Date:22 October 2025

Environmental and Social Considerations in Detailed Planning Survey (Technical Cooperation for Development Planning)

1 Full title of the Project

The Project for Revision of Integrated National Transport Master Plan in the United Republic of Tanzania

2 Type of the study (e.g. Master Plan, Feasibility Study, Detailed Design, etc.)

Technical Cooperation for Development Planning

3 Categorization and its reason

The Project is categorized as a "Category B" Project because of the following reason: The Project is not likely to have significant adverse impact on the environment under Japan International Cooperation Agency (hereinafter referred to as "JICA") Guidelines for Environmental and Social Consideration (April 2010) (hereinafter referred to as "JICA Guideline") in terms of its sectors, characteristics and areas.

4 Institution responsible for the Implementation of the Project

- Ministry of Transport (hereinafter referred to as "MoT")
- Ministry of Infrastructure, Communication and Transport (hereinafter referred to as "MoICT)

5 Outline of the Project (objectives, justification, location, proposed activities, and scope of the study)

(1) Expected Goals which will be attained after implementing the proposed plan

- To formulate the Integrated National Transport Master Plan 2050 for the United Republic of Tanzania
- To promote the harmonized planning and development of transport infrastructure—including ports, railways, roads, airports, and pipelines,
- To improve the efficiency of domestic and international logistics and passenger flows,
- To strengthen competitive corridors and the national network, and
- To contribute to the achievement of the National Visions 2050 of both Mainland Tanzania and Zanzibar.

(2) Outputs

To formulate the Integrated National Transport Master Plan 2050

(1) Activities

1) Activity 1: Analysis of the current situation and challenges in Tanzania's national transport sector, and formulation of demand forecasts and national spatial structure framework as the basis for the Integrated National Transport Master Plan 2050

1-1: Analysis of the current situation and Challenges

1-1-1: Collection and organization of basic information

1-1-2: Industrial development analysis

1-1-3: Transport infrastructure development analysis

1-1-4: Institutional framework analysis

1-1-5: Analysis of gender mainstreaming in the transport sector

1-2: Formulation of the social framework

1-3: Transport demand forecasting

1-4: Formulation of the national spatial structure framework

2) Activity 2: Formulation of the Integrated National Transport Master Plan 2050

3) Activity 3: Capacity development for government officials involved in the formulation and implementation of Master Plan

Training programs will be conducted to strengthen the planning capacity of government officials involved in the formulation and implementation of transport plans across various modes.

Seminars will be held to promote dialogue and dissemination of the Master Plan among private stakeholders to incorporate their views and opinions.

6 Description of the project site

(1) Location

The project site will cover the entire territory of the United Republic of Tanzania. Data collection and analysis may also include surrounding countries, where are relevant.

Source: un.org/geospatial/content/united-republic-tanzania (Access October 20th, 2025)

Table 1. Map of the Project area

(2) Natural Environment

1) Geology and topography

Tanzania exhibits highly diverse geological and topographical characteristics that reflect its complex tectonic history and varied geomorphological processes. The country's landscape ranges from high inland plateaus and rift valleys to extensive coastal plains and offshore islands, resulting in significant variations in natural conditions across regions.

The mainland is largely underlain by the ancient Tanzania Craton, composed mainly of Precambrian basement rocks dating back to the Archean and early Proterozoic eras[1]. These formations provide the stable geological core of the country. Surrounding the craton, younger sedimentary basins of the Karoo Supergroup, formed during the late Paleozoic to early Mesozoic periods, extend over parts of the southern and western regions[2]. Along the eastern margin, Mesozoic and Cenozoic marine and continental sediments are distributed, particularly in the coastal belt and within the Rift Valley system[3].

The eastern branch of the Great Rift Valley traverses northern and western Tanzania, shaping major escarpments, fault zones, and basins. This tectonic activity has also given rise to notable volcanic features such as Mount Kilimanjaro, Mount Meru, and the Ngorongoro Highlands. Rift-related processes have created deep basins occupied by major inland lakes, including Lake Tanganyika, Lake Nyasa (sharing with Malawi), and Lake Rukwa. Seismic activity in rift zones, though generally moderate, remains a relevant consideration for infrastructure planning.

Topographically, the central and western parts of the mainland form a gently undulating plateau with elevations ranging between approximately 1,000 and 1,500 meters above sea level. The plateau descends eastward to the Indian Ocean, forming a low-lying coastal plain that includes floodplains, estuaries, and deltas. The northern and southern highlands, as well as the rift escarpments, exhibit steeper relief and more complex terrain, influencing transport infrastructure alignment and drainage conditions[4].

The islands of Zanzibar, namely Unguja and Pemba, lie approximately 25 to 50 kilometers off the Tanzanian coast. Their geological structure consists predominantly of coral limestone and marine sedimentary deposits, reflecting their origin as uplifted reef terraces and alluvial plains[5]. The islands are generally low-lying, with elevations rarely exceeding 120 meters above sea level. Coastal areas are characterized by extensive coral reefs, mangrove forests, lagoons, and tidal flats. Due to their low elevation and porous geology, Zanzibar's coastal and nearshore environments are particularly sensitive to coastal erosion, saltwater intrusion, and the impacts of sea level rise[6].

From the perspective of environmental and social considerations, these geological and topographical conditions have significant implications for the Master Plan. The Rift Valley and highland areas require attention to slope stability, drainage management, and seismic risks, while the coastal and island zones call for integrated coastal management measures addressing erosion, flooding, and ecosystem protection[7].[8] Understanding these spatial variations is essential for developing transport infrastructure that is both resilient and environmentally sustainable.

