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15 April, 2013

RE: Environmental Impact Assessment Study Report for Construction of the First Three Berths of the Proposed Lamu Port and Associated Infrastructure

We, members of Save Lamu, a coalition of 36 Community-Based Organisations in Lamu County write in response to a notice by NEMA in the Daily Nation dated 19th March, 2013 that informs the public of the opportunity to submit comments on an ESIA report Construction of the First Three Berths of the Proposed Lamu Port and Associated Infrastructure in Manda Bay, Lamu County, Kenya.

We have undertaken a review of the ESIA Study Report and hereby submit comments on key issues with respect to the procedure (that is, how the ESIA was conducted) and substantive elements of the report that require amendments and re-consideration. The issues raised include inadequate research methods and public consultation, incomplete baseline information and description of impacts, insufficient assessment of project alternatives, and impractical and even harmful recommendations on measures to mitigate impacts as contained in the ESIA.

Comments

Public consultation

- As noted in page 144 of the ESIA, the Researchers clearly state that only questionnaires, key-informant interviews, focus group discussions, and direct observation were utilized to satisfy the requirement of public consultation. However, their neglect to hold three public meetings, providing adequate notice and convenient venues and times is contrary to Section 17 of the Environmental (Impact Assessment and Audit) Regulations, 2003. Of those held with a variety of stakeholders, we are only aware of meetings carried out with interest groups in Lamu town, one of which was carried out on August 2nd, 2012 to introduce the consultant to the Lamu Port Steering Committee before the commencement of the EIA Study (and thus cannot be considered a public meeting for the purpose of public consultation), and another on February 30th, 2013 to provide a presentation of the researchers' final results. These meetings were arguably not open to the "public", given no public notices were given for residents living outside of Lamu Island to attend the meeting, particularly those who are living on or around the proposed Port site at Kililani, (and it is noted that construction has already begun prior to satisfying the requirement of approval of an ESIA). We bring to your attention, therefore, that these meetings fail to meet the requirements as a "public meeting" after locking out a large number of directly affected communities, especially those from Pate and Manda Island, as well as people from the mainland of Lamu County.
- It is also important to note that public meetings can be ineffective when the meeting is facilitated by government officials or those in positions of power. In such occasions, the community can be intimidated and authority is used to gain influence and consensus rather than creating an atmosphere conducive for real exchange of ideas and consultations. This was indeed the case of the second meeting held on February 30th, which was called and facilitated by the County Commissioner with representatives from Ministry of Land, Agriculture, Education, KPA, Chiefs and other government officials. The meeting was used to seek approval of the findings of the ESIA, without any copies of the report available for review or final voting to obtain consensus on the report. Given the nature of

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this project, its size and potential impact on the entire community of Lamu, a range of public participation techniques such as door to door interviews, consulting people on the street, a call for public comment on the internet and over the radio is most reflective of true public participation.

- In addition, the Researchers did not adequately inform the affected parties and communities of the proposed project as is stipulated in the Environmental (Impact Assessment and Audit) Regulations, 2003 through failing to display posters in strategic public places in the vicinity of the site of the proposed project, to publish a notice on the proposed project for two successive weeks in a newspaper that has a nation-wide circulation, and to make an announcement of the notice in both official and local languages on a radio with a nation-wide coverage for at least once a week for two consecutive weeks in accordance to the Environmental (Impact Assessment and Audit) Regulations, 2003.
- Having had some of our members interviewed during the consultation process, we noted that the interviews were not equipped with comprehensive information on the project prior to being consulted. The interviewers instead assumed that the interviewees are already adequately informed on the project. This is particularly disconcerting since the report fails to be explicit in the information that was shared during focus groups and interviews and it was highly likely that opinions provided during the consultation process were based on false assumptions of the project. For example, the consultant failed to provide any map indicating the location of relevant components of the project.
- With respect to methodology in developing the report, it is noted that the ESIA is available only in English. The vast majority of the affected communities will not have an opportunity to review the ESIA, given the predominant language is Kiswahili. We request that the document be made available in Swahili and public hearings be conducted in Kiswahili so as to afford reasonable opportunity for the persons unable to read and write to comment on the report orally.
- In addition, Section 59(1) of the Environmental Management and Coordination Act (EMCA), 1999, grants “a time limit of not exceeding ninety days for the submission of oral or written comments by any member of the public on the environmental impact assessment study” to allow the community to submit their comments orally as well. Considering the national significance of the project and the insufficient public consultation to date, and the inadequacies of the EIA Expert, Heztech Engineering Services, to address the impacts and mitigation methods appropriately, these public hearings are necessary to ensure fulfilment of this legislative requirement

Baseline Information on Biodiversity

In the great haste to finalise the study, it is clear that numerous steps were overlooked whilst obtaining the baseline information on the environmental status of the region. Save Lamu notes with great concern that numerous steps were overlooked which are vital to ensure adequate monitoring and evaluation of the project.

Water, Current and Tides

- We are concerned that some steps to obtain technical data for analysing water, current and tides were skipped due to financial constraints of the project proponent. For example:
 - When looking at turbidity load for disperse simulation (Pg. 77), the Researchers note that sieve test results are unavailable for four out of the six borehole samplings in Manda Bay. The administrators rely on two borehole results, which is, by any standard, an inadequate sampling.
 - Further, the report further states that in dredging a “clay melting ratio is assumed completely without any experiments but only intuitively. Because the experimental method itself is not established yet nor the financial restriction allows the study team to carry out the additional experiments” (Pg. 79).

- It is disconcerting to learn that the project proponent was unable to finance lab tests to enable projections of effects on the marine life in a project that will cost the Kenyan government over Ksh 1.5 billion and will have significant effects on the local environment and ecosystems. This inability to thoroughly finance significant portions of the ESIA including tests, ultimately producing an inadequate ESIA raises a red flag signalling that perhaps other scientific research has been inadequately conducted due to financial and time constraints. This is too important a project, affecting the livelihoods and rights of many people in Lamu, to cut corners on cost. The administrators have listed numerous impacts on the environment and social fabric of Lamu County but this is incomplete given the lack of due diligence and proper completion of testing and analysis. The community have not received decisive and informed projections to avoid any ill-informed and “intuitive” decision-making.

