

7.3.2 Environmental and Social Conditions of the Port of Lobito

1) Natural environmental condition

Lobito bay is a closed water area surrounded by sand bar with length of about 5km. The quay has been constructed in the west side of sand bar for anti-corrosion. Sedimentation has occurred at the top of quay, therefore, navigation aids are installed at the mouth of the port. This sedimentation is likely due to sand from the Catumbela River. Beach has formed on the west side of sand bar and is utilized by citizens as a recreational area. Lobito bay has deep bottom topography from the center to the mouth of the bay and sufficient water depth (10 to 30m) for ship navigation.

In the back side of Lobito bay, there is a huge wet land connected to Lobito bay by water channel. This wet land is a symbol of Lobito as many Pink Flamingo and Lesser Flamingo visit this area every year. Other than Flamingo, Pelican, Cormorant, Curlew, Plover, Sea Swallow, Sea Gull and so forth could be found during the study.

Fishing is prohibited within the bay area to protect fauna and flora. State government is to promoting green lands and tree plantations since deforestation occurred in the vicinity of Port of Lobito during the civil war.

City of Lobito constructed a Sewage Treatment Facility five years ago to treat discharged sanitation. This was for the protection of water quality of the wet land located at the backside of Lobito bay. However, according to water quality tests conducted in the study, COD and Coli form Count were found to be worst at the water channel connecting the wet land and Lobito bay. This is because the sewage treatment facility may not be functioning properly or untreated sanitary water drains.

2) Social environmental condition

Lobito has been developed around the port and the terminus of Benguela Railway. At this moment, this railway is only partially operated due to damage inflicted by the civil war, however, the full operation is scheduled resume in 3 years with the financial support of China and others. in the past, Benguela Railway transported iron ore and agricultural products such as sisal hemp, cotton, coffee and sugar in addition to mineral resources from other inland countries. Recovery of Benguela railway and Port of Lobito are now very much expected by other countries like Congo, Zambia, Botswana and Zimbabwe.

Port of Lobito holds a public yacht race once a year which allows people to feel more at home with the port. Current industries around the port are Benguela Railway, Petroleum, Cement, Brewery, Water and Sewerage Company, Salt Pot, Agriculture (sugar, rice and ricinus). Salt pot has been operated utilizing the wet land located at the back side of Port of Lobito. There is clear separation between the coastal line and the road by fence of 3m high. And there are 8 entrance gates from the road where cargoes and people enter and exit from the port.

Port workers clean the port facilities each day. Metal and wood work shops as well as a machine repair shop are located in the port to maintain equipment in safe working order. Furthermore, waste materials generated in the port which can be recycled are exported to South Africa or disposed of underground and at the backside of the port. Asbestos insulated corrugate sheet is used as the roof of warehouses in the port.

There are unpaved sections in the yard and the dust generated by port vehicles has become a environmental issue. The port is located close to the urban area, therefore, it is import to consider not only the environment of the port but the surrounding area as well. The quays in the port have no rubber fenders which results in damage to the hull of ships as well as the quay itself. Also, existing safety rudders are extremely old.

East revetment of south quay has collapsed and poses a danger to port activities. Chassis vehicles and railway are forward within the port. The urban area is located at the backside of the port, however, the width of road is sufficient and port related traffic is light. According to WFP, the food crisis is over. However still now 900,000 people are suffering from food shortages and about 130,000 ton of food to support them is scheduled to be supplied from January 2006 to December 2008 by WFP. 70% of this food is for Lobito. The main items are oil, cereal, sugar, salt, meat however, the problem is lack of electric power supply facilities for reefer containers in the port.