2) Meteorology

Tanzania experiences a tropical climate that varies regionally due to differences in altitude, latitude, and proximity to the Indian Ocean. The mainland is characterized by two rainfall regimes: a bimodal pattern in the northern and eastern parts (short rains Vuli from October to December, and long rains Masika from March to May) and a unimodal pattern in the central, western, and southern regions (a single rainy

[1] International Atomic Energy Agency (IAEA) INFCIS (2023). *United Republic of Tanzania – Geology.* Vienna
[2] Geological Survey of Tanzania (GST). *Geology and Minerals Potential in Tanzania.* Ministry of Minerals, Dodoma, 2021.
[3] IAEA INFCIS (2023)
[4] GST (2021); Vice President's Office - Division of Environment (VPO-ED). National Environmental Policy (2021 Revision).
[5] IAEA (2023).
[6] GST. "Geology and Minerals Potential in Tanzania." Ministry of Minerals, Dodoma.
[7] National Environmental Policy (2021 Revision)

season from November to April)[8]. In Zanzibar, rainfall follows the bimodal pattern typical of the coastal belt. The average annual rainfall ranges from less than 600 mm in central semi-arid areas to over 2,500 mm in highland and coastal zones such as the Eastern Arc Mountains and the shores of Lake Tanganyika[9].

Mean annual temperatures range between 20°C and 30°C, largely influenced by elevation[10]. The hottest areas are the central plateau and low-lying coastal plains, with average daily temperatures of 27–30°C, while the highlands of Kilimanjaro, Mbeya, and Iringa record cooler averages of 18–21°C. The annual temperature range is relatively small near the coast but wider inland, reflecting continental climatic influence. Coastal humidity remains high throughout the year, typically exceeding 70%[11].

Seasonal climatic variations significantly affect agriculture, water resources, and transport infrastructure[12]. Droughts frequently occur in central and northern regions, while heavy rains and flooding are common in low-lying coastal and riverine areas, particularly along the Rufiji and Ruvuma basins and in the flood-prone areas of Dar es Salaam and Zanzibar. The Tanzania Meteorological Authority (TMA) operates a network of synoptic and agro-meteorological stations, which provide regular updates on rainfall anomalies, extreme weather events, and seasonal forecasts essential for national planning and disaster risk reduction[13].

Table 2. Major Rainfall Characteristics in Tanzania

Region / Zone	Rainfall Regime	Rainy Season(s)	Annual Rainfall (mm)	Remarks
Northern Highlands (Kilimanjaro, Arusha, Manyara)	Bimodal	Mar–May (*Masika*), Oct–Dec (*Vuli*)	800–1,200	Strongly influenced by orographic effect
Coastal Belt (Dar es Salaam, Tanga, Pwani, Zanzibar)	Bimodal	Mar–May, Oct–Dec	1,000–1,800	High humidity; risk of coastal flooding
Central Plateau (Dodoma, Singida, Tabora)	Unimodal	Nov–Apr	400–800	Semi-arid; frequent droughts
Southern Highlands (Mbeya, Iringa, Ruvuma)	Unimodal	Nov–Apr	1,000–2,000	Moderate climate; reliable rainfall
Western and Lake Zone (Kigoma, Mwanza, Kagera)	Unimodal	Oct–May	1,000–2,500	Influenced by Lake Victoria and Tanganyika

Source: the JICA Study Team based on Tanzania Meteorological Authority (TMA, 2023); FAO AQUASTAT (2023); World Bank Climate Change Knowledge Portal (2024); and VPO, National Climate Change Strategy (2021–2026).

3) Hydrology

Tanzania's water resources are organized into nine major hydrological basins, each governed by a Basin Water Board under the Ministry of Water. These basins vary widely in rainfall, topography, and water availability, reflecting the country's climatic and physiographic diversity. The catchments play a key role in supporting agriculture, domestic water supply, hydropower, and ecosystem functions.

[8] Tanzania Meteorological Authority (TMA). Climatological Summary of Tanzania (1991–2020). Dar es Salaam, 2023.
[9] Food and Agriculture Organization (FAO). FAOCLIM Database and AQUASTAT Country Profile – United Republic of Tanzania. Rome, 2023.
[10] NBS. Statistical Abstract 2023.
[11] World Bank Climate Change Knowledge Portal. Tanzania Country Profile: Climate Data and Projections. Washington, D.C., 2024.
[12] VPO. National Climate Change Strategy (2021–2026). Dodoma, 2021.
[13] TMA. Annual Climate Report 2023. Dar es Salaam.

Table 3. Major Catchment Areas and Water Resources in Tanzania

No	Catchment Area	Region	km ^{2}	Major Water resource
1	Rufiji	Iringa	181,964	Rufiji, Great Ruaha and Kilombero rivers Mtera, Kidatu and Kihansi dams
2	Lake Tanganyika	Kigoma	160,426	Lake Tanganyika, Malagarasi River
3	Internal Drainage	Singida	142,943	Lakes Eyasi, Manyara, and Natron, Manonga and Bubu rivers
4	Lake Victoria	Mwanza	119,299	Lake Victoria Mara and Kagera rivers
5	Ruvuma and Southern Coast	Mtwara	106,246	Ruvuma, Mbwemkuru river
6	Lake Rukwa	Mbeya	77,772	Lake Rukwa
7	Wami-Ruvu	Morogoro	67,333	Wami and Ruvu River, Mindu dam
8	Pangani	Moshi	54,820	Pangani River,Nyumba ya Mungu dam
9	Lake Nyasa	Tukuyu	33,997	Lake Nyasa
Total			944,800	

Source: JICA (2023) Environmental and Social Considerations Profile Final Report of Tanzania

4) Flora

Tanzania possesses one of the most diverse and extensive vegetation assemblages in sub-Saharan Africa, reflecting variations in climate, altitude, soil, and human use. The country's vegetation can broadly be classified into coastal, montane, woodland, savannah, and semi-arid types. The most widespread is the Miombo woodland, dominated by Brachystegia, Julbernardia, and Isoberlinia species, covering much of the central and southern plateau. These woodlands play a vital role in sustaining rural livelihoods, providing fuelwood, non-timber forest products, and critical ecosystem services such as carbon sequestration and watershed protection[14].

