREAGE OF VARIOUS LAND RESOURCES

	Area KM^2
Total Area	7605
Arable Land	4193
Non-Arable Land	3411.8
Water Mass	1368.75
Gazetted Forests	473.78
Gazetted Parks and Reserves	3188
Urban Areas	88.5

Population in the district varies from one division to another with an average density of 36 persons per square kilometre. The most densely populated division is Magarini with 92 persons per square Kilometre. Malindi District is famous for its palm-fringed silvery white sand beaches, Malindi Marine National Park, Watamu Marine National Park, Gede Ruins, the Vasco Da Gama Pillar and the Portuguese Chapel.

Other notable features include the Pillar Tombs, Kipepeo Butterfly Farm, snake and crocodile farms, Mida Creek and the canyons of Hell's Kitchen. They all serve as the District's major tourist attractions.

The plains running along the coastline form a major crop zone, with soil fertility ranging from moderate to high. Agriculture is a primary economic activity, with the main food crops being maize, cassava, cowpeas, green grams and mchicha. The main cash crops are coconuts, cashew nuts, cotton and simsim. Horticultural crops such as mangoes, citrus, pineapples, bananas, tomatoes and watermelon are also grown there.

Poverty levels in the District are relatively high. Approximately 66% of the population is considered to be living in absolute poverty, 4 i.e. they are unable to meet their basic food and non-food requirements. This is significantly

above the national average of 56%. Out of 210 constituencies in the country, Magarini Constituency is ranked 189 in the poverty index, while Malindi constituency is in position 139.5

TABLE 2 SHOWING POVERTY LEVELS BY DIVISION

Poverty Levels by Division		
Division	***No. of Poor***	***% of total population***
Malindi	113,201	66.7
Marafa	35,290	68.7
Magarini	49,629	62.5

The following further statistics illustrate the high levels of poverty in the District. The average distance to the nearest portable water point in the rural areas is 3 kilometres. Regarding primary school education, the total enrolment rate for boys is 84.6% and 67.7% for girls. Country levels stand at 95% for boys and 90 % for girls. The primary school drop-out rate stands at a high of 44.7% for boys and 59.9% for girls. With an enrolment rate of 14.7 % for boys and 1.7 % for girls in secondary schools, the D istrict has one of the lowest secondary school enrolment rates in the country. The HIV prevalence rate is also very high, standing between 15% - 17% 7 far above to the national average of 6.7% as at 2003.8

The main development challenges as outlined in the District Development Plan 2002-2008 (Ministry of Planning and National Development) are

- High numbers of landless people - 11.3% of households are landless;
- A population growth rate of 3.9% which is significantly higher than the estimated 2.56 % nationwide.
- The scourge of HIV/AIDS, and
- A slump in tourism. Though the tourism sector has improved dramatically in the last few years, the sector had experienced serious declines in the recent past .The average bed occupancy in Malindi, for example, had

declined from 62% in 1995 to 25 % in 2000. Some tourist hotels had to close down while those that remained continued to operate well below capacity. Tourism is one of the most important sectors in the district's economy and this downward trend had serious consequences in terms of employment and poverty alleviation. About 40% of the district's working population is either directly or indirectly employed in the industry.

3.2 Background to salt manufacturing companies in Malindi

There are six salt manufacturing companies operating in Magarini Division, Malindi District. These are:

1. **Krystalline Salt Limited**

Krystalline Salt Limited got a leasehold land title deed of ninety-nine years in 1984 and commenced operations in 1985. The directors are Mr.Kanji Kunverji Patel, Mrs. Dhanbai Kanji Patel and Mr. Deepak Kanji Patel. It owns about 2034.4 hectares (ha) of land on L.R. No. 13427 in Marereni, Magarini Division, Malindi District, and has a capacity to employ 170 people.

2. **KEMU Salt Packers Production Limited**

KEMU S.P.P. Ltd. was incorporated in 1996 and started operations in 1997. It has about 3,835 ha (9,428.55 acres) of land in Marereni area, Magarini Division. Two salt works fall within KEMU S.P.P. Ltd. land. These are Tana Salt Works (which has ceased operations) and Kurawa Salt Works (which is operational). Its directors are Mr. Mohammed Koriow Nur and Mr. Ibrahim Mohammed. Th e company employs 200 people.

3. **Kurawa Industries Limited**

Kurawa Industries Limited was incorporated in 1976 and occupies 595.2 ha under a leasehold title acquired in 1977. The directors are Abdulkader Mohamedhussein Kaderdina,

Adulhamid Mohamedhussein Kaderdina, Mohamedhussein Abdulkader Kaderdina and Abdulhaq Abdulkader Kaderdina. The land has been leased out to Mombasa Salt Works.

4. Malindi Salt Works

The shareholders of Malindi Salt Works are Mr. Islam Ali Islam, Mr.Ahmed Bin Ali, and Bashmakh Limited. Th e directors are Mr. Ali Islam Ali, Mr. Ahmed Ali Islam and Mr. Mohamed Islam Ali, Mr. Omar Hamed Ali, Mr. Munir Hamed Ali and Mohamed Hamed Ali. It has leasehold title for about 665 ha and employs about 140 workers. It became operational around 1984.

5. KENSALT Limited

KENSALT Limited, originally called Salt Manufacturers Limited, was formed in 1974 as a joint venture between the GoK and Saltec International. Th e GoK sold its shares to Saltec International in 1993. The current directors are Mr. M.S. Patel and Mrs P. K. Patel. It has about 2264.9 ha under L.R. number 12333, which it obtained in 1975. It employs about 400 workers, 55 percent of who are unionised.

6. Mombasa Salt Works Limited

Established in 1928, the Mombasa Salt Works Limited has a leasehold title for about 1017 ha. It employs about 65 permanent employees and between 150 -300 casual workers, depending on the season. These workers have no union representation. Its directors are Mr. Dauda (Chairman) and Mr. Manish H. Dauda (Managing Director).

