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NON-TECHNICAL EXECUTIVE SUMMARY OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED IMPROVEMENT OF DAR ES SALAAM PORT: PHASE 1 OF DAR ES SALAAM MARITIME GATEWAY PROGRAM (DSMGP), TEMEKE MUNICIPALITY, DAR ES SALAAM REGION

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Contents

NON –TECHNICAL SUMMARY	4
1 Introduction.....	5
2 Project Components.....	6
2.1 Deepening and strengthening of Berths 1 – 7.....	6
2.2 Construction of new Ro-Ro Terminal at Gerezani.....	6
2.3 Improving rail linkages and platform in the Port.....	6
2.4 Increasing the capacity of the grain silos	6
3 Key Findings.....	7
3.1 Environmental Issues	7
3.2 Social Issues	8
4 Conclusion and Recommendations	9
4.1 Recommendations	9
4.2 Conclusion	10
MUHTASARI.....	11
1 Utangulizi.....	12
2 Vipengele vya Mradi	13
2.1 Kuongeza kina cha maji na kuimarisha maeneo ya kugeshea meli ghati namba 1 - 7	13
2.2 Ujenzi wa kituo kipya cha kugesha meli kubwa za magari katika mkondo wa Gerezani	13
2.3 Kuboresha na kuunganisha mtandao wa reli ndani ya bandari	13
2.4 Kuongeza uwezo wa maghala ya kuhifadhi nafaka kwa kuweka mitambo yenye kasi na uwezo mkubwa wa kubeba nafaka	13
3 Matokeo Muhimu	14
3.1 Masuala ya Kimazingira	14
3.2 Masuala ya Kijamii	15
4 Hitimisho na Mapendekezo	17
4.1 Mapendekezo	17
4.2 Hitimisho.....	18

NON –TECHNICAL SUMMARY

1 Introduction

The proposed project title is "Improvement of Dar es Salaam Port – Phase 1 of Dar es Salaam Maritime Gateway Program (DSMGP)". Tanzania Ports Authority (TPA) is the proponent and sole operator of the Dar es Salaam Port. The DSMGP is receiving support from various financial institutions, including the World Bank and the Department for International Development (DfID) through the Trade Mark East Africa initiative.

The DSMGP will be implemented in at least two different phases, in partnership between the Government of Tanzania, TPA, other public and private stakeholders, and a coalition of development partners including the Trade Mark East Africa (TMEA), the United Kingdom Department for International Development (DFID) and the World Bank (WB). Phase 1 includes the following four activities:

- Construction of a new multipurpose berth at Gerezani Creek – which shall be used for general cargo operations until Berths 1 to 7 are modernised;
- Deepening and strengthening Berths 1 to 7, with depth increased to 14 m below CD (Chart Datum) (approximately 1,281 m length) and paving of inshore container terminal yards at Berths 5 to 7;
- Improving rail linkages and platform inside the Port; and
- Increasing the capacity of the grain silo, and supporting the installation of a conveyor system, and high speed bulk grab.

Phase 2 activities are at an early stage of development and will be part of a spate stand-alone ESIA that will be prepared and disclosed.

2 Project Components

2.1 Deepening and strengthening of Berths 1 – 7

Deepening and strengthening of Berths 1 to 7 from a level of approximately 9 m (Berths 1 to 3) and 10 m (Berths 4 to 7) up to 14 m below Chart Datum (CD). This will include rehabilitation of Berths 1-7 platforms, extension of water depths in front of the quay wall Berths 1 to 7 and horizontal widening of quay apron and extension of quay wall seawards to approximately 11.5 m (or more).

2.2 Construction of new Ro-Ro Terminal at Gerezani

The new terminal will cover an area of 93,000 m², as a Ro-Ro and Multipurpose Terminal, partly incorporating the south-eastern corner of Malindi Wharf (Figure 2-5), which requires the existing quay wall to be rehabilitated and deepened. An estimated 1,100 m² of the corner of the existing Malindi Wharf will be utilised, for loading/unloading vehicles, a space approximately 50 m long (along the quay face) by 22 m width. This will have repercussions for the current users of the wharf.

To create space for the new Ro-Ro Terminal, the seaward portion of Gerezani Creek will have to be completely or partially filled with suitable material. The prospective Ro-Ro Berth will be aligned as a straight extension of Malindi Wharf quay wall towards the quay wall of Berth 1 (near the Port Managers Office).