Along the eastern seaboard, coastal forests and mangrove ecosystems form unique habitats of high biodiversity value. Coastal forests, including those in the East Usambara Mountains and the Rufiji–Kilwa–Lindi corridor, contain numerous endemics and threatened species of trees and understory flora. Mangrove forests, dominated by Rhizophora mucronata and Avicennia marina, are distributed along tidal estuaries and deltas such as the Rufiji and Wami Rivers, providing breeding grounds for marine organisms and protecting the shoreline from erosion[15].

Highland and montane ecosystems such as the Eastern Arc Mountains (Uluguru, Usambara, Udzungwa, and others) support tropical evergreen and submontane forests of exceptional endemism. Many of these forest fragments have been recognized as global biodiversity hotspots due to their concentration of endemic plant species, including rare orchids and cycads. At higher elevations such as Mount Kilimanjaro and Mount Meru, vegetation zones range from montane forest to alpine moorland, culminating in afro-alpine shrublands and grasslands[16].

5) Fauna

Tanzania hosts an extraordinarily rich fauna, encompassing more than 300 species of mammals, over 1,000 species of birds, and numerous reptiles, amphibians, and invertebrates[17]. Large mammal populations remain among the most intact in Africa, supported by the extensive protected area network. The country is home to globally recognized species such as the African elephant (Loxodonta africana), black rhinoceros (Diceros bicornis), lion (Panthera leo), leopard (Panthera pardus), and African wild dog (Lycaon pictus). Herbivore species such as buffalo, zebra, wildebeest, and various antelopes

[14] Ministry of Natural Resources and Tourism (MNRT). *National Forest Policy and Vegetation Classification*, 2021.
[15] WW F& Tanzania Forest Service (TSF). Coastal Forests and Mangroves of Tanzania, 2022.
[16] Conservation International. Eastern Arc Mountains Biodiversity Hotspots Profile, 2023.
[17] UNEP-WCMC. Tanzania Biodiversity County Profile, 2024.

dominate the savannah ecosystems of Serengeti, Ruaha, Katavi, and Tarangire National Parks.

The coastal and marine environments of Tanzania, including the Zanzibar Archipelago, support diverse marine fauna such as dolphins, sea turtles, dugongs, and more than 500 species of coral reef fish[18]. Marine ecosystems, particularly coral reefs, seagrass beds, and mangrove estuaries, are critical for fisheries productivity and coastal protection. However, they face increasing pressures from overfishing, coral bleaching, and coastal development.

Avifauna diversity is also remarkable. Tanzania lies along both the Eastern African flyway and the Rift Valley migratory corridor, hosting resident and migratory species. Over 20 Important Bird Areas (IBAs) have been designated, including Lake Natron, Lake Manyara, and the Kilombero Valley, which harbour significant populations of flamingos, pelicans, and endemic forest species. The country's inland wetlands and lakes also provide vital habitats for migratory waterbirds[19].

Threat status statistics in this section follow the IUCN Red List Summary Statistics by country (latest available release), while protected area attributes follow the WDPA/Protected Planet country profile for the United Republic of Tanzania. Table 3 is indicative and reflect the version accessed on 22 Oct 2025.

Table 4. Threatened Species in Tanzania (IUCN Red List)

Taxonomic Group	Critically Endangered (CR)	Endangered (EN)	Vulnerable (VU) *	Total Threatened (CR+EN+VU)	Main Examples / Remarks
Mammals	9	14	18	41	African elephant (EN), black rhinoceros (CR), African wild dog (EN)
Birds	6	13	29	48	Grey crowned crane (EN), Pemba scops owl (EN)
Reptiles	7	12	16	35	Zanzibar day gecko (EN)
Amphibians	12	22	27	61	Kihansi spray toad (CR), Udzungwa forest tree frog (EN)
Fishes	39	67	95	201	Many endemic cichlids of Lakes Tanganyika & Nyasa
Molluscs & other Invertebrates	18	35	94	147	Freshwater snails, butterflies in Eastern Arc
Plants (vascular)	55	246	425 *est.*	726	Numerous endemics in Eastern Arc Mountains and coastal forests
Total (all groups)	146	409	704 *approx.*	1 259	