3.2.1 Leases to salt manufacturing companies

The Inquiry learnt that between 1974 and 1994, approximately 10,465 hectares of land were leased out by the Government to salt manufacturing companies as follows:

- Kensalt Ltd; **2264 hectares**
- Kurawa Industries Ltd **595.2hectares**;

- Malindi Salt Works **665 hectares;**
- Krystalline Salt Ltd **2034.4 hectares;**
- Kemu Salt Packers Production Ltd **3835 hectares;** and
- Mombasa Salt Works Ltd **1017 hectares.**

Attached to these grants were the following general and special conditions:

- The land and buildings shall only be used for the extraction of salt and housing for essential staff ;
- The grantee shall not sell or otherwise transfer the land or any part of it without the consent of the Commissioner for Lands;
- The grantee shall pay to the Commissioner for Lands on demand such proportion of the cost of maintaining all roads and drains serving or adjoining the land as the Commissioner may request; and
- The grantee shall not construct any dykes or other obstruction along (any river) and shall ensure throughout the duration of his operation that free flow of water from the sea is not interfered with.

Plate 2 Showing The Proposed Site

3.2 Physical Environment

3.2.1 Landscape:

The site has gentle terrain with minimal slope and ground difference. The overall neighbourhood landscape is low undulating. The slope difference is minimal and unrestrictive to construction works. The terrain is a reflection of the geological formation. These changes in ground level have a strong relationship with the geological structure of the area.

3.2.2 Soils:

The rock structure is stable but requires excavation to ascertain the suitable depth for construction. This requires ample excavation to determine suitable depth for laying the foundation. Construction would require employment of structural engineering skills to enhance stability of the structures.

3.2.3 Climate

Malindi has a wet and humid climate. Temperatures range between 22-30 degrees centigrade. High temperatures are experienced between October to March while low temperatures are experienced between April and July. Long rains are experienced between April and July. This period is critical to investors and necessitates provision of drainage facilities to eliminate pooling and surface run-off. The design capacity of the storm drains and discharge system must factor variable weather conditions that at times increase amount received. Extreme weather conditions result to high amounts of rains than expected. This has a bearing on drains and absorption capacities. Flooding in low lying areas is experienced.

Wind patterns are seasonal. Strong onshore winds are experienced between April and June. This period is also associated with long rains that present good opportunities to farmers. Dry spells in the region are associated with cyclical winds occasioned by the changing pressure systems. The warm weather associated with it enhances tourism.

3.3 Biological Environment

3.3.1 Vegetation Cover:

The project site has a set of mangrove and different types of vegetation. The plot will be landscaped in a manner as to blend with the natural environment.

3.3.2 Wildlife/Fauna*:*

There are no major animals in the environs except for small rodents, insects, lizards and birds. Therefore one can argue that there is no fauna threatened by the proposed development.

3.4 Infrastructure and Services

The infrastructural services available on the site are as outlined hereunder:

3.4.1 Road and Accessibilities

The project site is served by a murram road whose standard of maintenance can be described as satisfactory. This makes the site quite accessible. Although it can also be accessed from the main Malindi-Lamu Highway.

Plate 3 showing access road to the facility

3.4.2 Telecommunication

Telephone lines are available and run parallel to the road reserves. All mobile telephone providers can be accessed without any difficulties from the site.

3.4.3 Electricity

The site shall be supplied with power from the neighbourhood line. The capacity is sufficient to meet the supply needed on site. Information obtained from KPLC confirmed adequacy and capacity to supply. Energy saving methods shall be employed to enhance effective use.

Use of solar could be explored later to supplement the conventional electricity supply. This option can viably work to supplement energy supply on site.

CHAPTER 4: PROJECT ACTIVITIES AND DESCRIPTION

4.1 Site Ownership, Size and Zoning

The project land parcel L.R. No 28509; Kilifi is listed as the property of Kilifi Salt of Post Office Box Number 35425-00100, Nairobi.

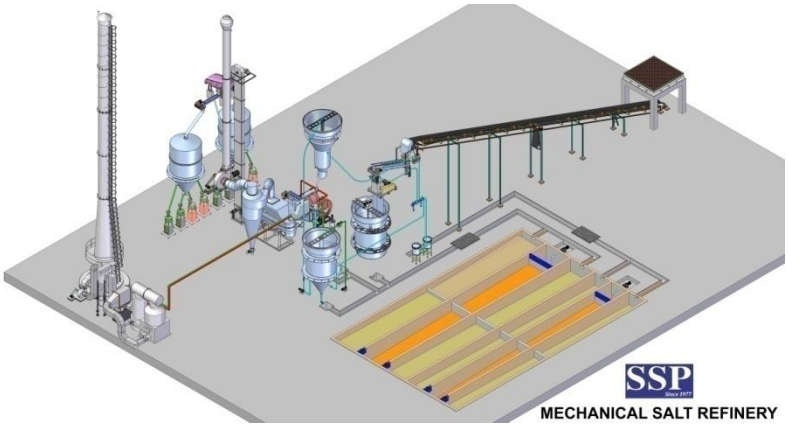

Plate 4 showing the mechanical salt refinery

Planning regulations allow the area to be used for Salt Farming, thus the proposed development is in line with permissible land use in the zone. The adjoining plots are predominantly salt farms, that is Kensalt Limited and Malindi Salt Works. The project meets the necessary permissible usage.

All the necessary Physical Planning regulations such as zoning, plot ratio and plot coverage were taken into account during the design of the proposed development, which observed the ground coverage and plot ratio allowed in the area. The development proposal has been submitted and approved by the County Government of Kilifi and other relevant departments. Noteworthy is the fact that Kilifi County does not have a clear advisory zoning plan or regulations. Approval of developments is pegged on existing trends in the neighbourhood.

The following are conditions to be observed:

- The land and the building shall be used for salt farming purposes; this is what the proponents are proposing. (The proposed development is compatible with the neighbourhood character)
- That the proponents are bound by any other conditions subject to the County Government of Kilifi by-laws.

4.2 Project Alternatives

This section analyses the project alternatives in terms of site, technology scale and waste management options.

4.2.1 Relocation Option

Relocation option to a different site is an option normally available for project implementation. At present the landowner/developer does not have an alternative site. The site is ideal for the kind of proposed development and has received approval from the lead agency; The County Government of Kilifi, in pursuant with the provisions of the Local Government (Adoptive By-Laws (Building) Order 1968. The Lessee covenants and agrees with the County Government of Kilifi to *"to use the said parcel of land for Salt Farming purposes."* (Copy attached). The experts therefore do not offer alternative site option.