Flora and Fauna

- We see that there are significant gaps in the marine ecological assessment of the ESIA as the researchers have only examined the immediate vicinity of the port area. This can be seen on ESIA map (Pg. 99), which shows 16 study locations studied which are directly under the first three berths. What has not been examined is the ship paths and port entry way and points northward past the reclaimed land roadway for the port. Furthermore, the study was carried over a cross-section and not longitudinally, which fails to take into consideration the change in flora and fauna during the different tidal seasons in the Lamu Archipelago. The Lamu archipelago is a unique ecosystem and this is acknowledged internationally. As a consequence, there needs to be more extensive research on the effects and impacts of the Port development as a whole.

Mangrove

- In the assessment of mangroves, the researchers selected sampling points on Manda Island, Pate Island Swamps, and Mongoni and Dodori creek Swamps. These samplings are inadequate to provide a clear picture of mangroves in the area. For example, the administrators have not examined Kililana where the road to the port site will be constructed and the Mkanda channel. Indeed, work has already commenced in Kililana without a proper assessment of its impacts. In our view, the report administration failed to explain their justification of selected sampling sites and their distance to recognized fish breeding and mangrove harvesting sites. It is also clear that indigenous knowledge of mangrove has not been factored in to the assessment. To augment any gaps the administrators have stated that: “Any mangroves not foreseen for clearing but likely to suffer from primary impact will be assessed during project implementation (pg 113). This is an inadequate response to the loss of habitat for mangrove and it is unclear whether regeneration is an option. Furthermore, since cumulated impacts can reach a 100km radius of the port from potential oil spill, sampling points around the entire archipelago should be mandatory. These sampling points should encompass areas near mangrove harvesting and fish breeding sites.
- We are also aware that a mangrove specialist was not employed by the Report Administration even though they have specified the importance of mangrove to climate change, fisheries, marine life, forests, economic activities and community services, among others. There are mangrove specialists from Kenya Marine and Forestry Research Institute that could have been co-opted for the ESIA Report. It is indeed detrimental to the project that a mangrove specialist was not engaged.

Birdlife

- We have noted with concern that the report administration has failed to capture the extreme diversity of the birdlife in the area. For example, the migratory nature of birds is not captured in the report and this is of utmost important when assessing the impact of the port. Instead, the report relies on a cross-sectional field survey at the project site where 26 species were spotted (Pg. 116). No details are given as to the season of the field survey, which as stated above directly impacts the number and species of birds available. Furthermore, the consultant used observation techniques only

whereas recognized standard bird survey methods such as water bird counts and timed species counts were not attempted. We find it surprising that in a project area that has some of the highest forest and mangrove cover in Kenya, only 26 bird species were identified when in the neighbouring area of Lake Kenyatta, researchers have recorded a total of 142 bird species¹. There are bird specialists available in the area including those from the NGO “A Rocha” who are knowledgeable in the appropriate scientific methods in which to provide a baseline survey needed for this report. The report provided on birds reveals a large gap in the baseline studies and thus is inadequate and detrimental to the project.

Fisheries

- In the ESIA, fisheries were assessed using field surveys conducted at various landing sites to quantify the fish catches and species of fish caught (Pg. 133). This method inadequately captures fisheries data since fish brought to landing sites do not reflect the types and quantities of fish found in the sea. Typically, fishermen select the fish they bring back to shore, and discard unwanted fish. This being the case, data from landing sites is inadequate to provide a baseline of the types of fish in the area. Furthermore, the survey is unable to capture the interdependency of marine life because not all fish are identified, nor is their place understood in the marine biodiversity of the area. Our review has determined that a direct sampling and survey of fish breeding and harvest sites are necessary to ensure a clearer sampling and to complement the field surveys carried out at fish landing sites. These samplings and testings should also be carried out in the port’s path to provide a clearer picture of fisheries in the area.

Coral:

- In assessing the coral, the consultant selects 10 coral sites within the area where ships are expected to gain entry into the port area but surprisingly fails to assess sites immediately lying under the site of the three berths, which have immediate and direct impacts from the dredging, marked in the image below; as well as the travel route of the ships headed towards the berths in the open sea. Overlooking such important sites to justify a “rapid assessment” as mentioned by the consultant (Pg 112), is an inadequate means to inform the design and engineering teams on the suitability of the site for the proposed project.

¹ Ogoma, m. (2011). Avifaunal survey of Lake Kenyatta ecosystem, Kenya. African Bird Club. Retrieved on April 4th, 2013 from http://www.africanbirdclub.org/sites/default/files/Kenya_lake_kenyatta_2011_final.pdf.