2.3 Improving rail linkages and platform in the Port

The Feasibility Study (2013) recommended that TPA liaise with RAHCO to harmonise changes to the railway network in the Port. For new rail tracks, both existing gauges plus the standard gauge track can/should be joined into one single track. In short, all railway tracks should be removed from the quays, mid-port and back port locations and be replaced by maximum two through-going tracks with side tracks for loading where needed. The new wagon rail tracks should be exclusively concentrated at the rear sides of terminals close to the slope against Bandari Road, thus in prolongation of the TICTS Railway Station. Additional tracks are proposed for the cranes servicing the berths.

2.4 Increasing the capacity of the grain silos

Recognising the handling problems of the current grain storage silo, its small holding capacity, even for bulk carriers, and the need for hundreds of truck drive through trips from the ship to the silos, the Feasibility Study (2013) proposed four options for improvements to the system. The preferred option is to increase the capacity of the grain silo, install a conveyor system and a high speed bulk grab. This activity is divided into two main components, the high speed grab, first stage silos and conveyor system with loading stations for rail and trucks, and the renovation and expansion of the TPA grain silo.

3 Key Findings

3.1 Environmental Issues

Sn	Impact of Major Significance	Summary of mitigation measures
1	Extraction of raw materials from quarry sites.	<ul style="list-style-type: none"> • Use of only existing licensed quarries in the Coastal Region; • Minimising of dust generation during the collection of raw materials from these quarries by water sprinkling and covering of loose materials; • Further mitigation measures to be employed during drilling operations by licensed quarry owner.
2	Flooding of upper Gerezani Creek area due to accidentally blocking surface water flow into the harbour.	<ul style="list-style-type: none"> • Regular inspection and maintenance of culvert outlet.
3	Changes in marine water quality due to potential release of chemicals and heavy metals while dredging or backfilling.	<ul style="list-style-type: none"> • Remedial dredging to be conducted to remove sediments contaminated above acceptable levels; • Necessary treatment of dredged material to be undertaken prior to disposal.
4	Marine pollution due to disposal of dredged materials.	<ul style="list-style-type: none"> • Siting disposal at subaquatic depressions where sediment would be more laterally confined; • Dredging ideally to be done during wet season.
5	Increase in invasive species from increased shipping traffic.	<ul style="list-style-type: none"> • Prevention strategy and detection and rapid response plans to be developed; • Awareness among regular Port users to be increased through workshops; • Ballast water management plan; • Port facilities to conduct cleaning or repair of ballast tanks; • Treatment technologies to be adopted.
6	Increased marine pollution from improper disposal of waste from marine vessels.	<ul style="list-style-type: none"> • Oil skimmers to be available at the Port as well as chemical dispersants; • Waste generated on vessels to be collected and appropriately disposed of (as per 1973 MARPOL Convention) • Ship waste management plan
7	Accidental vessel collisions during dredging.	<ul style="list-style-type: none"> • Vessel speed restrictions to be imposed; • Dredging vessel to display required lights and signs for visibility;
8	Accidental collisions of vehicles and trains within the Port area.	<ul style="list-style-type: none"> • Signage, lights and audible signals at main railway crossings
9	Accidental spills of oils and chemicals	<ul style="list-style-type: none"> • Port staff to be trained; • Oil skimmers to be available at the Port as well as chemical dispersants and equipment to be routinely inspected.
10	Oil spills from accidental vessel collisions	<ul style="list-style-type: none"> • Vessels reminded on MARPOL obligations; • Port staff to be trained; • Equipment routinely inspected; • Oil spills drills held regularly