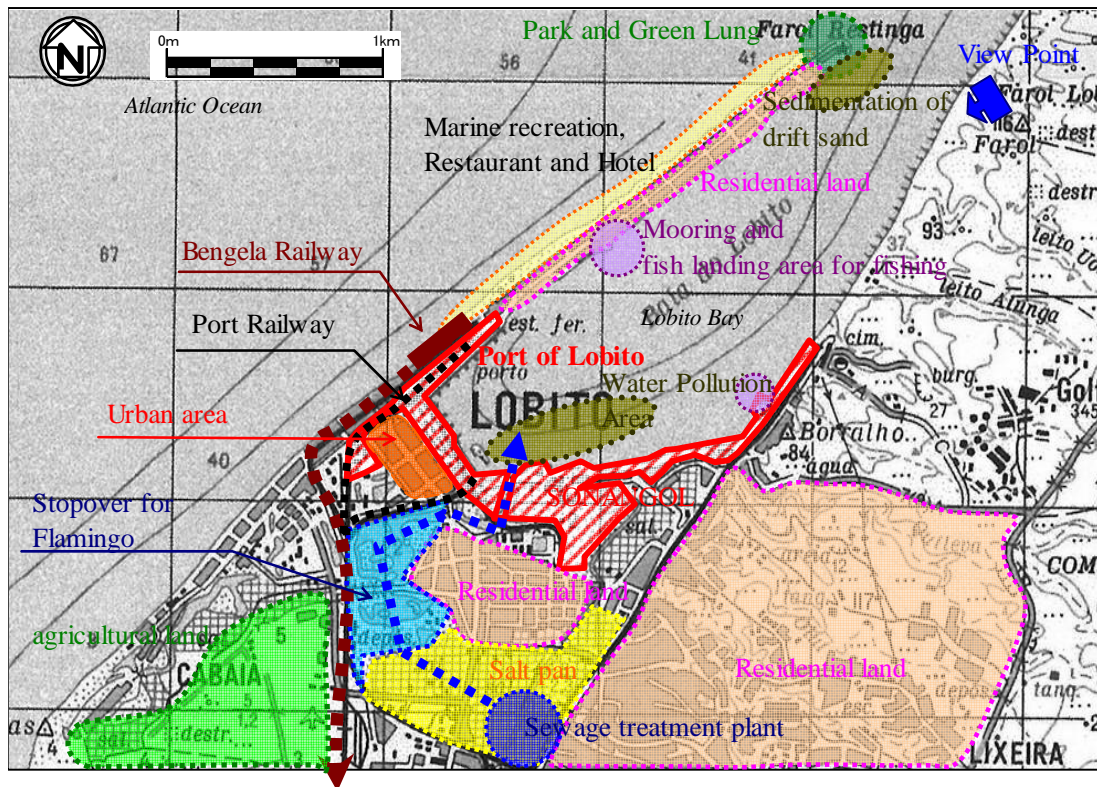


Figure 7-5 Environmental characteristics around Lobito Port

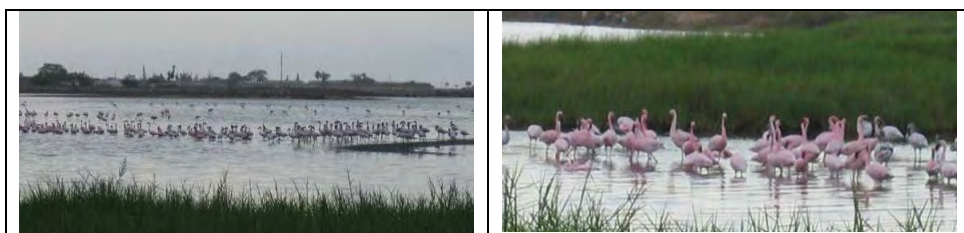


Photo 7-8 Flamingo visiting wet land



Photo 7-9 Sewerage facility, Salt pot and water channel to Lobito bay



Photo 7-10 View Point, Beach, Green space, and Park

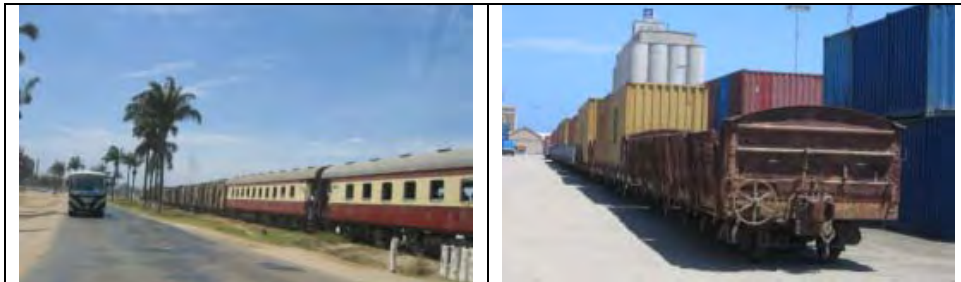


Photo 7-11 Benguela Railway and Inner port railway



Photo 7-12 Road and Farm



Photo 7-13 Dust in unpaved yard, Damaged safety rudder, and South quay

3) Current environmental issues around the Port of Lobito

Table 7-7 Desirable environmental consideration for Port of Lobito

Environmental Issue	Desirable environmental consideration
Securing navigation safety	Repairing unworkable navigation aids Dredging for top of sand bar
Dust control	Pavement for yard and road
Improvement of water quality	Preservation of salt pan and the area where flamingo makes habitat and protection of water channel
Poverty support and support system to accept food supply	Electric supply source facility for refer container
Securing safety of port activities	Installation of Rubber Fenders and Bollard Installation of safety rudder and car stop Recovery of destructive South Quay
Conservation area around port	Restriction of deforester and promotion of forestation

7.3.3 Environmental Feature around Port of Namibe

1) Natural Environmental Condition

Namibe Bay is about 8km in length from north to south and 5km deep; it has a water depth of 600m at the center of the mouth. The coastal zone has a commercial port and a fishing port; a sand beach has been built up in the center. Water depth in front of the quay of Port of Namibe is 5m to 10m and there is no significant shoaling tendency.

An extensive shoal -3m in depth called “Banco Amelia” is found the south west of the bay. In this shoal, an oil spill occurred on 19th June, 2004 in which oil drifted to the beach throughout the bay. There is a report that swimming has been prohibited for about 6 months to allow the beach to recover. However, the fishing activities are conducted out side of the bay therefore, no influence of fishing activities. Capitania of MINTRANS manages and controls the marine safety within the bay. Private company SONANGOL has provided oil fence and oil recovery equipment to each ship to ensure that such an incident is not repeated.