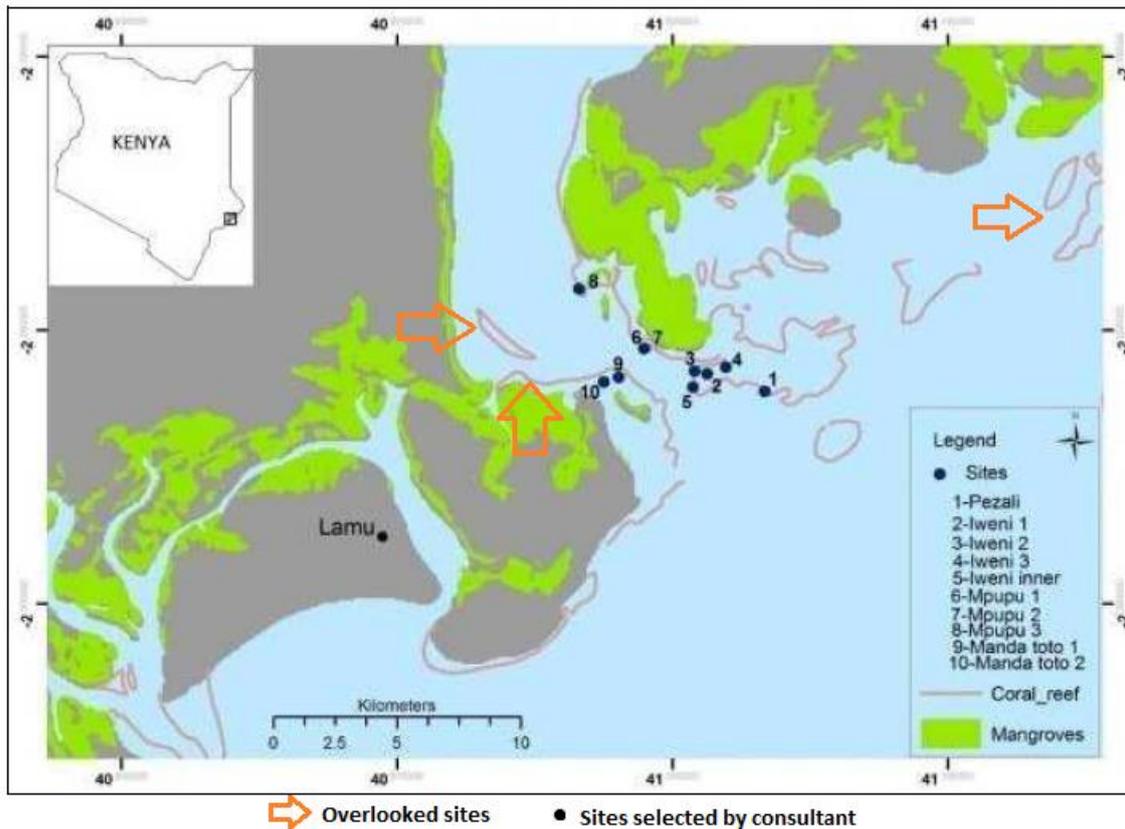


Figure 1. Coral Study Areas (Adapted from the EIA pg 123)

- The environmental sensitivity map (fig. 7.2 in ch. 7) has no reef marked in the Manda Bay mouth, and coral reefs are not mentioned anywhere in the executive summary. Thus, it seems coral reef presence in Manda Bay is generally ignored or downplayed and inadequately addressed in the ESIA.
- The rush to carry out an EIA is evidenced by the fact that the researchers failed to include important data collected by the on-going CDTF funded GIS baseline study for the Lamu Archipelago conservation and Community livelihood initiatives undertaken by locally by Kikozi Programme Group and Lamu Marine Conservation Trust. The GIS Baseline Survey maps the marine and coastal resources within the project area while providing baseline information to assess resource use trends and measure the impact of the project within the area. An adequate ESIA would take into consideration the research and work of local stakeholders, particularly where they have research relevant to the ESIA. The lack of consultation with local experts, therefore, illustrates an inadequate, both in terms of substance and procedure.

Terrestrial Life

- We are concerned that the ESIA report makes no mention of effects on terrestrial mammals on the mainland in view of the planned road and related infrastructure, which includes the already commenced port offices. The 2011 Feasibility Study carried out by Japan Port Consultants report that “there is evidence that large mammals cross the tidal flat to the west of the proposed site” and that the Kenya Wildlife Service (KWS) reports elephants migrating from Dodori National Reserve to Manda Island during low tide. The Feasibility Study lists several key wildlife in the Lamu Port Project Area including those whose statuses are listed as endangered, vulnerable and critical (See Figure 2) who are totally ignored in the ESIA report. Considering that Heztech Engineering Services carried out the environmental components of the feasibility study, yet these were not included in the ESIA, points to a significant gap in the research conducted which simply cannot be ignored and must be accounted for.

Species Name	KWS List	IUCN Status	CITES
Aders Duiker (<i>Cephalophus adersi</i>)	-	Critically	Not Listed
African Wild Dog (<i>Lycaon pictus</i>)	Yes	Endangered	Not Listed
African Elephant (<i>Loxodonta africana</i>)	Yes	Vulnerable	Appendix 1
African Lion (<i>Panthera leo</i>)	Yes	Vulnerable	Appendix II
African Fish Eagle (<i>Haliaeetus vocifer</i>)	-	Least Concern	Appendix II
Black-chested Snake-Eagle (<i>Ciraetus pectoralis</i>)	-	Least Concern	Appendix II
Bateleur (<i>Terathopius ecaudatu</i>)	-	Least Concern	Appendix II
Hippopotamus (<i>Hippopotamus amphibious</i>)		Vulnerable	Appendix II
African Buffalo (<i>Syncerus caffer</i>)		Least Concern	Not Listed

Figure 2. List of Key Wildlife in Lamu Port Project Area (Japan Port Consultants²)

Assessment of project alternatives

- The alternative port sites suggested in the ESIA are inadequate. They have suggested alternate locations in the immediate vicinity of Lamu and Manda Islands but have not attempted to locate other positions along the northern coast even though the justification of the port is to provide a northern corridor for Kenya. The Lamu Magogoni Port site was identified in 1977 by R. Renardet, commissioned by the then Ministry of Power & Communications. This study has not been made public, making it impossible for us to discern if in fact Lamu is the best site or compare the impacts of the other proposed sites. Given the exponential increase in science and technology over the last 30 years later, it is difficult to believe that a more suitable location (than the fragile ecosystem and World Heritage Site of the Lamu Archipelago) cannot be found. Indeed, real alternatives have not been adequately sought. Similarly, the channel depths and terrestrial formations have undergone change since the report in 1976 and, given the insufficient and inadequate process of the development of the ESIA reported above, we have grave fears that these changes have not been adequately analysed in their current states. The project proponent should therefore undertake a comprehensive strategic environmental assessment that takes into consideration all other alternatives outside the immediate project area to allow for more informed decision-making.
- If we are to assume that the Magogoni site is actually the best, there still remain gaps as to how dredging vessel types and disposal sites were selected, and the adequate provision for traffic routes and resettlement plans. The administrators present a “one option only” solution for both implementation and mitigation plans. The report fails to elucidate the alternative dredging vessel types, disposal sites, traffic routes and resettlement plans as required as per their terms of reference

² Japan Port Consultants (2011).

in page 13 of the report, including alternatives to replanting mangrove, relocating fish species, and many more.