3.2 Social Issues

Sn	Impact of Major Significance	Summary of mitigation measures
1	Increased demand on existing infrastructure and facilities	<ul style="list-style-type: none"> • Temeke Municipal to be notified on roads to be used; • Additional toilets connected to septic tanks to be constructed (two units proposed to start) for use by construction workers; • TPA to allocate budget for increased costs related to water supply, sewage and solid waste.
2	Increased demand on energy and limited water resources	<ul style="list-style-type: none"> • Installation of power-saving electrical appliances; • Adoption of a cost effective and technically feasible renewable energy sources e.g. solar power for some port operations; • Limiting the timing of machinery operations in an efficient manner to minimize energy wastage and exhaust outputs; • Use of TPA's boreholes as water sources for construction purposes and allocation of the DAWASCO mains mostly to sanitary facilities stationed for construction labour; • Water-conservation training to construction labour and monitoring water usage; • Frequent maintenance checks on water supply systems
3	Reduced berth space at Malindi Wharf impacting existing users	<ul style="list-style-type: none"> • Relocation of banking services to other TPA buildings; • Northern portion of Malindi Wharf (Lighter and Dhow wharfs) to be dredged (maintenance dredging) to allow deeper draught vessels to use these portions. • Vehicle access for Malindi Wharf users improved for Gate 2 to avoid Gerezani RoRo Terminal area during construction and operation • Formation of a dedicated Steering Committee to address Malindi Wharf issues
4	Increased vehicle traffic	<ul style="list-style-type: none"> • Road and safety signs to be positioned along road network; • Speed bumps to be constructed where necessary; • Speed limits to be imposed; • Idling of vehicles to be prohibited; • Road damage to be attended to promptly;
5	Occupational risks and accidents	<ul style="list-style-type: none"> • Signage, lights around port area; • Audible signals at main railway crossings; • TPA OSHE committee to include safety with staff training and organise annual awareness campaigns • Labourers to be provided with PPE and first aid kits to be available onsite; • Health, safety, security and environment induction course to be conducted for workers; • Controlled access to site with warning signs around perimeter;
6	Increase in HIV/AIDS infection rate	<ul style="list-style-type: none"> • Workshops on HIV/AIDS and prevention to be conducted routinely for Port staff; • Conduct sensitisation activities, testing, counselling and promotion of condom use, etc.
7	Managing the redundancy of casual labourers following mechanisation of Port	<ul style="list-style-type: none"> • Involve casual labourers for those activities that are more labour intensive rather than highly mechanised. For example, during construction workers could be involved in offloading machinery, equipment and other essential services for construction purposes; • The workers have to be prepared for forced retirement; • The skilled workers will find alternative jobs; • Training on using the new technology and system should be provided where possible to casual labourers; • Retrenched labourers are to be given first priority for other TPA inland services at ICDs, etc.; • Identify the one to be retrenched and inform them about the possible opportunities that will arise during construction. For example , a group of casual labourers could undergo training on how to manage traffic movement in and out the project area especially for large vehicles transporting construction materials such as sands, aggregates and borrow pits entering construction site. This group could be trained on how to use flags and should be equipped with communication equipment's such as radio calls; • Project needs to be in compliance with national labour laws and workers' rights; during redundancy consider severance packages

4 Conclusion and Recommendations

The result of the study indicates that the project is beneficial to the TPA in terms of income generation. It will also benefit the adjacent communities by ways of employment creation, which is likely to reduce poverty levels. The government will also realise increased revenue from the services offered by the proposed port. Further, the envisaged construction of the four project activities under this Phase I is to be implemented on TPA-owned land and in an existing area such that no land take is required.

Regarding impacts of the project on the environment, all identified negative impacts that have been predicted appear to be of small-scale. Dust (air pollution), noises, and other wastes may occur, but are of little significance. These impacts are temporary in nature considering the mitigation measures that have been proposed.

This project will not require any resettlement of project affected people, i.e. neither physical nor economic displacement. Impacts related to land acquisition are not anticipated because land required for Phase 1 activities are located within TPA boundaries. In addition, the ESIA identified existing sites that the Contractor(s) employed for the construction can use: one is within the TPA area towards the Ship Yard area; the second is where the current contractor's camp for the Kigamboni Bridge located on Nelson Mandela Road. Therefore, the project does not require the preparation of a Resettlement Action Plan for Phase 1 activities. Of note are impacts from employment, Malindi Wharf, supply of backfill materials for the Gerezani Ro-Ro Terminal and dredging (including disposal of spoils).

4.1 Recommendations

For sustainability of the project and the ecosystems in general, the following recommendations should be implemented:

- TPA should undertake a stakeholders awareness campaign before construction begins, that is maintained during construction and operation phases. This can be in the form of meetings with all interested and affected parties. Stakeholders' site visits prior to the meeting will provide a better understanding of the project. In addition, project brochures can be disseminated to all key stakeholders including public offices in Temeke, Ilala and Kinondoni municipalities and City Council.
- All relevant government taxes associated with operations should be paid in a transparent way.
- Jobs and employment associated with the proposed project development as a matter of priority should be given to local communities with appropriate skills, or to those who have lost their jobs due to the mechanisation of the Port.
- The impact on existing job opportunities, particularly of casual labourers provided by the labour agencies, cannot be determined precisely at this stage, because details of the workforce required to operate the new facilities is in most instances not known at present. A detailed analysis of labour requirements associated with each of the four activities in Phase 1 is needed and should be shared with the agents and the community at a later stage. In case collective de facto redundancy of a large group of casual labour is unavoidable, TPA should aim to comply with IFC's Performance Standard 2 on labour and working conditions (2012), which presents guidelines for an appropriate retrenchment plan.