4.2.2 The Zero Option/No Project Option

The No Project option in respect to the proposed project implies that the status quo is maintained. This option is the most suitable alternative from an extreme environmental perspective as it ensures non-interference with the existing conditions. The landowner will continue to pay rent on the plot while the property remains idle. The No Project Option is the least preferred from the socio-economic and partly environmental perspective due to the following factors:

- A wasted opportunity for the proponent, community and the government as benefits that are bound to accrue to project will not be realized.
- Reduced interaction both at local and national levels.
- Employment opportunities will be created for site workers who work at the project area.

From the analysis above, it becomes apparent that the No Project alternative is no alternative to the project.

4.2.3 Alternative Land Use

The proponents have an option to use the land for other purposes other than the proposed development.This option however calls for change of user as the project area is currently zoned as a Salt Farm. Change of user from Salt Farming to other uses will still have other impacts which may be worse than the proposed project depending on their nature.

4.2.4 Proposed Alternative

Various alternative methods for development of the project were considered, however in all instances the outstanding difference was either material or technology used but development of the Salt Farming emerged as the most plausible option according to the project area setting and primacy. This option is acceptable for various reasons as follows;

- The proposal is in line with the County Government of Kilifi designated land use, housing typologies and building density within the project area.
- Development of the proposed Salt Farming is compatible with existing developments within its immediate context.
- The project will reprieve high demand for business units in the project area.
- The option offers higher returns to investments

In searching for the best alternative the following were conclusions of the best options which encompass the proposed development:

4.2.5 Project Design and Setting

The approved plans of the proposed Salt Farm are annexed in the report.

- The design ensures compliance with development requirements, legislative and infrastructural capacities.
- Ample landscaping will restore the lost vegetative cover.

4.3 Description of Construction Inputs/Raw Materials

The proposed project will use modern, locally and internationally accepted materials to achieve public health, safety, security and environmental aesthetic requirements. Equipment that saves energy and water will be given first priority without compromising on cost or availability of other factors.

The main construction raw materials include; sand, cement, stones, hardcore (gravel/ ballast), ceramic tiles and other ceramic fittings, steel and wooden fixtures and fittings, glass, steel metals, timber and painting materials among others. Heavy use of timber during construction is discouraged because of the destruction of forests. Exotic species would be preferred to indigenous species in the construction. Noteworthy is the fact that the proposed building design and technology shall require very little timber. Building materials will be transported from their source to the project site by the use of trucks and lorries. These materials will be sourced from the nearest source thus giving both environmental and economic logic to the proponent.

Construction machines include machinery such as trucks, concrete mixers, tools and other relevant construction equipment. These will be used for the transportation of

materials, and in the actual construction of the Salt Farm. Most of the machinery will use petroleum products as the source of energy and shall therefore be serviced and utilized to the highest level of proficiency to avoid unnecessary spillage or emissions of petroleum related wastes that might pollute the environment.

Construction labour force of both skilled and non-skilled workers will be sourced from within. A site office will be constructed. The contractor will put up a latrine on the site adjacent to the site office. A separate store for storage of hazardous materials such as paints, grease, oil, fuel will be constructed. The store for these materials shall have iron sheet walling and roof and waterproof concrete floor. The storage of these hazardous materials will be in accordance to the manufacturer's instructions as outlined on the material safety data sheets.

4.4 Programme for Implementation of the Project.

The project shall commence works upon securing of the relevant approval licenses. The proponents have already submitted the plans to the County Government of Kilifi and secured approval. The County Council is expected to issue the construction permit once the NEMA license has been released. The project is expected to go through the following processes;

4.4.1 Securing Approvals and Licenses

Before commencing construction works, the proponents shall secure all development permits. These include:

- Building permit from the County Government of Kilifi.
- Clearance certificate for Rates and land rent to the County Council and the Commissions of Lands
- Building plans duly prepared by a registered architect and structural engineering plans prepared by a qualified engineer shall be submitted to the council for approval.
- Obtain NEMA license and building permit license.

- The contract agreement shall be signed and the project handed over to the contractor for implementation once the necessary approvals have been secured.

4.4.2 Site Preparation

The method of construction will generally follow the following sequence of activities,

The site preparation shall involve:

- Ground clearing to pave way for construction works.
- Construction of raw material storage structures and administrative/foreman's office
- A temporary latrine for construction workers shall also be erected.
- Top soil stripping, excavation and stockpiling **(**The project contractor shall invite the municipal engineer to determine the trenching depth. This will be followed by excavation of the marked trenches)
- Foundation lying **(**The structural engineer shall advice on depth and bearing capacities)
- Setting of the building. The design shall be adoptive to ground variation.
- Variation of the plan where necessary to cater for essential site features.
- Landscaping
- Construction of the Salt Farm shall follow construction requirements. Ample time shall be given to allow stability.

4.4.5 Electrical Work

The proponents will utilize the use of Solar Energy and Diesel.Electrical work during construction of the premises will include installation of electrical gadgets and appliances including electrical cables, lighting apparatus, sockets etc. In addition there will be other activities involving the use of electricity such as welding and metal cutting.

4.4.6 Plumbing

Installation of pipe-work for water supply and distribution will be carried out during and after the construction phase. In addition pipe work will be done to connect sewage from generation points to the sewer system (septic tank). Plumbing activities will include metal and plastic cutting, the use of adhesive, metal grinding and wall drilling among others.

4.5 Description of the Project's Decommissioning Activities

This refers to the final phase of the project. The proposed Salt Farm is envisioned to be operational for over fifty years. This period may witness changes in technology, improved services and the need to put space to better use. The decommissioning could be occasioned by change in operations or deterioration of the structures. Before demolitions are done, the proponents will ensure that all the necessary statutory requirements have been met. Intent to close shall be made and all pending bills for both personnel and business operations settled.

4.5.1 Demolition works

Upon decommissioning the project components including: buildings, pavements, drainage system and the perimeter fence will be demolished. This will produce a lot of solid waste, which will be re-used for other construction works or if not re-usable disposed of appropriately by a licensed waste disposal company.

4.5.2 Dismantling Of Equipment and Fixtures

All installations including underground fitting will be removed. Sewer pipes, electric conduits and inspection chambers will be dismantled.

4.5.3 Ground restoration

The site will be restored through replenishment of top soil and re-vegetation using indigenous plant species. Leveling, tracing and features that enhance value shall be instituted.

4.6 Project Budget

The overall estimate for construction of the proposed Salt Farming and all other ancillary services is approximated to cost **Kshs 14,700,000.** .