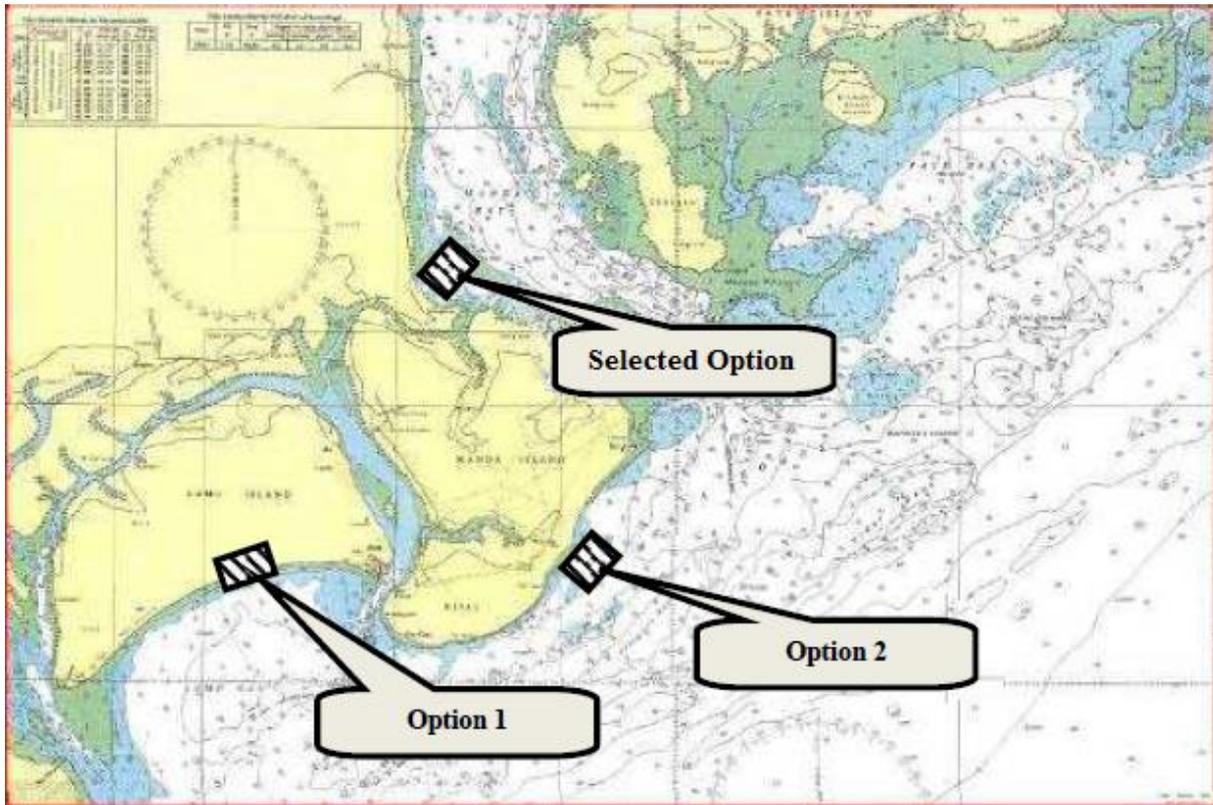


Figure 3. Alternatives Considered (Adapted from the EIA Pg 32-33)

Description of impacts

As a result of the above detailed the gaps, the environmental impacts of the project predicted by the researchers are highly inadequate because it minimizes expected impacts. This is mainly by failing to consider the ecosystem value of the region to the greater East African Coast. Their description of impacts gives a picture of significant negative effects on the environment, yet the researchers have greatly downplayed negative impacts to the ecosystem as a whole. The ESIA report also fails to distinguish the various phases of the port construction and its use and concentrates most of the impacts described within the construction phase alone. This is a significant omission and thus it is unclear to the community how later phases of growth in the construction of other berths and running the port will impact them and the environment. There is also a gap as to how the mitigation measures suggested by the researchers will potentially impact the environment.

Ecological

- The researchers claim that there are no fish breeding sites near the proposed three berths, yet, they provide no samplings or analysis to back up their finding. If this claim is correct, the researchers still need to deduce the impacts of the change in mangrove cover on the ecological balance of the area. Considering that Lamu has some of the highest carbon stocks of mangrove in the country, it is fair to expect that the degradation of mangroves will lead to an increase carbon emissions over an extended period of time and therefore should be addressed, particularly since Kenya has a commitment to reduce emissions from deforestation and forest degradation.
- We have observed that the researchers limit their scope to short-term impacts and therefore fail to consider the broader climate changes expected. This is a substantial gap in the ESIA and renders the ESIA completely inadequate if it does not assess all impacts of the project. In addition, they fail to

consider the anticipated changes in sea levels and how this knowledge affects the location of the project in the future. In 2007, the Intergovernmental Panel on Climate Change (IPCC) projected that during the 21st century, sea levels will rise another 18 to 59 cm (7.1 to 23 in)³. Given that Lamu is only 6 metres above sea level, it is important to consider such a potential change in sea level in the design of the port. These IPCC projections do not include “uncertainties in climate-carbon cycle feedbacks nor do they include the full effects of changes in ice sheet flow”. As such, the levels could be much higher in the next few decades and should be considered to help advice on where and how the port should be best constructed.

- We are concerned that the Researchers have described the impacts to water column turbidity as “temporary, localized, & may not be well understood currently”. How the researchers can make a conclusion that an impact is temporary and localized without them fully understanding the matter is highly contradictory and lends question to their ability to arrive at such a conclusion. It is not good enough for the researchers of an ESIA to conclude that they do not understand a potential impact of a project, particularly one with the potential of such drastic negative impacts on the environment as this project.
- We are discouraged that 2 hectares of mangrove forest in Kililana were decimated last year (pg 157) prior to the beginning of this ESIA process, yet the report fails to summarize the impacts of this. The cutting of mangrove is particularly disconcerting considering that the ESIA report states that the clearing of mangroves was carried out without the oversight of the Kenya Forest Service (KFS) and yet NEMA has not acted on the matter. It therefore sets out the illegality of this construction, work that is continuing despite its illegality.
- The fact that the population in Lamu is expected to increase to over 1.5million with the construction of the port is not given appropriate attention when estimating the resulting environmental degradation expected from pollution, change in land utilisation patterns, increase demand for timber and other natural resources and the flow on effects to the unique ecosystem of Lamu.
- The environmental sensitivity map (fig. 7.2 in ch. 7) has no reef marked in the Manda Bay mouth, and coral reefs are not mentioned anywhere in the executive summary. Thus, it seems coral reef presence in Manda Bay is generally ignored or downplayed yet it is a vibrant ecological area adding value to the community through tourism and fisheries. It’s omission further signifies the inadequacies of the ESIA.
- The report also ignores the effect of noise pollution on fish. Sound travels very fast in water and can lead to fish travelling to more distant areas to avoid the sound stress. This will inevitably lead to a reduction or loss of fish population in the area, affecting livelihoods. Heavy metals can also be consumed by fish and through bio-magnification the metals will accumulate in the fish. Through food web concepts, almost all the fish in the area will be affected by these metals. These fish will either die, causing loss of fish population, or be non-consumable, where if consumed they will pose a serious health threat to the consumers.