- Solid and liquid waste management should be strictly practiced in a systematic way to avoid systems malfunctioning and hence pollution to soils and groundwater and emphasis given to maintaining a clean environment around construction areas. Due to the anticipated increase in liquid waste generation, the existing handling infrastructure at the Port such as cesspits needs to be expanded as well. Further, TPA are encouraged to review their Waste Management Plan to ensure they meet international standards under the 1989 Basel Convention on Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal and the Environmental Health and Safety Guidelines for Hazardous Materials Management.
- Information gained from the sediment sampling surveys undertaken during the ESIA related to dredging (on sediment particle size and chemical composition), suggests that more comprehensive studies are required, particularly deeper into the sediment, before decisions can be made on the fate of the dredged material. This should also be conducted as part of the ESIA for the dredging of entrance channel and turning basin.
- Detailed geotechnical, soils and materials investigations should be conducted before project implementation begins.
- Implementation of the ESMoP should be the responsibility of the contractors engaged on the activities, with TPA participating in a supervisory role.
- To accompany developments associated with Phase 1 of the DSMGP, the EMS should be strengthened technically and in terms of equipment and resources at its disposal.

The ESMP provides the way forward for implementation of the identified mitigation measures. The estimated costs for implementing the mitigation measures should guide appropriate bills of quantities.

The ESMoP provides parameters to be monitored and responsibilities allocated. Again, the estimated budget provides an indication. Actual costs will be determined precisely when monitoring activities will be finalised once contractors have prepared method statements for the activities and sub-activities therein.

4.2 Conclusion

Given the nature and location of the project, the conclusion is that the proposed Phase 1 components of the DSMGP at Dar es Salaam Port will entail no significant impacts provided that the recommended mitigation measures are adequately and timely implemented. The potential impacts associated with the proposed developments are of a nature and extent that can be reduced, limited and eliminated by the application of appropriate mitigation measures.

The consultants from WAPCOS Ltd. are of the opinion that almost all potential environmental and social impacts identified may be mitigated against. There are few impacts that are considered residual in nature. The proposed environmental management plan and environmental monitoring programme if implemented will safeguard the integrity of the natural and social environment.

MUHTASARI

1 Utangulizi

Mradi unaopendekezwa ni Uboreshaji wa Bandari ya Dar es Salaam (DSMGP) - Awamu ya Kwanza. Mamlaka ya Usimamizi wa Bandari (TPA) ndio muwekezaji na muendeshaaji wa bandari hii. Mradi huu utapokea ufadhili kutokea taasisi mbalimbali za ikiwemo Benki ya Dunia (WB) na Idara ya Maendeleo ya Uingereza (DfID) kupitia mpango wa Trade Mark East Africa (TMEA).

Serikali ya Tanzania itatekeleza mradi huu wa DSMGP katika awamu mbili kwa kushirikiana na wadau mbalimbali, muunganiko wa nchi wahisani na taasisi mbalimbali za kimataifa kama vile Trade Mark East Africa (TMEA), Idara ya Maendeleo ya Uingereza (DFID) na Benki ya Dunia (WB). Awamu ya kwanza ya mradi huu utahusisha shughuli zifuatazo:

- Ujenzi wa kituo kipya cha kugesha meli kubwa za magari katika mkondo wa Gerezani;
- Kuongeza kina cha maji hadi mita 14 chini ya bahari na kuimarisha maeneo ya kugesha meli ghati namba 1 - 7;
- Kuboresha na kuunganisha mtandao wa reli ndani ya bandari; na
- Kuongeza uwezo wa maghala ya kuhifadhi nafaka kwa kuweka mitambo yenye kasi na uwezo mkubwa wa kubeba nafaka.

Awamu ya pili ya DSMGP IPO katika hatua za awali na maandalizi na utafanyiwa tathmini ya athari za kimazingira na kijamii kama ilivyokuwa kwa awamu ya kwanza. Vile vile, tathmini hii itawekwa wazi kwa umma.

2 Vipengele vya Mradi

2.1 Kuongeza kina cha maji na kuimarisha maeneo ya kuegesha meli ghati namba 1 - 7

Ujenzi utahusisha ukarabati wa sehemu za kuegesha meli , upanuzi wa kina cha maji kwa mita 14 mbele ya sehemu za kuta za kuegesha meli, kupanua usawa wa maeneo ya kuegesha meli kwa kuongeza urefu wa ukuta wa maegesho ya meli kuelekea baharini kwa takriban mita 11.5.