Port of Namibe was constructed by cutting off sandstone terrace. There is an approx. 40m difference between the height of port level and the backside of the port thus landslides are a potential problem during rainfall. In fact, north side of this area was experienced a landslide due to heavy rain in 2004 and the concrete block wall was damaged.

It took about one month for waters to subside after the great flood in 2001. There were more than 70 casualties due to this flood, most occurring in the area around Bero River running between the Port of Namibe and Port of Sacomar. During the study wild birds such as blue heron, egret, sea swallow, and sea gull were found in the coastal area around the port and a few harbor seals were also seen in the bay. According to the water quality test, water transparency is good and water pollution could not been found although sanitary water has been discharged from residential areas.

2) Social Environmental Condition

The south side of Namibe bay has a commercial port where general cargoes and container cargoes are handled. On the north side, Saco mar port is being used to export iron ore. There is a beautifully curbed coast between Port of Namibe and Saco mar port. An urban district and residential area are found on the hill side about 1km away from the coast.

Port of Namibe is handling mainly container cargoes and other food aid commodities like rice and wheat and the import of cement and the export of granite. Port of Sacomar stopped transporting iron ore in 1975; presently it is working as terminal base for oil and natural gas (LPG) of a petroleum company, SONANGOL. In the surrounding area of the port, 250 thousand people live across the Namibe State; the population in the urban area of Namibe is 85 thousand. SONANGOL Company is supplying petroleum oil and LPG to Huila, Cunene as well as Namibe by truck and rail.