Socioeconomic

- As with the assessment of biodiversity, the impacts are assessed with a narrow focus on the immediate environs around the three berths and fail to assess the cumulative and long-term effect of the project on the ecological balance of the region.
- By focusing on mostly communities within the immediate environs of the port, the researchers gravely underestimate the number of community members dependant on tourism as only 2% (Pg.

152). This ignores the economic benefits generated by multiplier effect of tourism through indirect services including those of retailers, vendors, farmers, fishermen etc.

- The potential accumulation of contaminants in the fish consumed through bio-magnification can causing serious illness to fish consumers, including cancer, and as such reduce the market value of the fish to local and international markets, which is not mentioned in the report.
- The ESIA Report fails to consider the impact of the project on tourism for the community managed marine conservation area in Iweni. The report states that the conservation area is under protection by the community and earning five BMUs a livelihood but will be entirely lost due to dredging (Pg 177). Based on calculations from Lamu Marine Conservation Trust, the conservation area earns the BMUs about Ksh 16.4 million in salaries for tour guides per year, and Ksh1.3 million in conservation fees per year. Such a significant impact should not so easily be overlooked.
- The consideration of loss of tourism is also only considered by looking at the primary impact of losing direct revenue from tourists visiting the adjacent conservation areas. As a secondary impact, reduction in biodiversity that will result in neighbouring conservation areas is more difficult to predict and not mentioned in the report. There is therefore a great need to factor in the costs of ecosystem goods and services lost or gained as a result of the project.
- With regards to the impact on culture, the report notes that a heritage impact assessment (HIA) should be carried out prior to the commencement of the project (Pg. iv). The Report contradicts itself in advising in the following page (v) that “the project be allowed to proceed on condition that the proponent implements the mitigation measures proposed in this report”. It is strongly argued above that the mitigation measures quoted in this ESIA are largely inadequate, given the lack of necessary funding and expertise to do this ESIA properly. Considering that Lamu is a UNESCO World Heritage Site that is greatly dependant on tourism, NEMA should prioritize the undertaking of this Heritage Impact Assessment (HIA) before any further work comments. In line with this informed thinking, the UNESCO World Heritage Committee expressed a strong concern over the Lamu-Southern Sudan-Ethiopia Transport (LAPSSET) corridor during its 36th Session in June 2011, by demanding that the government halt and prevent any further construction of the new Lamu Port and LAPSSET facilities at Lamu until a comprehensive HIA is undertaken.
- While the report claims that the project area is not a fish breeding site, secondary impacts from the loss of mangrove as a source of lumber are poorly considered. In addition, the loss of mangroves exposes shorelines to storm surge and erosion therefore exposing the beach front to erosion. This can result in a cumulative cost of billions of shillings which can only be deduced with appropriate monetary valuation of ecosystems services.
- Furthermore, there is a need for the valuation of the mangrove revenue lost that could be obtained through the UN-REDD+ programme. Currently, the Kenya Forest Service is working nationally on introducing more community-led REDD+ programmes nationally. Locally, the WWF is raising awareness on REDD+ programmes in Lamu. A reduction in mangrove cover of the County will therefore curtail any opportunity for the community to benefit from carbon trade activities.
- Despite the recognition that piracy activities in Somalia costs the world economy \$18 billion a year⁴, the report fails to mention the potential risk posed by insecurity towards shipping vessels from Somali pirates following the initiation of the port. Piracy in the region is highly probable and could potentially force shippers to alter trading routes and thereby affect the community as well as operations of the Lamu port.

⁴ World Bank (2013). *The Pirates of Somalia: Ending the Threat, Rebuilding a Nation*. Washington, DC: USA.

- Considering that the port will bring a population increase of over 1500% from the current numbers, inadequate attention is given to the expected cumulative social impacts resulting from this such as access to social services, inadequate capacity of school, social goods, and other infrastructure. Also, details on the cost evaluation of the impacts are not provided.
- The Researchers focus on the impact on land owners immediately around the port area only and ignores the cumulative impacts from the increase in population and resulting increase in land speculation and land grabbing in the area. It also fails to recognize the different land users including hunter-gathers and pastoralists who rely on communal land and not individual land ownership. It fails to take into the consideration the rights that these communities have to their community land as a result of the port development and subsequent land speculation and land grabbing. Indeed, the project has infringed the constitutional rights of a significant proportion of the Lamu community.
- The impacts of HIV/AIDS are not adequately mitigated as comprehensive prevention measures are not outlined, especially for incoming ships and staff at the port site who are will have the highest risk of HIV/AIDS transmission.
- While increase in land value is usually a positive impact, in Lamu almost 80% of the local communities do not have title deeds and live in poverty, thus such a drastic increase in land prices make it difficult for them to purchase land and compete with investors coming into the region. From the announcement of the port launch a year ago, land prices in the region have quadrupled, making it almost impossible for locals to purchase land that is titled.

Mitigation Measures

The EIA openly describes disastrous negative impacts but fails to provide meaningful resolution to the issues raised. These include the following as per Table 11a (Pg. 170-174) in the report. More generally, the responsible institution, timeline for implementation as well as monitoring and evaluation baseline and limitations should be clearly indicated for each mitigation measure proposed. The monetary costs of all the mitigation measures are also not spelled out and included in the total cost of the project so that is not assumed as a cost to be borne the community or County government.