2.2 Ujenzi wa kituo kipya cha kuegesha meli kubwa za magari katika mkondo wa Gerezani

Eneo hili jipya litakuwa na ukubwa wa mita za mraba 93,000 ambalo litatumika kuhifadhia mizigo ya aina mbalimbali. Ujenzi wa kituo hiki kipya utamega sehemu ya bandari ya Malindi kwa takriban mita za mraba 1,100. Ili kuweza kutengeneza nafasi ya kutosha Gerezani, sehemu ya bahari itajazwa kifusi kinachofaa zaidi kutoka nchi kavu au baharini.

2.3 Kuboresha na kuunganisha mtandao wa reli ndani ya bandari

Upembuzi yakinifu uliofanyika mwaka 2013 ulipendekeza kwamba Mamlaka ya Bandari Tanzania (TPA) ishirikiane na Kampuni Hodhi ya Reli Tanzania (RAHCO) ili kuweza kujenga mfumo mpya wa reli ndani ya bandari ya Dar es Salaam. Mtandao wa reli uliopo sasa bandarini utaboreshwa zaidi kufikia geji ya juu na kutakuwa na njia moja kuu ya reli bandarini. Njia hii itaanzia upande wa kaskazini mpakani na TRL kupitia nyuma ya bandari karibu na mteremko wa geti namba 3 kuelekea kusini na kuunganisha pamoja na eneo la TICTS. Matoleo yatasanifiwa kwa ajili ya kuunganisha ghati zilizopo na njia kuu ya reli.

2.4 Kuongeza uwezo wa maghala ya kuhifadhi nafaka kwa kuweka mitambo yenye kasi na uwezo mkubwa wa kubeba nafaka

Maboresho haya yanafanyika kutokana na uwepo wa ufanisi mdogo sana katika kupakua nafaka melini na kusafirisha mpaka kwenye maghala ya kuhifadhia. Kwa hali ilivyo sasa, meli yenye shehena ya nafaka ikitia nanga, basi malori mengi sana yatahitajika ili kusafirisha nafaka hiyo kwenda kwenye maghala yaliyopo hapo hapo bandarini. Mfumo huu utabadilishwa na ambapo mitambo mikubwa na ya kisasa itajengwa na nafaka zitapakuliwa na kusafirishwa moja kwa moja kwenda kwenye maghala.