CHAPTER 5: PROJECT IMPACTS AND THEIR MITIGATION

5.1 Introduction

This section identifies both negative and positive impacts associated with the proposed development project. These are identified according to phases namely: Construction Phase, Operational Phase and Decommissioning Phase.

5.2 The Construction Phase

The construction phase shall begin with the site preparation for construction work to take place. During site preparation, clearing of any vegetation that is available in the construction land parcel will take place. Construction impacts have the potential to create nuisance for residents in the neighbourhood, however these shall be managed within acceptable limits. In addition the construction impacts are also temporary in nature.

5.2.1 Positive Impacts

i) Employment Opportunities

Both direct and indirect forms of employment shall arise from the project initiation. Direct employment will be mainly through skilled and unskilled labourers whose workforce shall be needed to build the Salt Farm. Employment opportunities will be a benefit both in the economic and social sense. In the economic sense it means abundant labour will be used in economic production. Several workers including casual labourers, masons, carpenters, joiners, electricians, plumbers as well as other professionals are expected to work on the site for a period that the project will start to the end. Apart from casual labour, semi skilled and unskilled labour and formal employees are also expected to obtain gainful employment during the period of construction.

ii) Local and National Economic Gains

Both the local and national economy shall gain much from the project in that materials for building shall be sourced locally within the country and that all the materials are charged VAT hence increasing revenue collection in the country.

iii) Provision of Market for Supply of Building Materials

The project will require supply of large quantities of building materials most of which will be sourced locally within the vicinity of Ngomeni, Sabaki, Timboni and the surrounding areas. This provides ready market for building material suppliers such as quarrying companies, hardware shops and individuals with such materials.

iv) Informal business growth

During the construction period the informal sector will benefit from the operations. This will involve jua kali operators selling their products to be used on site. Such a move shall promote jua kali entrepreneurs in the local areas. Food business will also emerge as most of the workers who will be working on the proposed housing project site will be buying food from the informal business owners who shall be operating in the vicinity.

5.2.2 Negative Impacts

i) Loss of Vegetation Cover and Biodiversity

Construction would necessitate removal of the vegetative cover on site to pave way to trenching and laying of the foundation. The removal of trees and shrubs would reduce the existing vegetative cover, resulting in irreversible loss of natural habitat for flora and fauna particular to the area. The proposed development will have negative effects on the composition of natural plant species both on site and the neighbourhood. Some of them could be unique to the site. Compacting, leveling and site improvement creates new conditions that limit plant regeneration.

Mitigation measures

The loss of habitat and negative impacts on the local bio-diversity are obvious adverse consequences of the proposed development. Mitigation calls for protecting and restoring as much of the original condition on the development site as possible. Additional measures must be considered to further minimize negative impacts on the terrestrial ecology in the area:

- In an effort to preserve the existing biodiversity, naturally occurring plants such as those used primarily for landscaping (ornamental/beautification and fencing) should be harvested during the site clearing phase and relocated to a nursery, to serve as a source of plants for replanting at a later date.
- A landscape plan should be developed by a landscape architect which would include action items corresponding to each phase of the project ensuring gradual, albeit partial, restoration of the site's ecological characteristics.
- Roof gardens and other plant enhancement strategies shall be adopted.

ii) Destruction of the Soil Structure, Landscape and Change in Drainage Patterns

Construction would necessitate flattening, leveling and compaction to create uniform grounds for construction works. Loss of topsoil due to soil erosion as well as anticipated runoff, are causes for concern which must be addressed prior to the clearing phase. Soil erosion will remain a problem during the clearing as well as during the construction phases of the project. Lack of proper drainage ways could result in localized pooling and flooding, providing ideal conditions for the proliferation of nuisance pests such as mosquitoes. Excessive runoff, especially during heavy rains, could also lead to elevated nutrient loading within the site.

Mitigation measures

The project has been looked at in totality. The design shall employ an adaptive grafting system that shall take care of varying levels. The project contractor should institute appropriate measures to ameliorate adverse construction activities on the site's soil structure, landscape and drainage patterns;

- ✓ Demarcate and delineate areas to be affected by the construction work.
- ✓ Conduct site clearing activities in stages to minimize the area of exposed soil.
- ✓ Control earthworks
- ✓ Install drainage structures properly
- ✓ Compact loose soils
- ✓ Ensure management of excavation activities especially during rainy conditions
- ✓ Provide soil erosion control structures.
- ✓ Undertake landscaping after construction is complete
- ✓ Provide soil erosion control structures.

iii) Pollution

The increased traffic to the area, use of heavy equipment during the clearing of the site and transportation of building materials will create noise and raise dust which could further disturb the cherished neighbourhood tranquility. Dust and emissions from the construction vehicles and heavy machinery are inevitable both during the site clearing as well as during the construction phases. Airborne pollution, particularly dust resulting from clearing of the land and from exposed piles of building materials (e.g. sand, cement, etc.) may further stress the local flora and fauna, and may also pose a health risk to construction workers and residents in the vicinity who suffer from asthma or other respiratory ailments.

Mitigation measures

The contractor shall employ the following measures to mitigate pollutive nuisance associated with the proposed project;

- ✓ Control speed and movements of construction vehicles along the dusty access road by erecting speed bumps.
- ✓ Spraying of dry soils in excavated areas and access road to suppress dust.
- ✓ Regular maintenance of construction equipment.
- ✓ Provide barriers such as walls and trees around site boundaries to provide some buffer against dust propagation.
- ✓ Construction activities to be restricted to daytime(0800-1700hrs)
- ✓ Workers in the vicinity of high-level noise to wear safety & protective gear.
- ✓ Affix silencers and mufflers on exhaust systems of all mechanical equipment
- ✓ Stacked building material on-site shall be kept for shortest time possible.

iv) Incidents, Accidents and Dangerous Occurrences/ Health and Safety

The construction phase may generate safety hazards in relation to increases in traffic and access to the construction site (if not adequately controlled), and potential health impacts and nuisance factors due to noise, dust, vibrations and gaseous emissions.

Mitigation measures

The main contractor should take the necessary measures to avoid / minimize the negative health and safety impacts by, among others:

- ➢ Remove and cart away earth works as soon as it's generated.