Loss of fishing grounds and landing sites

- The consultant proposes that gear and vessel exchange to use other fishing grounds and methods including modern fishing equipment as a simplified solution, neglecting the capacity of the fishermen in utilizing the new equipment over the long-term as well as in the sustainability to finance fuelling and maintaining the boats. He fails to assign the responsible party and establish the number of fishermen who will benefit from this activity. Furthermore, there is no assessment carried out of the availability of adequate fish reserves or their sustainability with a sudden increase in deep sea fishing in the region (currently being illegally fishing by fishermen from neighbouring countries Tanzania and Somalia).
- The Researchers refer to the provision of “power, access roads and cold rooms or ice making plants.” Having noted that 50 years after independence, 90% of fishing communities in Lamu East remain without electricity or proper roads, the proposition to create these sound more like a wish list than an immediate solution.
- On page 180 of the report, the administrators suggest supporting one BMU project as part of corporate social responsibility (CSR) in order to mitigate the effects. This belittles the fact that CSR is not equivalent to mitigation plans, nor is supporting a BMU, a legal right that communities are entitled to register for, something that should be considered or used as an alternative to adequately

protecting the livelihoods and resources of this community. Whereas mitigation plans are part of due procedure, CSR is only an indirect benefit that accrues from the profits of the said project. As such, a separation of CSR from mitigation plans is required. In addition, supporting only one BMU is ineffective considering that five alone operate in the Iweni Conservation Area lying directly in the port area and there are 29 BMUs in Lamu, of which 13 of them will be lost because they are within the proposed project site.

- The Report states that two fishing landing sites will be lost on the mainland. However, they have not described which ones nor identified them on a map. The mitigation for this loss is to develop alternative sites. However, they have not addressed how and where this would be accomplished. Who is responsible and time frame for putting into place the mitigation measure is required. Given the levels of poverty experienced by the people of Lamu, it is simply not good enough to take away the livelihoods of a significant proportion of the population (being fisherfolk), without providing or allowing for due and respectful consideration of alternatives.
- The Report fails to mention the occurrence of and greater numbers of invasive species, including sharks in shipping lanes and harbours of ports. Their presence will have a harmful effect on tourism and fisheries. This is a gap in the ESIA and there is no mitigation measures provided.
- Key shrimp fishing areas will be lost within the proposed port area which will hamper fishermen to access these grounds and natural resources. The loss of these key shrimping sites will affect the livelihoods of the fishermen in Lamu. Also, the Report neglects to provide mitigation for these fishers and their shrimp sites as the shrimp population is found in brackish water.

Closure of “Mkanda” (channel) during port operation

- The ESIA researchers state the Mkanda or channel will be closed. The researchers failed to adequately capture the Mkanda’s importance to the community and to all economic activities in the area. This channel is the only route utilized by fishermen, traders, school children, tourists and the community traveling from island to island and to Lamu town for essential social and government services. Locals use the route on a daily basis to transport basic household goods from Lamu Town, where daily supplies for convenience stores in Pate, Kiwayuu, and Ndau Islands, as well as Kiangwe, and Mkokoni villages are obtained from. In addition tourists mostly travel through the route to visit the Lamu archipelago. The closure of the Mkanda is equivalent to cutting off all social and economic activities for the communities in Lamu East and Lamu West.
- The ESIA researchers provide an alternate route that consists of Manda-Shela-Lamu, an ocean route that exposes small boats to high seas that are impassable in some seasons of monsoon winds. Even in calm weather, the seas are too rough for carrying passengers in small boats. This alternate route is unacceptable to the community and clearly exhibits a lack of consultation with the community and use of traditional knowledge of the people living here.
- A water by-pass has also been suggested, namely the development of a “Siyu Channel” for use by small boats, as well as the construction of an airstrip in Lamu east. The Researchers neglect to point out that an airstrip exists in Lamu East but is not utilized due to the high cost of air travel. Furthermore, developing a “Siyu Channel” is not described in any measure nor is it identified on a map in the report. If the channel is expected to be through Pate Island near Siyu, then the administrators should have noted that the channel is dry during low tide and is impassable. The proposal for a Siyu Channel will require dredging almost 2km in length and almost 50m sufficient depth for boats to pass. It would therefore be necessary to cut over 6 hectares of mangrove and it would interfere with Siyu village, where the 16th century Siyu Fort is located. Significantly, the channel would divide Pate Island into two, thereby requiring a bridge. The proposal for developing a channel is an enormous undertaking, perhaps equal to the construction of the three berths of the port

deserving an additional ESIA of its own to examine the impacts and mitigation measures. Despite the impacts being far reaching, none are listed in this ESIA Report.

- The ESIA researchers suggest that “proper transport” is a solution yet fails to clearly specify in greater detail the alternatives. A comparison of the alternatives and potential impacts should have been detailed. For example, one other alternative not yet considered would be to first assure an existing and reliable access road via Mkokoni to Mokowe and provide free ferries across from Mtangawanda to the Mainland. Since the risks and benefits of alternatives such as these have not been captured in this ESIA Report, it is not facilitating informed decision-making.

Clearing mangroves will affect livelihoods

- The mitigation measures suggested by the ESIA Report to resolve the impact of mangrove clearing is to “re-plant mangroves in other areas”. Considering that mangrove harvesters only utilize fully grown mangrove, which take almost a decade of growth, re-planting mangrove in other areas will not provide an immediate resolution to the matter. Furthermore, restoration activities are not specified including the proposed locations and their environmental suitability based on water currents, water consistency and ground substance, etc. For example, the Mkanda has been a place where mangrove has been planted to restore the mangrove loss from former dredging. These areas have failed to retake the growth and mangrove loss is evident.

Agricultural land and land owners are being displaced in Kililana

- The ESIA researchers propose the compensation of land owners in the port area but fail to report that in the series of consultations with the Kililana community, it was agreed that both compensation and resettlement will occur since the rate of compensation would not provide sufficient financial support for the farmers who have lost years’ worth of agricultural produce.
- The ESIA report states that the Compensation process will be steered by DC, Chiefs and community leaders. However, this mitigation fails to acknowledge the new laws that recognise the County Government and related community land board as the sole entities responsible over land management in the area. The new constitutional dispensation recognizes the roles of the Governor and his staff and should therefore be reflected in the report.