3 Matokeo Muhimu

3.1 Masuala ya Kimazingira

Na.	Athari Kuu Mbaya	Njia za Kuepuka ama Kupunguza
1	Uchimbaji wa kokoto, mchanga na malighafi zingine kwa ajili ya ujenzi	<ul style="list-style-type: none"> Mkandarasi atatumia machimbo yaliyopo na yenye leseni kwa sasa mkoa wa Pwani; Kumwaga maji ili kupunguza vumbi, na kufunika mchanga na kokoto wakati wa usafirishaji Miliki wa machimbo atafuata taratibu zingine zote kama ilivyoainishwa kwenye leseni yake.
2	Kutokea kwa mafuriko eneo la juu mkondo wa Gereza kutokana na kuziba	<ul style="list-style-type: none"> Ukaguzi na ukarabati wa mara kwa mara wa makalavati
3	Kupungua kwa ubora wa maji ya baharini kutokana na kemikali wakati wa uchimbaji ili kuongeza kina cha maji	<ul style="list-style-type: none"> Uchimbaji utafanyika ili kuondoa tope la juu liloathiriwa zaidi na kemikali za aina mbalimbali; Kabla ya kutupwa, uchafu na tope lenye kemikali utatibiwa kwanza
4	Uchafuzi wa bahari kutokana na utupaji wa tope	<ul style="list-style-type: none"> Eneo la kumwaga tope hili litakuwa mbali bahari kuu haswa sehemu zenye mabonde chini ya bahari ambapo tope halitaweza kusafirishwa zaidi na mawimbi au maji; Uchimbaji utafanyika kipindi cha masika
5	Kuongezeka kwa viumbe-bahari wapya wanaokuja na meli za kigeni zitakazongezeka	<ul style="list-style-type: none"> Mpango kazi maalum utakuwepo kwa ajili ya kuzuia na kupambana na hali kama hii; Kujenga na kupanua uelewa zaidi kwa watumiaji wa bandari; Mpango wa usimamizi wa farumi utakuwepo; Ukaguzi, matengenezo na usafi madhubuti wa miundombinu na vifaa vya bandarini; Teknolojia mbalimbali zifaazo kwa mazingira ya mradi itatumika kutibu farumi.
6	Uchafuzi wa bahari kutokana na utupaji ovyo wa taka kutokea kwenye meli zitakazokuja	<ul style="list-style-type: none"> Mitambo ya kutenganisha mafuta na maji pamoja na kemikali mbalimbali itakuwepo bandarini; Mpango wa usimamizi wa meli utakuwepo; Meli zote zitafuata matakwa wa mkataba wa kimataifa wa MARPOL (1973 MARPOL Convention)
7	Kugongana kwa mitambo wakati wa uchimbaji kuongeza kina cha maji baharini	<ul style="list-style-type: none"> Mwendokasi wa mitambo utadhibitiwa; Mitambo ya kuchimba itakuwa na alama pamoja na taa maalum ili kuepusha ajali.
8	Ajali katik ya treni na magari ndani ya bandari	<ul style="list-style-type: none"> Matumizi ya alama mbalimbali za kuongozea magari, treni, alama za sauti na pia vivuko katika makutano ya barabara na reli
9	Kemikali na mafuta kumwagika na kusambaa baharini	<ul style="list-style-type: none"> Wafanyakazi wa bandarini watafanyiwa mafunzo maalum; Mitambo ya kutenganisha mafuta na maji pamoja na kemikali mbalimbali itakuwepo bandarini. Sambamba na hili mitambo hii itakaguliwa mara kwa mara.
10	Kusambaa kwa mafuta baharini kutokana na ajali za meli na vyombo vingine vya baharini	<ul style="list-style-type: none"> Makampuni ya meli watazingatia taratibu, sheria na mahitaji ya mkataba wa MARPOL katika shughuli za baharini; Wafanyakazi wa bandarini watapatwa mafunzo; Ukaguzi wa mara kwa mara wa vifaa; na Mafunzo ya vitendo yanayohusu namna ya kukabilia na majanga ya aina hii.

3.2 Masuala ya Kijamii

Na.	Athari Kuu Mbaya	Njia za Kuepuka ama Kupunguza
1	Kuongezeka kwa mahitaji ya miundombinu na huduma za kijamii	<ul style="list-style-type: none"> Halmashauri ya wilaya ya Temeke itapewa taarifa mapema kuhusu barabara zitakazotumika ili pia washauri njia mbadala; Vyoo vya ziada vitajengwa kwa ajili ya wafanyakazi wakati wa ujenzi; Mamlaka ya Bandari (TPA) itatenga bajeti kwa ajili ya gharama zitakazoongezeka haswa maji, takataka na usafi wa mazingira Temeke Municipal to be notified on roads to be used;
2	Kuongezeka kwa mahitaji ya nishati na rasilimali maji	<ul style="list-style-type: none"> Matumizi ya vifaa vinavyotunza ama kutumia nishati kiasi kidogo; Matumizi ya vyanzo vya nishati mbadala kwa mfano, nishati-juu kwa baadhi ya shughuli bandarini; Matumizi sahihi na matengenezo ya mara kwa mara ya mashine zitumiazo nishati kiasi kikubwa; Matumizi ya maji ya visima mbali mbali vilivyopo bandarini kwa ajili ya shughuli za ujenzi, na maji yanayotolewa na DAWASCO yatatumika kwa shughuli za usafi kwa wajenzi; Wafanyakazi wajenzi watapewa mafunzo na kujengewa uwezo juu ya matumizi bora na endelevu ya maji; Maboresho ya mfumo wa usambazaji maji ili kuzuia upotevu wa maji
3	Kupungua kwa eneo la bandari ya Malindi hivyo kuathiri watumiaji wa sasa	<ul style="list-style-type: none"> Huduma za kibenki zilizopo katika eneo la bandari ya Malindi zitahamishiwa kwenye jingo jipya la bandari mara ujenzi utakapokamilika; Kongeza kina cha maji sehemu ya kaskazini mwa bandari ya Malindi kwa mita 5 – 5.5 kuanzia kwenye ghati la mizigo mpaka kwenye ghati ya majahazi; Watumiaji wa bandari ya Malindi pamoja na magari ya mizigo waruhusiwe kupitia geti namba namba 2 wakati wa ujenzi na uendeshaji wa mradi ili kuepuka usumbufu kupitia Gerezani. Kuundwa kwa kamati maalum ya kushughulikia masuala ya bandari ya Malindi wakati wa ujenzi
4	Kuongezeka kwa foleni katika barabara mbalimbali za jiji	<ul style="list-style-type: none"> Matumizi ya alama za kuongozea magari; Usimamizi madhubuti wa mwendokasi; Matumizi ya matuta pale inapowezekanika; Maeneo korofi ya barabara yatakarabatiwa mapema iwezekanavyo;
5	Hatari na ajali kazini	<ul style="list-style-type: none"> Matumizi ya alama, ishara na taa maeneo ya kazi; Ishara za sauti katika maeneo ya vivuko vya reli; Kujenga uelewa kwa wafanyakazi na watumiaji wa bandari juu ya masuala ya afya, usalama na hatari mbalimbali kazini; Wafanyakazi wote watavaa vifaa-kinga muda wote wakati wa ujenzi na operesheni ndani ya bandari; Kudhibiti uingiaji holela wa eneo la ujenzi na operesheni;
6	Kuongezeka kwa kasi ya maambukizi ya virusi vya UKIMWI	<ul style="list-style-type: none"> Semina elekezi kuhusiana na masuala ya UKIMWI itatolewa mara kwa mara; Uhamasishaji wa matumizi ya kondom, kujitolea kupima afya mara kwa mara;
7	Kupunguzwa kwa wafanyakazi baada ya ubadilishaji mifumo na teknolojia mpya ya kubebea nafaka	<ul style="list-style-type: none"> Wakati wa ujenzi, vibarua wahusishwe kwenye shughuli ambazo hazihitaji ujuzi kwa mfano, kupakua mizigo ya aina mbalimbali Wafanyakazi waandaliwe kisaikolojia na kupewa taarifa mapema kwajili ya kupunguzwa kazini; Wafanyakazi wenye ujuzi watafutwiwe kazi mbadala;