There are a beautiful beach, walkway, coastal road and Mocamedes railway along with Port of Namibe and Port of Saco mar. The beach running down into Port of Sacomar from Port of Namibe is visited by 3 thousand local residents in the summer season as place of recreation and relaxation but swimming was recently prohibited 6 months due to an oil spill. Mocamedes railway is connected to the Port.

Eighty meters land side from the coast between Port of Namibe and Saco mar port is set as port area. In this area near Port of Namibe, there is an industrial fishing port facility and the basin for small size fishing boats. This fishery facility is managed by the port authority and operated by a fishery cooperative. These industrial fishing boats have been using Tombua fishing port which is about 50km away as their activity base while this industrial fishery facility has been used for rest and mooring. Registered number of fishing boats in 2004 was 12 and the number of registered fishermen was 168. The basin for small size fishing boats are used by artisanal fishermen who sell their catch fishes directly to consumers along with the coastal road. Registered number of fishing boats in 2004 was 243 and the fish catch is about 6,400ton per year. Congestion by both fishery activities and port vehicles sometimes occurs but from good relations between the two parties has been maintained.

The quay of the Port of Namibe was severely damaged in the civil war, there are no rubber fenders and the facilities aging. What is worse, because of the damage and bumpy condition of the quay and apron handling work in the water front area are dangerous and time consuming.

According to WFP, the food crisis is over. However still now 900,000 people are suffering from food shortages and about 130,000 ton of food to support them is scheduled to be supplied from January 2006 to December 2008 by WFP. 10% of this food is for Namibe. The main items are oil, cereal, sugar, salt, meat however, the problem is lack of electric power supply facilities for reefer containers and warehouse in the port.