- Warning signs of construction work going on should be displayed.
- The contractor should maintain a regular inspection schedule to certify and conform to standards set.
- Fence off the construction site
- Appoint a safety supervisor.
- Machines to be operated by qualified personnel only.
- All machinery and other moving parts of machinery must be enclosed or guarded to protect injury.
- Warning and safety signage indicating that construction is in progress should be clearly shown
- Provide fully equipped first aid kits
- Install safety net to protect workers against falling objects.
- Medical checkup for all workers prior to and throughout the construction phase
- Persons providing food for workers at the site must have all the necessary Public Health Licences.
- The contractor should provide a section within the project site with a shade and clean water where food will be served.
- Provide a mobile toilet on site for construction workers
- Use stable ladders and other climbing/support structures.
- Provision must be put in place for a Health and Safety Committee with representatives from workers and employer.

5.3 Operational Phase Impacts

The construction of the Salt Farm will set potential risks and hazards. These wastes must be carefully managed to avoid inconveniences and minimize environmental health. The kitchens and toilets plus parking yard present potential source of pollution. The project generally shall contribute to the generation of traffic. Traffic flow in the neighbourhood shall increase. This could create conflict at the entry and exit. The paved area around the staff quarters, walkways, driveway

and the roof top are impervious systems. Pavements on site and increased concrete have a bearing on storm water generation and ground water recharge. If measures are not provided this could be fatal and lead to accidents. Potential operational impacts are therefore significant and warrant ample mitigation.

5.3.1 Positive Impacts

i) Employment Generation

Employment opportunities are one of the long-term major impacts of the proposed project that will be realized after construction and during the operation and maintenance of the Salt Farming. These will involve security personnel, solid waste management staff and domestic workers.

iii) Increase in Revenue Generation to the County Government of Kilifi and the Central Government

The land rates that will be paid to the County Council will be beneficial to the economy. The VAT that will be paid to the Central Government will also be additional revenue to the Government.

iv) Improved Security

Sufficient security arrangements at the proposed development project will ensure higher level of security around the project area.

v) Optimal Land use

The parcel of land will be put to the best use that will offer better returns not only to the investor but also the Government.

5.3.2 Negative Impacts

i) Increased Waste Generation

The proposed development of the Salt Farm is anticipated to increase activity in the Ngomeni area. It is expected that certain quantum of solid waste, mainly domestic in nature will be generated during the occupation phase stage. These will include biodegradable and non-biodegradable wastes. Solid

waste if not well managed has the potential of causing disease outbreaks because it creates suitable breeding conditions for pathogens and has long term effect on the environment.

Mitigation measures

- Create awareness on solid waste integrated management programme.
- Provision of bins, one for bio-degradable and another for non-biodegradable matter.
- Private refuse handlers should be hired to facilitate waste handling and transport to MCM designated waste collection centre.

ii) Wastewater

Sewerage and effluents resulting from the units and sanitary facilities is of significant concern with respect to the environment if left untreated. The project area is not sewered. The proponents are proposing to construct septic tanks and soak pits to manage wastewater. The proposed septic tanks and soak pits will accommodate sewage from all units. Pollution to surface water may occur, if not properly managed.

Mitigation measures

✓Routine checkups and monitoring of the sewer system to ensure the sewerage and effluents always drain effectively through properly designed and laid pipes.

✓Sanitary facilities shall be kept clean throughout.

✓Any breakage to the waste pipes shall be fixed promptly.

✓Monitor effluent quality regularly to ensure that the stipulated discharge rules and standards are not violated.

iii) Increased Pressure on Trunk infrastructure

An increase in the population in the project area will result in increased use of trunk infrastructure which could translate to increased electricity and water demand. Occupation of the

Salt Farm will increase demand of electricity for lighting, cooking, cooling of units and running of electric equipments and gadgets. The building would also exert pressure on MAWASCO water main serving the project area as more water for domestic purpose shall be required to serve envisaged dwelling units.

Strain on existing drainage system is also envisaged as the building roof and pavements will lead to increased volume and velocity of storm water or run-off flowing across paved area(s).This will lead to increased amounts of storm water entering the drainage systems, which might result into overflow, erosion or water logging in the neighbouring plots which may damage of the existing drainage systems.

Mitigation Measures

- ✓The staff quarters should have water harvesting systems (gutters, downpipes and water storage facilitates to enhance collection and storage of rain water.
- ✓Water conservation taps that turn off automatically when water is not in use will be installed.
- ✓Sensitize on efficient water use.
- ✓Ensure electrical equipment, appliances and lights are switched off when not being used and install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy.
- ✓The proactive design of the building has incorporated storm drains to channel storm water to existing natural drainage systems. The storm drains shall be kept open and regularly maintained. It will utilize an appropriate design to enhance flow.

iv) Incidents, Accidents and Dangerous Occurrences/ Health and Safety

Due to increased and diverse activities within and around the building, unexpected eventualities might occur due to sudden

failure of the system, external threats, internal disturbances, earthquakes and accidents. It is important to be adequately prepared to prevent and counter such incidents like fire outbreaks and/or occupational related accidents that may lead to injuries, loss of life and property.

Mitigation Measures

- Install automatic fire alarm system for the entire development
- Set up fire reserve water tank attached with an automatic booster pump for horse reel.
- Adequate means of fighting electrical fires will be provided by means of carbon dioxide (Co_2) fire extinguishers or dry powder fire extinguishers.
- Use of non-oil paints is highly recommended to prevent fast spread of fire in case of an outbreak.
- Adopt an emergency response plan for the entire project during occupational phase.
- Ensure that all fire fighting equipments are strategically positioned, regularly maintained and serviced.

5.4 Decommissioning Phase Impacts

5.4.1 Positive Impacts

i) Rehabilitation

Upon decommissioning of the proposed project, rehabilitation of the project site will be carried out to restore the site to its original status. This will include replacement of topsoil and re-vegetation which will lead to improved visual quality of the project area. If the new project to be put up at the site is listed in the second schedule of EMCA, then an EIA will be carried out again.

ii) Employment Opportunities

Since the demolition exercise will utilize human resource manpower, employment opportunities shall therefore be created.

5.4.2 Negative Impacts

i) Solid Waste

Demolition of the proposed development and related infrastructure will result in the accumulation of huge amounts of solid waste. This consists of materials used in construction including concrete, metal, drywall, wood, glass, paints, adhesives, sealants and fasteners. Large quantities of such waste may lead to release of certain hazardous chemicals into the environment. In addition, even the generally non-toxic chemicals such as chloride, sodium, sulphate and ammonia which may be released as a result of leaching of demolition waste, are known to lead to degradation of groundwater quality.

ii) Dust

Large quantities of dust will be generated during demolition works. This will affect demolition staff as well as the neighbouring residents. Personal Protective Equipment (PPE) will accordingly be provided

iii) Noise and Vibration

The demolition works will lead to significant deterioration of the acoustic environment within the project site and the surrounding areas.