	<ul style="list-style-type: none">• Mafunzo juu ya matumizi ya teknolojia na mifumo mipya itolewe kwa vibarua pale inapowezekana ili kupunguza idadi ya wafanyakazi watakaochishwa kazi;• Wafanyakazi watakaopunguzwa wapewe kipaumbele kwenye kazi zingine bandarini kama vile huduma za bandari kavu (ICDs) na maeneo mengine;• Wafanyakazi watakaopunguzwa wapewe taarifa za fursa zingine zinazoweza kujitokeza wakati wa ujenzi kama vile kuongoza magari, kazi ndogondogo za hapa na pale• Mradi lazima uzingatie taratibu zote na matakwa ya kisheria kama ilivyoainishwa katika sheria za kazi katika kupunguza wafanyakazi kama vile malipo ya fidia, haki za wafanyakazi n.k
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4 Hitimisho na Mapendekezo

Matokeo ya utafiti huu unaonesha kwamba mradi pendekezwa una manufaa kwa Mamlaka ya Bandari, nchi ya Tanzania na ukanda wa nchi zinazotegemea bandari ya Dar es Salaam kwa ujumla. Tanzania itaweza kukuza uchumi wake kutokana na kuongezeka kwa mapato, ushuru na vilevile Wananchi wataweza kupata ajira kutoka na shughuli za ujenzi na uendeshaji. Hivi vyote vitachangia kupunguza umasikini katika ngazi ya kaya na Taifa kwa ujumla. Aidha, awamu hii ya kwanza ya mradi utatekelezwa ndani ya eneo la bandari hivyo hakutakuwa na uhamishaji wa aina wowote wa makazi ya watu ama ardhi ya ziada. Kwahiyo mradi hauhitaji maandalizi ya Mpango-Kazi wa Uhamishaji Makazi (RAP)

Kuhusiana na athari zilizotabiriwa, athari mbaya zote zinaonekana kuwa ni za kiwango kidogo. Kwa mfano uchafuzi wa hali ya hewa kutokana na vumbi, kelele na uzalishaji takangumu unaweza kutokea lakini ni kwa kiwango kidogo. Athari hizi ni za muda tuu haswa kipindi cha ujenzi na njia za kuepuka ama kupunguza madhara yake zimeanishwa.