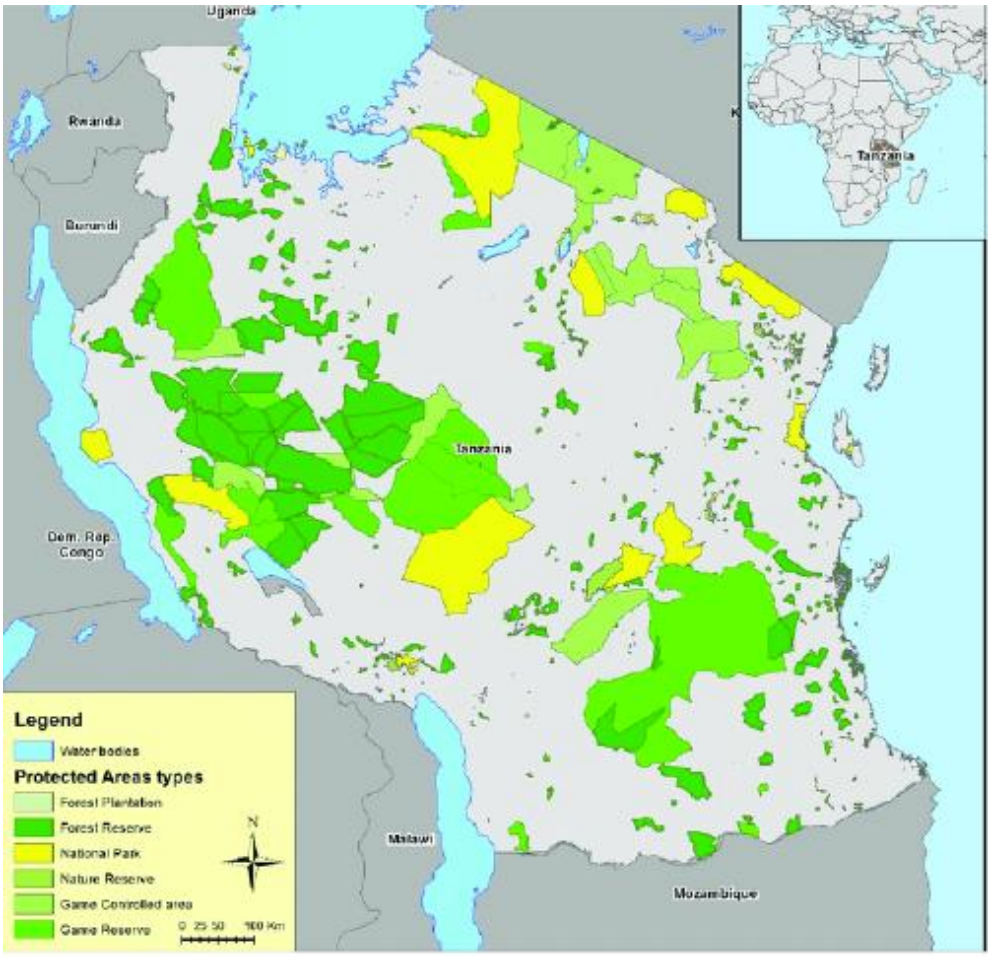
Source: IUCN Red List – Summary Statistics by Country: Table 5 (version 2020-1), Table 6a (version 2019-03), and Table 6b (Version 2017-1), Accessed 22 Oct. 2025

Note: *VU figures are approximated based on Table 5 (Tanzania row, version 2020-1).

6) Protected Area

Tanzania has established one of the most extensive networks of protected areas in Africa, covering approximately 30–40 percent of its total land area. The system includes 16 National Parks, 1 Conservation Area, 28 Game Reserves, 42 Game Controlled Areas, 38 Wildlife Management Areas, 4 Ramsar Sites, and 109 Forest Reserves (Figure 2). These areas play a vital role in conserving the country's rich biodiversity, supporting ecosystem services, and promoting nature-based tourism.

[18] WIOMSA (Western Indian Ocean Marine Science Association). Marine Ecosystems of Tanzania, 2023.
[19] BirdLife International. Important Bird Areas in Tanzania, 2023.



Source: Center for Large Landscape Conservation. n.d. FOCUS-BRI Country Report: Tanzania. Bozeman, MT: CLLC. Available at: URL. Accessed 22 Oct 2025.

Table 5. Protected Areas in Tanzania

In addition, four sites are inscribed as UNESCO Natural World Heritage Sites, and five sites are designated as UNESCO Biosphere Reserves, as shown in Table 4.

Table 6. UNESCO Natural World Heritage in Tanzania

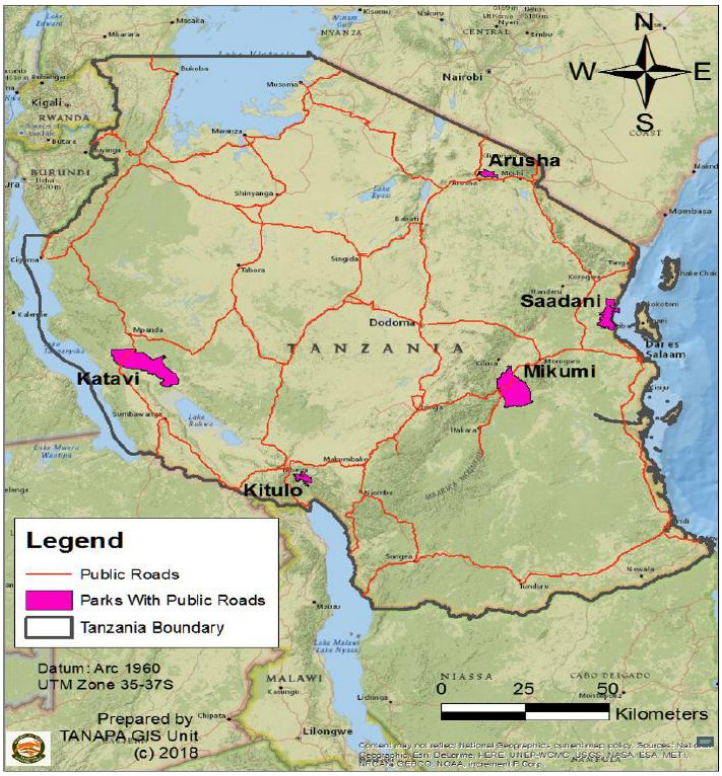
Natural Heritage Site	Biosphere Reserves
Kilimanjaro National Park	Lake Manyara
Selous Game Reserve (now Nyerere National Park*)	Serengeti – Ngorongoro
Serengeti National Park	East Usambara
Ngorongoro Conservation Area (mixed heritage)	Jozani - Chwaka Bay
	Gombe Masito Ugalla