CHAPTER 6: ENVIRONMENTAL MANAGEMENT PLAN

The objective of the Environmental Management Plan (EMP) is usually to provide a logical framework within which identified negative environmental impacts can be mitigated and monitored. In addition the EMP assigns responsibilities of actions to various actors and provides a timeframe within which mitigation measures and monitoring can be done. The EMP is a vital output of an Environmental Impact Assessment as it provides a checklist for project monitoring and evaluation. The EMP outlined below will address the identified potential negative impacts and mitigation measures of the proposed development project.

The necessary objectives, activities, mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts associated with the project.

The management plan complements the mitigation measures identified in chapter five. It provides a matrix to link key impacts to actors who will undertake action on impacts identified. Action taken shall restore if not compensate damages and losses in the environment occasioned by the development of the project.

IMPACTS	OBJECTIVES	MITIGATION MEASURES	RESPONSIBLE ACTORS	COST	TIME FRAME	VERIFIABLE INDICATORS
THE CONSTRUCTION PHASE						
Loss of vegetative cover and site biodiversity	➢To minimize the destruction of trees ➢To restore, retain and improve tree cover ➢To retain some of the existing stock	✓Undertake top survey to establish their exact locations on site. ✓Undertake selective clearing ✓Retain mature trees on site ✓Plant more trees ✓Landscape and beautify the site on completion of construction works ✓Delineate an area for indigenous tree gardening	•The Proponent •The Site Contractor •The Landscape Architect	150,000/=	Throughout the construction phase	❖The number of trees on site ❖Presence of indigenous mature trees ❖The number of trees planted.
Destruction of the soil and ground slope	➢To restore the ground. ➢To minimize soil erosion. ➢To improve the general outlook.	✓Level and compact the ground to enhance stability ✓Create ample landscaping to address varying levels ✓Plant grass. ✓Create walk ways. ✓Improve vegetative cover and replace losses through replanting	•The Site Contractor •The Proponent •The Site Engineer •The Project Designer	200,000/=	Throughout the construction phase	❖Land scaping ❖Paved walk ways ❖Existence of terraces.
Increased surface run-off	➢To control surface runoff ➢To prevent soil erosion	✓Landscaping ✓Improve tree cover ✓Create storm water drains. ✓Harvest rain water on site ✓Stabilize and level the ground to break	•The Site Contractor •The Proponent	180,000/=	Throughout the construction phase	❖Existence of storm water drains ❖Non-existence of rills
Accumulation of wastes	➢To minimize wastes ➢To eliminate waste accumulation ➢To improve site aesthetics	✓Remove building material wastes ✓Provide building material in prepared forms ✓Dispose of all the wastes generated ✓Recycled materials ✓Sub-contract an agent to clear site debris.	•The Site Contractor •The Sub Contracted Agent	100,000/=	Throughout the project cycle	❖Non-existence of wastes.
Pollution of the environment	➢To control pollution	✓Provide a waste treatment system ✓Ensure no improper discharge of waste water ✓Control erosion on site	•The Proponent	❖To be determined	Throughout the project cycle	❖Non-existence of wastes ❖Quality air conditions

Increased traffic volume	➢To minimize traffic conflict ➢To avert accidents	✓Create a walk way to the plot entrance ✓Provide sign posts to guide motorists ✓Provide ample parking on the plot ✓Liaise with the roads department to improve safety measures.	•The Transport Planner •The Works Officer •The Municipal Engineer •The Proponent	❖The cost shall be assessed by the transport planner	During the onset of construction	❖An acceleration lane. ❖A walk way ❖Parking bays
Increased liquid and solid wastes	➢To minimize pollution ➢To improve environmental health	✓Provide waste bins in strategic locations ✓Engage an agent in collecting refuse. ✓Construct a refuse chamber for kitchen collection ✓Provide clear warning signs of management of wastes. ✓Employ ground keepers	•The Proponent •A Sewerage and Waste Water Consultant Company •The Municipal Council	100,000/=	Throughout the project cycle	❖Existence of treatment works ❖Waste bins ❖The number of times collection is done.
Strain on water supply systems	➢To ensure constant supply of water ➢To minimize strain on the existing sources	✓Construct an underground or elevated storage tank with sufficient capacity ✓Sink a bore hole ✓Maintain the supply system ✓Liaise with CWB to upgrade the waterline.	•The Coast Water Board •The Proponent •The Contractor	❖Costs to be assessed by the contracted company	Throughout the construction phase	❖Existence of an efficient water system
Strain on energy sources	➢To maintain energy supply ➢To minimize strain	✓Purchase and install a generator ✓Use energy saving systems (bulbs) ✓Purchase of step up systems to cushion against variation ✓Tap solar energy for alternative use ✓Use of wind power for the borehole	✓The Proponent ✓KPLC	❖Within the project cost	Throughout the construction phase and operational phase	❖Generator ❖Use of solar
Increased health and safety risks	➢To minimize risks ➢To promote safety ➢To create a healthy and conducive working environment	Workers on site shall:- ✓Use protective gear when undertaking works {helmets, gloves etc} ✓Accident kitty shall be provided ✓The working schedule shall conform to labour laws. ✓Allocation of duty shall be based on professional training. ✓Use of machines to transfer and shift	•The Proponent •The Site Contractor	❖Within the project cost	Throughout the construction phase	❖Non-existence of wastes ❖Quality air conditions

		materials shall be employed to minimize strain. ✓Undertake target group measures to ensure effective management. ✓All employees on the site shall be trained on health, hygiene and safety. ✓First aid kits shall be availed in strategic locations ✓A health scheme shall be provided to all employees. ✓Stickers and labels shall be put in the necessary area. ✓Clear warnings of hazards shall be indicated. ✓Fire equipments shall be installed in all buildings ✓Fire fighting equipments shall be erected.				
Site aesthetics	➢To make the site appealing	✓Landscaping of the site ✓Constant clearing and maintenance by staff ✓Water the ground ✓Plant suitable grass	•The Proponent •The Site Contractor	❖To commence once the project is operational	Throughout the construction phase and operation phase	❖The number of trees on site ❖Presence of a beautiful landscaped site ❖The number of trees planted.
THE OPERATIONAL PHASE						
Increased solid waste generation	➢To decrease solid waste generation	✓Providing adequate number of sanitary facilities for the workers, residents and visitors ✓Provision of bins, one for bio-degradable and another for non-biodegradable matter. ✓Providing adequate number of suitable solid waste containers ✓Contracting a licensed waste transporter to collect solid waste for	•The Proponent •The Site Contractor	100,000/=	Throughout the operation phase	❖Waste bins ❖The number of times collection is done.