Reduction in value of mangroves and coral reefs would affect tourism

- The report purports the use of measures to minimize damage to mangroves and corals as a solution to the impact on coral and mangrove. However, on page 177, they indicate that the coral reef of Iweni Conservation area will be completely lost due to the adverse effects caused by dredging. We believe that diverse mitigation measures should be examined here to offset the loss of the value of the coral reef to BMUs and local tour guides including those of Promise Ahadi Dhow Operators, and many others following their immediate loss in millions of Ksh in revenue. Exploration of the pristine coral reefs are a major tourist attraction in Lamu. Such a project is likely to result in a dramatic decline in tourism, affecting the livelihoods of the majority of the Lamu community.
- The Report suggests that ecological and oceanographic studies be carried out before clearing mangrove to ensure the ecological balance. However, two hectares of mangrove have already been cleared before the ESIA report was established. Mitigation in this case has been ignored by the proponents of the project (Pg. 181), and penalties should be spelled out for this.
- Suggesting that the mangrove be replanted is but an artificial ecosystem which can never offer equivalent ecological values.
- The report proposes to minimize sediment by deploying turbidity barriers to prevent sedimentation on coral. However, these “turbidity barriers” are not described in the report. There needs to be clear

identification as to how and where they will be placed and to what effect. How long would they be left in the bay? How do they affect currents, fish movement and other flows in the channel? Have they ever been shown to be effective at reducing coral reef degradation associated with dredging? No information is given on the details of any of these points and the strategy seems highly flawed. This suggests the lack of relevant experience of the ESIA consultants to develop such an important report.

- The Report fails to mention the size of the Community Conservation Area of Iweni containing the coral reef areas that are to be destroyed by dredging. The administrators need to provide the number of acres affected so that a true reflection of the impact of the project is recorded and compensation values are accurate.
- With respect to creating artificial reefs to provide habitat to replace affected coral, no details are given on where an artificial reef would be placed, how it would be built or how effected corals may be transported there. Coral replantation is best carried out prior to the damage of corals. As such, proposing that dredging of the three berths is carried out before such a procedure is carried out is ill-advised and reflects the lack of expertise of the consultants to make such a judgement. Prior to any works, best practice calls for a Coral Propagation "backup" to be undertaken where a few cuttings from each adult colony should be preserved in case of loss. Unfortunately, by failing to provide any timeline and methodology for implementing such a procedure prior to construction works, the report may lead to significant genetic losses of the reefs before any transplantation is possible. Coral reefs are highly complex habitats with specific oceanographic limits of growth. Reefs are also highly variable from one location to another. It seems highly unlikely that a site similar to Manda Toto will be found, and if a truly similar site is found, it would be found, the biodiversity will never be regained. Furthermore, translocation of this reef is unfeasible and also completely impractical considering the 2km extent of the reef complex. Let alone replantation of dredged coral, which is much harder, recovery of existing coral reefs has been noted to take as long as 20-50 years^{5,6}. The United Nations Environment Programme therefore advises that “transplanting corals for coral-reef restoration should by no means be regarded as a universal solution for the dire position coral reefs are facing today. Prevention of coral-reef decline is a considerably more effective management strategy than restoration”⁷.
- Although monitoring is crucial for assessing the health of any ecosystem, it is not a mitigation strategy in and of itself. The report, (Pg 198), claims that coral mortality and other indicators will be regularly assessed in case “impacts to coral reef is minimised and kept within the limits of acceptable loss”, but gives no suggestion of what actions will be taken if the reef is being negatively affected. No acceptable limits or thresholds are identified when action should be taken to prevent the continuing decline of the ecosystem and no practical mitigation actions are suggested should these thresholds be overstepped.

Ownership issues – fear of local residents being locked out of port related benefits

- The researchers suggest the use of “a clear benefit sharing system with the community”, yet fails to acknowledge the role which the County government is to play. What is needed is a better definition of the benefit sharing system and specificity as to how it will work for the benefit of the county.
- The report fails to provide “affirmative action” where priority is given to locals during employment as a possible solution for the above.

⁵ Dulvy NK, D Stanwell-Smith, WRT Darwall, and CJ Horrill 1995. Coral mining at Mafia Island, Tanzania: a management dilemma. *Ambio*, 24: 358-365.

⁶ Pearson RG 1981. Recovery and colonization of coral reefs. *Marine Ecology Progress Series*, 4:105-122

⁷ UNEP (2004). *Successes and Challenges in the Management of Coral Reef Marine Protected Areas. UNEP Regional Seas Report and Studies No. 176, People and Reefs*: Nairobi, Kenya.

Loss of the World Heritage Site

- The report loosely states that the mitigation measure for protecting the World Heritage Site is “protection of the world heritage site by ensuring proper mitigation measures are put in place”. In other words, the mitigation measure suggested is to create a mitigation measure, a cyclical solution that has no clear focus or action plan. The researchers should suggest clear methods to work with the National Museums of Kenya and suggest clear strategies to be developed, including by-laws to protect the heritage site, a heritage management and development plan—long overdue for Lamu—and a heritage impact assessment. The administrators should also refer to the recommendations provided by UNESCO during their field visit in Lamu in 2010⁸.

Displacement, domination and loss of the cultural identity and change in the political landscape

- While mechanisms to preserve culture are well outlined, they fail to provide the mechanisms for how they will work and who is responsible. The report also fails to propose strategies that tackle disenfranchisement of political disempowerment.

Lifestyle of the Boni community will be disrupted by the presence of settlement schemes

- The ESIA report does not provide adequate solutions for the lack of land tenure for hunter-gatherer communities such as the Boni. Considering that the Boni are highly dependent on community land, the support for individual settlement schemes without considering the needs of hunter and gathering communities continues to disenfranchise them. As such, more rigid strategies are needed for empowering this group with community land ownership.

Overpopulation and expected influx of outsiders to Lamu County

- The impact of overpopulation and influx of outsiders is only addressed superficially. The main components of mitigation are civic awareness and education. The researchers fail to provide explicit and tangible mechanisms to deal with overpopulation. For example, the report proposes anti-drug awareness initiatives to deal with proliferation of drug trafficking with no mention of security measures. Also, the report completely fails to address the inadequacies of existing social services and infrastructure in Lamu County, which cannot cater for the new increasing population.
- Proposals to increase hospitals, schools, water, and other essential services throughout the County must be included as mitigation to the influx of outsiders to Lamu County are overlooked. Considering that the County allocation of Lamu in 2012 is based on the current population of 101,539, the funds are significantly lower than what is needed to plan for a drastic increase in population of 1.5 million people. As such, clear plans for revenue allocation and benefit-sharing with the county should be included in the mitigation measures.
- The existing serious water shortage in Lamu County has not been captured in the ESIA. For instance, the administrators have described the development of 4 boreholes in the area. This however is not nearly sufficient for the industry and population increase that are expected. Furthermore, it is not explained how this water will be channelled to residents in the archipelago. It is important to understand that the communities on Pate, Ndau and Kiwayu Islands are reliant on the mainland and Lamu Island for their water. This is a potential disaster if not planned appropriately.
- There are no mitigation measures to describe the influx of people to the area and the concern to protect historical sites of archaeological importance.