Source: UNESCO World Heritage Centre, United Republic of Tanzania – World Heritage List (accessed 22 Oct 2025).
*Note: The former Selous Game Reserve was partially upgraded to Nyerere National Park in 2019, while retaining its World Heritage designation under the name “Selous Game Reserve.”

Tanzania's protected area network encompasses a diverse range of ecosystems, including savannahs, forests, wetlands, and coastal and marine habitats. These areas are managed under multiple institutions such as the

Tanzania National Parks Authority (TANAPA), the Ngorongoro Conservation Area Authority (NCAA), and the Wildlife Division of the Ministry of Natural Resources and Tourism (MNRT). Several areas, including Serengeti National Park, Kilimanjaro National Park, and the Ngorongoro Conservation Area, are of global ecological significance and attract substantial international attention for both tourism and conservation.

As of 2018, among the five national parks assessed, two parks, Mikumi National Park and Katavi National Park, are traversed by major trunk roads, and all five parks are accessible by public roads. It is reported that about 244 wild animals die each year due to vehicle collisions within the park areas[20].



Source: Tanzania National Parks Authority (TANAPA). Public Roads Traversing Through Parks – Challenges & Opportunities for TANAPA. Final Report, April 2020.

Table 7. Location of Five National Parks

(3) Social Environment

1) Demography

Tanzania has a total population of approximately 65 million as of 2024, according to the National Bureau of Statistics (NBS). The Mainland accounts for about 97 percent of the total population, while Zanzibar (Unguja and Pemba Islands) represents roughly 3 percent. The national population growth rate remains high at around 2.9 percent per annum, leading to continued pressure on land, resources, and infrastructure. The median age is estimated at 18 years, reflecting a youthful population structure with a dependency ratio exceeding 80 percent. Urbanization is progressing rapidly, with the proportion of urban residents increasing from 33 percent in 2012 to nearly 40 percent in 2024. Major urban centres include Dar es Salaam, Mwanza, Arusha, Dodoma, Mbeya, and Zanzibar City[21].

Tanzania is ethnically diverse, comprising more than 120 ethnic groups. Most groups belong to the Bantu linguistic family, while others include Nilotic, Cushitic, and Khoisan minorities[22]. Despite this diversity, Tanzania is noted for its strong national identity and social cohesion, largely attributed to the promotion of Swahili as a national language and to post-independence nation-building policies[23]. The population distribution is uneven, with high densities around the Great Lakes and coastal regions, and lower densities in the central and southern plateaus[24].

Religious affiliation in Tanzania is roughly divided among Christianity, Islam, and traditional

[20] Tanzania National Parks Authority (TANAPA). Public Roads Traversing Through Parks – Challenges & Opportunities for TANAPA. Final Report, April 2020

[21] NBS. National Accounts of Mainland Tanzania 2024. Dodoma.

[22] NBS. *Statistical Abstract 2023*

[23] Government of Tanzania. Vision 2025 Implementation Report. Dodoma, 2022.

[24] NBS & OCGS Zanzibar. Administrative Units Population Distribution Report, 2023 Update.

African beliefs. On the Mainland, Christianity predominates in the north, west, and southern highlands, while Islam is more common along the coastal areas and in urban centres. In Zanzibar, Islam is the dominant religion, practiced by an estimated 95–99 percent of the population[25]. The overall religious landscape is characterized by tolerance and peaceful coexistence, which contributes to Tanzania's social stability[26].

2) Economy and Livelihoods

Tanzania's economy is one of the fastest growing in Sub-Saharan Africa, with an average real Gross Domestic Product (GDP) growth rate of 4–5 in recent years[27]. The economy remains primarily based on agriculture, which employs about 65–70 percent of the labour force, followed by services and industry[28]. Agriculture contributes roughly 25 percent to GDP and supplies most of the country's food and export commodities such as coffee, cashew nuts, tobacco, cotton, and cloves (particularly from Zanzibar)[29]. The services sector, including trade, tourism, and transport, has been expanding rapidly, contributing about 40 percent of GDP[30].

The industrial sector is gradually diversifying, with growth in construction materials, agro-processing, textiles, and energy. The development of transport and logistics corridors such as the Central Corridor, Southern Corridor, and TAZARA railway has become a key driver of trade and regional integration. Zanzibar's economy, while smaller in scale, is more service-oriented, driven by tourism, spices, and fisheries. The government's Blue Economy Policy (2021) emphasizes sustainable marine resource utilization, port development, and renewable energy[31].

Despite steady macroeconomic growth, poverty reduction remains uneven. According to the World Bank Poverty and Equity Brief (2024), Tanzania's basic-needs poverty rate is estimated at around 26 percent, showing gradual improvement from 34 percent in 2007[32]. However, rural areas still experience significantly higher poverty incidence. Informal employment dominates the labour market, particularly in agriculture and petty trade[33]. Women's participation in the labour force is high, but they are overrepresented in low-income and unpaid sectors[34]. Promoting livelihood diversification, rural enterprise development, and infrastructure improvement remain key policy priorities for achieving inclusive economic growth[35].