		dumping at an approved site ✓Create awareness on the solid waste integrated management programme ✓Undertake checkup on the drainage ✓Undertake regular maintenance to minimize leakage and blockage				
Increased liquid waste generation	✓To decrease liquid waste generation	✓Routine checkups and monitoring of the sewer system to ensure the sewerage and effluents always drain effectively through properly designed and laid pipes ✓Sanitary facilities shall be kept clean throughout ✓Any breakage to the waste pipes shall be fixed promptly ✓Monitor effluent water quality regularly to ensure that the stipulated discharge rules and standards are not violated	•The Proponent •The Site Contractor	100,000/=	Throughout the operation phase	❖Existence of treatment works
Visual Impacts	✓To enhance the visual outlook	✓The proponents shall engage the services of a landscape architect on preferred finishes that enhances visual outlook, uniqueness and visual appreciation ✓The building finishing shall incorporate a screening effect that blocks direct views of the neighbouring plots from the upper windows of dwelling units on the upper floors ✓Harmonize details, material and finishes for the roofs and walls with existing developments in the neighbourhood ✓Other site improvements shall be undertaken to enhance aesthetics	•The Proponent •The Site Contractor •The Landscape Architect	❖To be assessed by the Landscape Architect	During the operation phase	❖A beautiful landscaped site
Increased Pressure on trunk	✓To ensure efficient usage of trunk infra-structure	✓The building should have water harvesting systems (gutters, downpipes and water storage facilities to enhance	•The Proponent •The Site Contractor •The Works Officer	500,000/=	Throughout the operation phase	❖The presence of storage tanks ❖Storm drains

infrastructure		collection and storage of rain water). ✓Sensitize the residents on efficient water use. ✓Paving of and site frontage and any other open area should be done using pervious materials like concrete blocks as this will encourage water percolation. ✓Ensure electrical equipment, appliances and lights are switched off when not being used and install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy. ✓The pro-active design of the building has incorporated storm drains to channel storm water to existing natural drainage systems. The storm drains shall be kept open and regularly maintained. It will utilize an appropriate design to enhance flow.				
Increased flow of traffic along the Ngala Road and traffic conflict	✓To ease traffic congestion	✓Provide road signs to guide traffic flow ✓Use traffic reflectors ✓Create bumps to reduce speed along Ngala Road	•The Proponent •The Site Contractor •The Works Officer	800,000/=	During the operation phase	❖Traffic reflectors ❖Bumps ❖Road signs
Noise pollution	✓To reduce noise emission	✓Build a perimeter wall to cushion against noise intensity ✓Eliminate use of noise gadgets ✓Use silencers on generators	•The Proponent •The Site Contractor	500,000/=	During the operation phase	❖Noise free environment
Increased surface run off	✓To eliminate surface run off	✓Improve and level the area near the gate to minimize accumulation of storm water ✓Construct a storm drain to join the existing Municipal Council storm water drain. ✓Enhance grass cover to minimize storm	•The Proponent •The Site Contractor •The Landscape Architect	350,000/=	During the operation phase	❖Existence of storm water drains ❖Non-existence of rills

		water intensity.				
Fire Outbreak	✓To ensure safety	✓Provide extinguishers ✓Check, monitor and replace fire extinguishers to ensure they can cater for emergency needs.	•The Proponent •The Site Contractor	430,000/=	Throughout the operation phase	❖Fire extinguishers
THE DECOMMISSIONING PHASE						
Accumulation of rubbles	➢To ensure safety in the demolition process ➢To restore the site qualities ➢To salvage some useful materials from the structures	✓Engage a qualified contractor to undertake demolition works ✓Employ the best technology in the demolition and destruction of structures ✓Sample out useful materials ✓Dispose of waste ✓Engage a landscape architect to restore the site qualities in preparation for new projects ✓Undertake assessment of the ground through a competent geologist	•The Proponent •The Site Contractor •The Landscape Architect	1,000,000/=	3 months after closure	❖Non- existence of rubbles on site ❖The quantities of salvaged materials.
Noise pollution and vibration	➢To reduce noise emission	✓Switch of the engines of the lorries while on site ✓Undertake demolitions during the day ✓Engage qualified persons ✓Avoid use of ballistic materials	•The Proponent •The Site Contractor	❖To be determined	3 weeks	❖Sound mufflers
Loss of employment	➢To ensure efficient off-loading of workers	✓Provide advance notice to workers ✓Notify welfare schemes to pay workers ✓Organize pension payments with registered firms	•The Proponent •The Labour Office •The Pensions Department •The Insurance Companies.	❖To be determined	**All payments to workers to be made three weeks after closure.**	❖Payments made to workers ❖Notification to the labour office

PUBLIC CONSULTATION

Public consultation is one of the methods that were used to enable understanding of the social and economic characteristics of the local community. Public consultation was also done in pursuit of compliance with the provisions of EIA/A regulations which require that the major stakeholders to a project must be adequately consulted. The EIA consultant understands that the local community members are major stakeholders in the project, and therefore gathered their views and included them in this report. In addition, the public consultation and social impact assessment was carried out in line with NEMA requirements and in general good practice by Kilifi salt Ltd to remain compliant with the law.

For the purposes of this assessment, the public consultation strategy was designed to involve any and all individuals or groups that would be positively or negatively affected by the proposed development. The strategy involved face-to-face discussions with the public to inform and educate the stakeholders and any interested and affected parties (IAPs) on the proposed development as well as its consequences.

LEVEL 1

This process also involved sampling of some members of the community and requesting them to fill in some structured questionnaires. This consultation process dealt more with the project's anticipated impacts on the local environment as well as health and safety of the neighbouring residents.