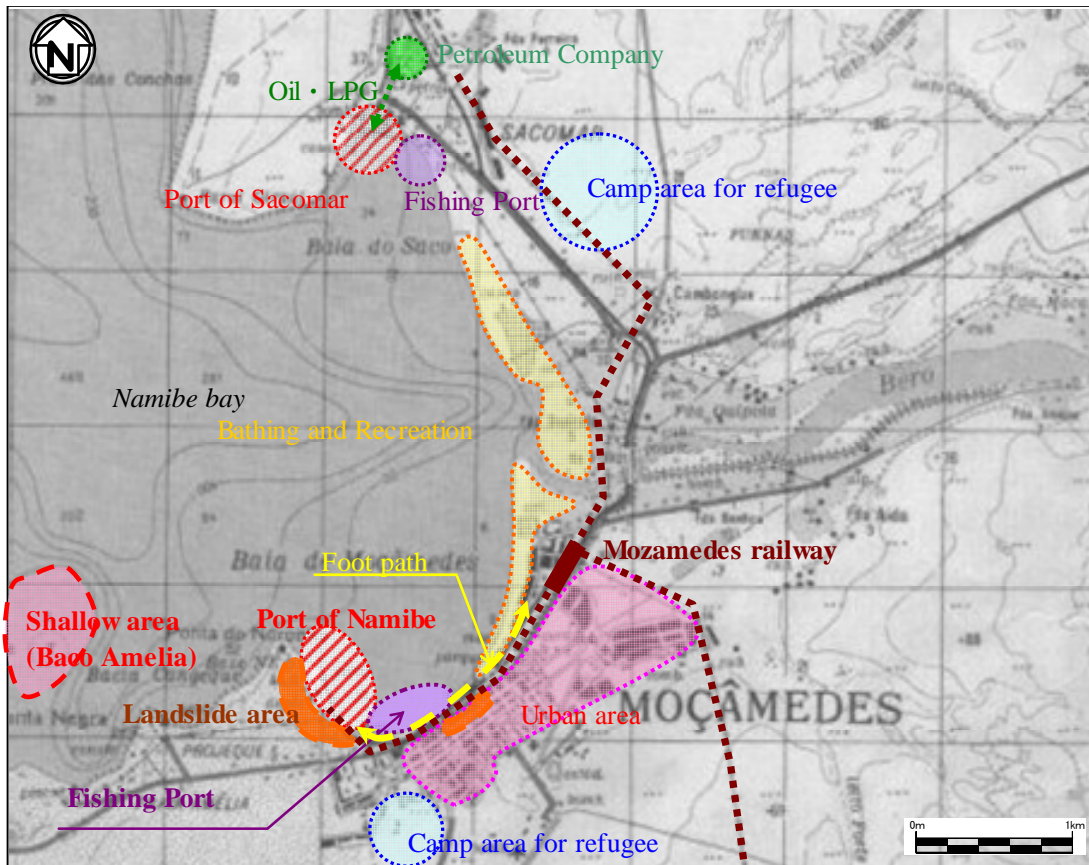


Figure 7-6 Environmental characteristics around Namibe Port



Photo 7-14 Panoramic view of Port of Namibe



Photo 7-15 Foot path and beach recreation



Photo 7-16 Mocamedes railway and coastal road



Photo 7-17 Sandstone terrace



Photo 7-18 Access gate and coastal road



Photo 7-19 Fish landing and sales in fishing port

3) Current Environmental Condition

Table 7-8 Desirable environmental consideration

Environmental Issue	Desirable environmental consideration
Securing safety of port activities	Improvement of quay and apron Installation of rubber fender, safety rudder and car stops Pavement of port yard and road
Dust control	Pavement of port yard and road
Poverty support and support system to accept food supply	Electric supply source facility for reefer container Renovation of CFS
Slope protection for landslide area	Cutting earth of sandstone terrace to prevent landslide

7.3.4 Environmental and Social Conditions of the Port of Cabinda

1) Natural Environmental Condition

The water depth around Port of Cabinda is about 3m to 5m which is quite shallow and the port facilities are surrounded by shallow sea. This formation is a result of sedimentation from the Congo River and sunken ship in east side of Port of Cabinda over a 15 years period. In order to maintain the necessary water depth dredging works are carried out around the jetty.

The navigation channel is also shallow, necessitating transshipment 8 to 10miles away from the jetty. This leads to the accidents due to high offshore waves. The rainy season lasts from October to March or May. During this period, they have intense squalls with winds reaching 50 knots and thunders are observed. In the dry season from March or June to September, the Congo River swells from the direction of the southwest. According to the water quality test, the water pollution was not found although transparency is not good due to the sedimentation.

2) Social Environmental Condition

Cabinda produces a lot of lumber and phosphate rock. The timber industry here is most active in Angola due to the high quality hard lumber. Port of Cacongo which had been an export port for woods like mahogany is now being considered as an industrial support terminal of cement mainly by Port Authority of Cabinda, in view of the fact that it is 50 km from the urban area. The Port Authority is planning a land fill to make efficient use of sedimentation around the Port and relocate the existing container yard to the east side of the port.

Because of shallow water depth in navigation channel and basin, double handling works in which cargo is unloaded from vessel onto a barge offshore and then unloaded again onto the jetty has been carried out. And it takes a rather long time for handling containers since the container yard is located 1 to 2km away from the port. In order to prevent the hike of commodity price by the rising of port charges, the government has subsidized the fee for one time out of two. According to African line using the port, unless a depth of -10m can be secured in the existing channel and mooring basin by dredging, it will be difficult to introduce new 20,000 DWT class which is scheduled to be purchased in the near future. They requested installation of buoys in the shallow area for safe navigation.

The seaside area from the coast road is owned by the port authority. A part of the area will be returned to the government and will be sold as high class residential district. River mouth of Lucola belongs to Cabinda Port area and a part of the area is designated as environment conservation area.

The costal beach sweeps away from north to south around the port. Small-scale fishing