Table 8. Key Economic Data of Tanzania

Indicator	Latest Value	Unit	Reference Period	Notes / Source
Gross Domestic Product (GDP, current)	62.4	USD billion	2020	National accounts[1]
Real GDP Growth Rate	5.2	Percent per annum	2021	Stable growth after COVID-19 recovery[2]
GDP per Capita (current)	976	USD per person	2020	Based on national population estimate[3]
GDP per Capita (PPP)	2,635	USD PPP per person	2020	World Bank Atlas method[4]
Inflation Rate (CPI, y/y)	4.0	Percent	Jan 2022	Within target range of 3–5%[5]
Consumer Price Index (CPI, base = 2015)	106	Index points	Jan 2022	NBS price statistics[5]

[25] Pew Research Center. Religion in Africa: Tanzania Country Profile. Washington D.C., 2023.
[26] United Nations Development Programme (UNDP). Tanzania Human Development Report 2023.
[27] Ministry of Finance (MoF). Annual Economic Survey 2023. Dodoma, 2024.
[28] World Bank. World Development Indicators 2024. Washington D.C.
[29] MoF. Annual Economic Survey 2023. Dodoma, 2024.
[30] African Development Bank (AfDB). Tanzania Economic Outlook 2024.
[31] Zanzibar Planning Commission. Zanzibar Blue Economy Policy 2021.
[32] World Bank. Poverty and Equity Brief: United Republic of Tanzania, October 2024.
[33] NBS & OCGS Zanzibar. Integrated Labour Force Survey 2020.
[34] UN Women. Tanzania Gender Equality Profile 2023.
[35] World Bank. Tanzania Country Economic Memorandum 2024.

Unemployment Rate	9.5	Percent of labour force	2020	Labour Force Survey[6]
Balance of Trade	−562	USD million	Sep 2021	Merchandise trade deficit[7]
Government Debt-to-GDP Ratio	37.8	Percent of GDP	Dec 2019	Fiscal report, MoFP[8]
Poverty Headcount (basic needs)	26.4	Percent of population	2023	Household Budget Survey[9]
Exchange Rate (average)	2,330	TZS per USD	2023	Bank of Tanzania[10]
Tourism Contribution to GDP	10.7	Percent of GDP	2019	MNRT sector statistics[11]

Sources: JICA Study team based on 1. National Bureau of Statistics (NBS). National Accounts of Tanzania Mainland, 2023. Dodoma., 2. MoF. Annual Economic Survey 2023. Dodoma, 2024. 3. NBS. 2022 Population and Housing Census Results. Dodoma, 2023., 4. World Bank. World Development Indicators 2024. Washington, D.C., 5. NBS. Consumer Price Index Bulletin, January 2022.,6. NBS & OCGS Zanzibar. Labour Force Survey 2020., 7. Bank of Tanzania. Monthly Economic Review, September 2021. 8. MoFP. Public Debt Statistical Bulletin, December 2019., 9. NBS & OCGS Zanzibar. Household Budget Survey 2023., 10. Bank of Tanzania. Annual Report 2023., 11. MNRT. Tourism Sector Performance Report

3) Land Use and Settlement Patterns

Tanzania has a total land area of about 947,300 km², of which approximately 885,800 km² lies on the Mainland and 61,500 km² comprises Zanzibar (Unguja and Pemba Islands)[36]. The country's land use is dominated by agriculture and pastoralism, which together occupy roughly 45–50 percent of the land area[37]. Forest and woodland cover approximately 38 percent, while about 30 percent of the territory is under various forms of protection, including national parks, game reserves, and forest reserves[38]. Urban and built-up land remains relatively limited, estimated at around 0.5–1 percent of total land area, though expanding rapidly along major transport corridors and coastal zones[39].

The settlement pattern reflects the country's strong rural orientation. More than 65 percent of the population resides in rural areas, depending largely on subsistence agriculture and livestock[40]. The urban population is concentrated in a few major centres such as Dar es Salaam, Dodoma, Mwanza, Arusha, Mbeya, and Zanzibar City, all of which are experiencing rapid growth and spatial expansion[41]. Dodoma, as the administrative capital, has undergone significant transformation through government relocation programs and urban infrastructure investment. Informal settlements are prevalent in most large cities, driven by rural–urban migration, limited access to serviced land, and low affordability of formal housing[42].

The national land tenure system is defined by the Land Act (1999) and Village Land Act (1999), which classify land into three categories: general land, village land, and reserved land. The majority of land is held under customary tenure within village boundaries, while general land includes urban areas and lands outside village jurisdiction. The Land Use Planning Act (the7) and Urban Planning Act (2007) provide the framework for spatial and physical planning. In Zanzibar, the Land Tenure Act (1992) and Town and Country Planning Act (1955, revised) govern land administration and settlement development. Recent policy directions emphasize integrated land use planning to balance agriculture, conservation, and urban growth, and to mitigate land-use conflicts among farmers, pastoralists, and conservation areas[43].