Displacement of people from their homes and land

⁸ Bakker, K.A., King, J., Eloundou, L. & Ohinata, F. (2010) Report on The Reactive Monitoring Mission To Lamu Old Town (C1055), Kenya. World Heritage Committee 34th Session. Brasilia, Brazil, 25 July – 3 August 2010.

- The ESIA report fails to adequately address the unique issues that hunter-gathers, pastoralists, and fishermen face in the development of the Lamu Port. The communities depend on shared forests, pastures, and fish landing sites, all of which need to be protected through community land registration. Since the Community Land Bill is still pending, specific considerations for community land registration should be stipulated in the report in alignment with the new land laws so as to come into effect during the enactment of the bill.
- The resettlement action plan for communities affected is not well detailed in the ESIA report in terms of the amount for compensation and land for allocation.

Unresolved land issues and skewed allocations of title deeds

- In addition to the Mpeketoni-1977, Hindi-Magogoni-1983 and Witu-1988 settlement schemes mentioned, the report fails to acknowledge the even bigger and more pressing issues of land grabbing and illegal allocation of land to individuals. The Researchers propose solutions that are inadequate to address these issues. It is the community's concern that unresolved land issues and skewed allocations of title deeds be investigated for land rights violations and a legal process to redress land right injustices that have been committed as part of mitigation measures.

Increased speculation and Acquisitions

- The ESIA report focuses only on land adjudication as a solution to land injustices. This inadequate measure neglects the importance of protecting community forests and communal land rights, protected in the Kenyan Constitution and regulating land use through proper planning from the County. The report fails to elucidate what exactly is defined as the "project area" and to outline the "the Limit of Lamu Port", as required in "the Kenya Ports Authority Act (Article 34). These definitions are very important in order to plan important safety of ship operations in the harbour as well as create a land use plan for the area that is accepted by the communities.

Other Issues

- The report fails to propose solutions for the increase in illegal immigration to pursue jobs in the region, and piracy of ships such as changes in internal and border security.
- Whereas a Project Matrix is indicated in the 2011 Feasibility Study outlining the implementation of necessary steps prior to the launch of the project, there is no similar matrix for the mitigation plans that should be undertaken.
- The development of an environmental management plan is not well detailed and clarified to include performance indicators, baselines, goals, responsible parties, outputs, and penalties in case of violations.
- The report fails to pay adequate attention to the impact on endangered species as well as the effects of the introduction of invasive species into the area by ships.

Conclusion

The ESIA report fails to provide the necessary information for appropriately considering alternatives in design and implementation of the project, as well as mitigation measures that will effectively address the negative impacts on the environment and social fabric of the community. Indeed, there are concerns that the expertise of the ESIA consultants is highly lacking, given the significant gaps in the ESIA – both as to procedure (and guessing, or not even addressing impacts, insufficiently addressing and asking for public comment) and as to substance. On analysis of the above concerns, we firmly believe that the Lamu Port will have significant and irreparable damage to the people of Lamu and their environment and unique ecosystems if implemented as is. Given the highly flawed ESIA, it is the duty of NEMA to refuse the issuance of an environmental impact assessment licence under the Act and advise the

proponent to provide comprehensive and independent analysis of all alternate sites proposed outside of those indicated in the report and their expected impacts through a strategic environmental assessment.

The LAPSSET project is widely publicized to include airports, highways, railway lines, oil pipeline and refinery, as well as resort cities which are all not included in the ESIA assessment. In 2011, NEMA noted that it has increasingly “faced challenges of inadequacy of the EIA to deal with cumulative, synergistic, secondary and long term impacts”. As recognized in your National Guidelines for Strategic Environmental Assessments in Kenya (2011), these impacts can be addressed if policies, plans and programmes (PPP) are subjected to the Strategic Environmental Assessment (SEA) process. We therefore request that considering the large scope of the project, that this tool be utilized for this project so as to analytically and systematically integrate environmental issues into PPP through rigorous stakeholder engagement prior to the commencement of the project.

The ecology in Lamu is widely recognized as one of the richest along the entire coast of East Africa and its ecosystems have worldwide recognition. It’s preservation and protection is therefore not only of national significance but are important internationally. Consequences of the project proponents’ failure to plan strategically with the three berths may include even higher economic, social and ecological costs. Especially considering Kenya’s new approach towards a Green Economy, comprehensive ecological valuation is essential and needed.

We therefore recommend that the proponent undertake assessments that adequately consider alternates to the proposed current location in Manda Bay, along the Kenyan coast and south of Lamu. We also request NEMA to provide an alternative review of the ESIA by qualified practioners. If in fact the goals of the Lamu port are to improve the national economy, then it is critical that its undertaking be done thoroughly and without bias so as to effectively minimize the social and environmental impacts. When presented with the necessary evidence, a more effective decision can be made on whether Manda Bay is in fact the most cost-efficient and sustainable project site.

Considering that the project proponent has already begun construction of the associated infrastructure of the three berths, we are gravely concerned over the legitimacy of the ESIA Report to prescribe advice on the best alternatives. We therefore also expect NEMA to halt the on-going construction until the above gaps are addressed effectively and in consultation with the community and take the necessary legal action on the matter as prescribed in section 45(1) of the EMCA 1999 which states that, “*any person who commences, proceeds with, executes or conducts or causes to commence, proceed with, execute or conduct any project without approval granted under these regulations commits an offence and on conviction is liable to the penalty prescribed under the Act.*”

In undertaking the above, NEMA will take ultimate responsibility over its roles as the custodian of our natural environmental to enforce the very regulations we have passed as Kenyans in the 2010 Constitution to preserve our right to a healthy environment.

Sincerely,



Abubakar Al-Amudy
Chairman

cc. Mr Edward Menza, Lamu Office, NEMA