Most of the local residents who were interviewed did not anticipate any negative impacts of the proposed project on the area environment, health and safety. The consultants informed them that mitigation measures will be put in place during construction to ensure minimization of any possible impact of the project on the environment. All of the local residents who were interviewed welcomed the project and mentioned various benefits that they expected from the project such as improved communication, increased business and improved security.*(questionnaires attached in the annex of this report)*

LEVEL 2

This involved 3 public barazas with the local residents,local village elders and local adminstration as well as the NGO'S in the area.The first meeting was held on 19th February 2015 wheraes the second meeting was held on 27TH AUGUST 2015 at BREEZE POINT hotel at 8.00AM.

The third meeting was held on 4th november 2015 at the Chiefs Office Gongoni at 12.30pm

(minutes of the three meetings attached in annex 3 of this report)

Seniour government officials attended the meetings for instance for instace mr John Mazuri who is the Minister of lands attendeded the meeting also Mr Menza Minister Of Agriculture attended the third meeting.

Various stakeholders from different field were also present including enviromental consultants,physical planners,seniour health officer of the area,DO AND DC Magarini subcounty and seniour officer fisheries department.

Non govermental organisations such as the RAIS FORUM and Community Forest Association were also represented during the meeting.

The following are the general issues of concern and recommendations that were raised during the meetings.

Plate 5 showing the first meeting held at Breeze hotel

Plate 6 showing the next meeting that was held at the chiefs office Gongoni

Issues raised regarding the proposed project

- The project should benefit the community
- Land for expansion should not disrupt human settlement.

- Roads to the fishing grounds should be left accessible/protected to enable fishermen go to the grounds.
- Water wells should not be affected as they serve the community.
- Roads should be improved for easy accessibility
- Trees should be planted to improve water catchment areas.
- Rivers should be protected so that there is even flow.
- The people's welfare should be put into consideration in this noble plan i.e. expansion plan should not lead to loss of property.
- The program is likely to cause environmental pollution/degradation. Friendly environmental initiatives should be intertwined in the expansion program like tree planting in which all stakeholders are involved.
- The company should expand its Corporate Social Responsibilities to interior areas by setting up schools or enhancing the existing schools' infrastructure and or any other amenities that will benefit the community.

Recommendations in regard to the proposed development

- The project should be done with consideration of the lives of the community.
- The project should benefit the community like expansion of infrastructural facilities
- A buffer zone of trees should be planted in between the pans and the habitable areas to

protect the land and the inhabitants.

- Protect the water wells from getting salty.
- Protect the fishing grounds to help the fishermen.
- Salt pans should not be dug near classrooms.
- Employment should first benefit the natives before considering the people outside the area.
- The program should be geared towards improving the living standards of the locals.
- The company should include in their budgetary allocations, a fund that shall benefit the community. It should also extend their programs by working with schools that are located in the interior and not just those around their salt works.
- Involve all the stakeholders and pledge to improve their economic conditions.
- Environmental protection and conservation should be put as apriority for the utilization of the next generation.
- Education activities should be put into consideration during development. Developments should focus on improving the standards of education in the area such as school infrastructure, fees payment for bright children from poor families among others..

- Take our views seriously and help the community with development projects.
- The proposed project should have a timeframe that factor in the community's

psychological reception of the expansion program.

- The company should treat its workers well.
- The project will reduce the poverty level as more people will reap from the expansion

program to support their families.

- The project is good and expansion should go on.

The company promised to build an access road from Kibaoni on the 50m access that will run all the way to the beach

From the survey findings, the residents and the various stakeholders involved do support the project. In the entire interview sessions and in the questionnaires filled, which are attached in appendices of this report, all of the people interviewed accepted and welcomed the project. This is because to them the salt project will not only create employment opportunities as awell as improve the economy of the area .

CONCLUSION AND RECOMMENDATIONS

The main objective of proposed project is development of 54 No.Salt Farming on plot 28509; Malindi. The preparation of this EIA project report was carried out to fulfill legal requirements, as outlined in the Environmental Management and

Co-ordination act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003).

The report established that the construction and operation phases of the proposed project will have both positive and negative impacts on the environment. In order to ameliorate envisaged negative impacts this report provides suitable mitigation measures. These measures are tailored to effectively overcome anticipated negative impacts through a program of continuous monitoring and strict adherence of the recommended Environmental Management and Monitoring Plan (EMP).

The project proponents will work closely with the lead experts including NEMA, the general public and the MCM to attain environmental compliance and highest performance standards.

Annual audits shall also be executed to establish efficiency and adequacy of operational systems. It is with these considerations that I recommend this project for approval and issuance of NEMA license to facilitate commencement of works on site.

REFERENCES

1. UNCED, (United Nations Commission and Development), (1992): ***Agenda 21. The Earth Summit,*** Rio De Janairo
2. Schramm,G. and Warford, (1989) Environmental ***Management and Economic Development.*** The John Hopkins University Press, Baltimore.
3. Government of Kenya, (1999).***Environmental Management and Coordination Act*** Government Press Nairobi
4. Government of Kenya, (1996): ***Physical Planning Act Cap 286.*** Government Press Nairobi
5. Government of Kenya, (2002): ***Water Act***. Government Press Nairobi
6. Government of Kenya, (1978) ***Local Government Act Cap 265.***Government Press Nairobi
7. Government of Kenya, (1986) ***Sessional Paper No 1 of 1986 on Development Prospects and Policies.*** Government Press Nairobi
8. Erick, J.S & Ronald, L. (1982): ***Water supply and sanitation in developing countries***. Ann Arbor Science
9. Biswas, A.K & Geping, Q. U (2002): ***Environmental Impact Assessment for developing countries***. The United Nations University.Tycooly publishing, London
10. Government of Kenya, ***Public Health Act (Cap 242).*** Government Press Nairobi
11. Government of Kenya, ***the Way leaves Act (Cap 292)*** Government Press Nairobi
12. Mathason, F.J. (1966); ***Geological Survey of Kenya***
13. Mathu, E.M and Davies, T. C (1966); ***Geology and the Environment in Kenya: journal of African earth sciences,*** volume 23, Number 4
14. Ministry of Planning and National Development, CBS (2006) ***Economic Survey,*** Government Printers Nairobi
15. Hotel Bed Occupancy, Malindi District (1995-2000), District Tourist Office Malindi
16. Malindi district Poverty Assessment Report 2006, District Commissioner's Office Malindi.
17. HIV/AIDS Prevalence by Division in Malindi District (2006), Malindi District.