[36] NBS. Statistical Abstract 2023. Dodoma.
[37] FAO. FAOSTAT Land Use Indicators: United Republic of Tanzania (2023). Rome.
[38] VPO. National Environment Statistics Report 2022.
[39] World Bank. Tanzania Urbanization Review: Productive Jobs for an Urbanizing Tanzania. Washington, D.C., 2022.
[40] NBS. 2022 Population and Housing Census Results. Dodoma, 2023.
[41] Ministry of Lands, Housing and Human Settlements Development (MLHHSD). National Human Settlements Development Policy 2023 (Draft for Consultation). Dodoma.
[42] World Bank. Tanzania Cities Transforming Report 2023. Washington, D.C.
[43] Ministry of Lands, Housing and Human Settlements Development (MLHHSD). National Land Use Framework Plan 2021–2040. Dodoma, 2021.

4) Land tenure

Land in Tanzania is publicly owned and held by the President as a trustee for all citizens, as established under the Land Act (Cap.113) and Village Land Act (Cap.114), both enacted in 1999. The two laws divide the Mainland territory into three categories: general land, village land, and reserved land. General land covers most urban areas and land outside village boundaries. It is administered by the Commissioner for Lands, while village land is managed by Village Councils under the supervision of the Ministry of Lands, Housing and Human Settlements Development (MLHHSD). Village land is managed by village councils, while reserved land includes national parks, forest reserves, and other protected areas designated by law[44].

Under this framework, individuals and organizations may obtain a Granted Right of Occupancy (GRO) on general land for up to 99 years, or a Customary Right of Occupancy (CRO) on village land, recorded through a Certificate of Customary Right of Occupancy (CCRO). These tenure instruments are inheritable and transferable, forming the basis for access to credit and investment[45]. The legislation guarantees equal land rights for men and women, and prohibits discrimination in acquisition, holding, or disposition of land. Despite this, practical challenges persist, including incomplete land registration, overlapping administrative mandates, and limited awareness of legal rights among rural populations.

In Zanzibar, land remains vested in the Revolutionary Government, and all land is administered under the Land Tenure Act, 1992. Rights are primarily allocated through long-term leasehold arrangements (often 33, 66, or 99 years), and land allocation, transfer, and consolidation are managed by the Ministry of Lands and Housing Development (MLHD). The principle of public ownership remains, but leaseholds function similarly to occupancy rights on the Mainland. Recent policy efforts, including the Land Policy 2020 and digital cadastre initiatives, aim to strengthen land administration, promote equitable access, and reduce land-use conflicts between agriculture, conservation, and urban development.

5) Gender

Tanzania has made steady progress in promoting gender equality and social inclusion through a comprehensive policy and legal framework. The National Gender Policy (2000) and its implementation instrument, the National Strategy for Gender Development (NSGD, 2008), provide the overarching guidance for mainstreaming gender in all sectors. These frameworks aim to enhance women's participation in socio-economic development, improve access to education and health services, and eliminate gender-based violence and discrimination. The Constitution of the United Republic of Tanzania (1977, as amended) guarantees equality before the law and prohibits gender-based discrimination.

In Zanzibar, the Gender Policy (2016) and Gender and Development Act (2016) serve as the main instruments for promoting women's empowerment and equal opportunity. The framework emphasizes gender mainstreaming in all government programs and affirms women's rights in political participation, education, and access to resources.

Institutional coordination is led by the Ministry of Community Development, Gender, Women and Special Groups (MoCDGWSG) on the Mainland, and by the Ministry of Community Development, Gender, Elders and Children (MoCDGEC) in Zanzibar. Both governments have adopted gender-responsive budgeting guidelines and established gender desks in key ministries, regional secretariats, and local government authorities.

Women represent approximately 51 percent of Tanzania's total population[46]. Their participation in the labour force is high which estimated at over 78 percent, but concentrated in low-income and informal

[44] MLHHSD. National Land Use Framework Plan 2021–2040. Dodoma, 2021.
[45] MLHHSD. Guidelines for the Issuance of Certificates of Customary Right of Occupancy (CCROs). Dodoma, 2020
[46] NBS. 2022 Population and Housing Census Results. Dodoma, 2023.

sectors such as subsistence agriculture, small-scale trade, and domestic services[47]. In contrast, women's participation in wage employment and decision-making positions remains limited. Only about 37.8 percent of Members of Parliament are women, reflecting gradual but insufficient progress toward parity[48].

Gender disparities persist in education and access to productive assets. While enrolment in primary education has achieved near gender parity, women's participation drops sharply in tertiary education and technical training[49]. Access to land and property is legally guaranteed under the Land Act and Village Land Act, which affirm equal land rights for men and women; however, customary practices and limited awareness of legal rights often restrict women's ownership and control over land. Financial inclusion is improving through microfinance and women's savings and credit cooperatives, but access to formal financial institutions remains lower among women, particularly in rural areas[50].

6) Social Inclusion and Vulnerable Groups

Beyond gender equality, social inclusion remains a key development priority. Tanzania recognizes several vulnerable groups, including youth, the elderly, persons with disabilities (PWDs), and marginalized communities. The Persons with Disabilities Act (2010) ensures equal access to education, employment, and public services. The National Youth Development Policy (2007) promotes entrepreneurship and skills development for youth, while Zanzibar's Elderly Policy (2019) focuses on social protection and care for older persons.

Despite these efforts, vulnerable populations continue to face barriers in accessing education, employment, and infrastructure, particularly in rural areas and informal settlements. Limited accessibility, social stigma, and inadequate data disaggregation hinder effective policy implementation. The Government and development partners are strengthening inclusion mechanisms through social protection programs such as the Productive Social Safety Net (PSSN II), community-based rehabilitation, and youth skills development initiatives.

Regarding persons with disabilities, the 2012 Population and Housing Census – Disability Monograph (NBS, 2016) identified several major categories of functional difficulties at the national level. The distribution of persons aged seven years and above by type of disability is summarized in the table below.