Vilevile, tathmini hii imeainisha eneo ambalo kwa sasa linatumika kwaajili ya kambi ya mkandarasi mjenzi wa daraja jipya la Kigamboni, barabara ya Mandela. Eneo hili linaweza kutumika pia kama kambi kwaajili ya mkandarasi atakayeshinda zabuni ya ujenzi wa bandari awamu hii ya kwanza. Mambo makuu makubwa manne katika tathmini hii ni masuala ya ajira kwa wale watakaopunguzwa kutokana na ujio wa teknolojia mpya kwenye maghala ya nafaka, upatikanaji wa kifusi kwaajili ya kujaza eneo la Gerezani, kupungua kwa eneo la bandari ya Malindi and utupaji wa tope litakalotokana na uchimbaji kuongeza kina cha maji.

4.1 Mapendekezo

Ili mradi uwe endelevu ni muhimu mapendekezo yafuatayo yakatekelezwa:

- Mamlaka ya Bandari (TPA) inalazimika kuwafahamisha wadau wa aina mbalimbali na kuwajengea uelewa wa mradi kabla ya ujenzi kuanza, wakati wa ujenzi na kipindi cha uendeshaji. Hili linaweza kufanyika kupitia mikutano na wadau, vipeperushi na matangazo mbalimbali kwenye ofisi za umma kama vile Manispaa za Temeke, Ilala na Kinondoni pamoja na ofisi za Jiji.
- Ushuru na kodi zote za serikali zilipwe katika hali ya uwazi;
- Wazawa wapewe kipaumbele katika ajira zitakazotokana na ujenzi na uendeshaji wa mradi huu;
- katika hatua hii, ukubwa wa tatizo la vibarua watakaopoteza ajira zao kutokana na uboreshaji wa mifumo na teknolojia bandarini bado linahitaji uchambuzi wa kina. Hii ni kutokana na kukosekana kwa taarifa muhimu ya idadi na kada za wafanyakazi watakaohitajika kuendesha mitambo na mifumo mipya katika maghala ya nafaka. Upembuzi wa kina utahitajika kabla ya kuanza mradi, na pia endapo wafanyakazi wengi watapunguzwa ni muhimu Mamlaka ya Bandari ifuate taratibu za IFC Kiwango Na. 2 kuhusiana na Wafanyakazi na Mazingira ya Kazi.
- Ni lazima kuwepo na usimamizi makini wa taka laini na ngumu ili kuepuka madhara ya uchafuzi wa rasilimali maji yaliyopo ardhini na juu ya ardhi. Wakati wa ujenzi na uendeshaji taka nyingi zaidi zitazalishwa, hivyo ni muhimu kuboresha mifumo iliyopo sasa ili iweze kuendana na kasi ya uzalishaji taka. Vilevile, TPA inashauriwa kuipitia upya Mpango wa

Usimamizi wa Taka ili kuhakikisha kuwa inafikia viwango vya kimataifa na matakwa ya mkataba wa kimataifa wa Basel (Basel Convention, 1989).

- Uchunguzi wa kimaabara uliofanywa kwenye sampuli za tope litakalochimbwa ili kuongeza kina cha bahari unaonesha kuwa ni muhimu kufanya utafiti wa kina zaidi haswa kwenye kina kirefu ili kujiridhisha kwanza na maamuzi juu ya matumizi ama utupaji wa tope litakalochimbwa. Uchunguzi huu wa kina utafanyika kama sehemu ya utafiti mwingine wa athari za kimazingira na jamii awamu ya pili ya DSMGP.
- Kabla ya mradi kuanza ni muhimu kufanya uchunguzi wa miamba, udongo na maeneo ya kuchukulia malighafi za ujenzi kama vile mawe, kokoto na mchanga.
- Mkandarasi anawajibika kutekeleza Mpango wa Usimamizi wa Mazingira (ESMP), na TPA watakuwa wasimamizi wakuu.
- Mpango wa Ufuatiliaji wa Mazingira (EMP) unapaswa kuimarishwa zaidi kiufundi zaidi wakati wa ujenzi na uendeshaji wa mradi.

4.2 Hitimisho

Kutokana na aina ya mradi na mahali utakapotekelwa, hitimisho la tathmini hii ni kwamba mradi pendekezwa hauna madhara makubwa ikizingatiwa kwamba njia za kupunguza ama kuepuka madhara zitakelezwa kama ilivyopendekezwa na kwa muda muafaka. Athari mbaya zitokanazo na mradi ni za kiasi kidogo na zinaweza kupunguzwa, kuepukwa ama kuondoshwa kabisa. Endapo Mipango ya Usimamizi na Ufuatiliaji wa Mazingira na Masuala ya Kijamii utatekelezwa kama ilivyoainishwa utalinda ubora na asili ya mazingira.