Table 9. Persons aged over 7 reporting difficulty by domain in Tanzania

Difficulty domain	Number of persons
Seeing	819,197
Hearing	393,799
Walking	480,954
Remembering & concentrating	351,453
Self-care	199,200

Source: NBS, Disability Monograph (2016)

According to the same monograph, approximately 3.16 million persons, equivalent to 9.3 percent of the total population aged seven years and above, were recorded as having one or more difficulties. The classification followed the Washington Group Short Set of Questions covering domains such as seeing, hearing, walking, remembering, and self-care. Although these data remain the most comprehensive national statistics, definitions and survey design have been revised in the 2022 Census, and updated tabulations are yet to be published.

[47] NBS and OCGS Zanzibar. Integrated Labour Force Survey 2020. Dodoma & Zanzibar
[48] Inter-Parliamentary Union (IPU). *Women in National Parliaments Database.* Accessed on 22 October 2025.
[49] UNESCO Institute for Statistics (UIS). Education Indicators Database 2024.
[50] World Bank. Tanzania Country Gender Assessment 2023. Washington D.C.

7 Legal Framework of Environmental and Social Considerations

1) Law, Regulation and Guidelines

Laws, regulations and standards related to environmental and social issues including requirements and procedures of Environmental Impact Assessment (EIA), stakeholder participation, and information disclosure.

Table 10 and Table 11 shows a list of policies, acts and regulations related to environmental and social issues in Tanzania.

Table 10. Laws, Regulations and Standards Related to Environmental and Social Issues in mainland

Category	Title	Year	Responsible Organization
Policy	National Environmental Policy	1997 (2021)	Vice President's Office (VPO)
	National Climate Change Response Strategy (NCCRS)	2021	VPO
	National Disaster Management Policy	2022	President's Office (PMO)
	National Agriculture Policy	2013	Ministry of Agriculture Food Security and Cooperatives
	National Land Policy	1997	Ministry of Land, Housing and Human Settlement Development (MoLHHSD)
	National Forest Policy	1998	Ministry of Natural Resources and Tourism (MNRT)
	National Tourism Policy	1999	MNRT
	National Human Settlements' Development Policy	2000	MoLHHSD
	National Water Policy 2002 (Version 2025)	2025	Ministry of Water
	Women and Gender Development Policy	2000	Ministry of Women, Gender and Children Development
	National Policy on HIV/AIDS	2001	Prime Minister's Office (PMO)
	Construction Industry Policy	2002	Ministry of Works
	National Transport Policy *upgrading, expected by 2025	2003	Ministry of Transport and Communication
	Wildlife and Wetland Policy	2007	MNRT
	Road Safety Policy	2009	Ministry of Infrastructure Development
Act	The Environmental Management Act (Cap. 191, as amended by Act No.11 of 2021/ Act No.3 of 2025)	2004 (Amend. 2021,2025)	VPO
	The Wildlife Conservation Act (Cap. 283, as amended by 2017)	2009 (Amend. 2017)	MNRT
	The Mining Act Chapter 123	2010 (Amend. 2019)	Ministry of Minerals
	Water Resources Management Act (Act No. 11 of 2009, amended by Act No. 2 of 2022)	2009 (Amend. 2022)	Ministry of Water
	The Water Supply and Sanitation Act (Act No. 5 of 2019)	2019	Ministry of Water
	The Forest Act	2002 (Amend. 2015, 2018)	MNRT
	Energy and Water Utilities Regulatory Authority (EWURA) Act, 2001 (Cap.414, 2020)	2001 (Amend. 2020)	Ministry of Water
	Petroleum Act, 2015 (Act No.21 of 2015)	2015	Ministry of Energy and Minerals

Category	Title	Year	Responsible Organization
	The Land Acquisition Act	1967	MoLHHSD
	The Land Act	1999	MoLHHSD
	Village Land Act	1999	MoLHHSD
	The Land Use Planning Act	2007	MoLHHSD
	The Urban Planning Act	2007	MoLHHSD
	Local Government Acts	1982	PMO
	Regional and District Act	1997	PMO
	Protected Places and Areas Act	1969	MNRT
	Marine Parks and Reserves Act	1994	MNRT
	Surface and Marine Transport Regulation Authority (SUMATRA) Act	2001	Ministry of Transport and Communication
	Water Resources Management Act	2009	Ministry of Water and Irrigation
	Wildlife Conservation Act No. 5	2009	MNRT
	The Environmental Management Act (Standards for the Control of Noise and Vibrations Pollution)	2015	VPO
	The Road Act	2007	Ministry of Infrastructure Development
	The Grave (Removal) Act	1969	MoLHHSD
	Antiquities Act Cap 333R.E.	2002	MNRT
	The HIV and AIDS (Prevention and Control) Act	2008	Prime Minister's Office
	Occupational Health and Safety Act	2003	Ministry of Labor, Employment and Youth Development
	The Employment and Labor Regulations Act	2004	Ministry of Labor, Employment and Youth Development
Regulations/ Rules	Environmental Impact Assessment and Audit Regulations (as Amended in 2024)	2005 (Amend. 2024)	VPO
	Strategic Environmental Assessment Regulations	2008	VPO
	Environmental Management (Soil Quality Standards) Regulations	2007	VPO
	Environmental Management (Air Quality Standards) Regulations	2007	VPO
	Environmental Management (Standards for the Control of Noise and Vibrations Pollution) Regulations	2015	VPO
	Environmental Management (Prohibition of Plastic Carrier Bags) Regulations	2019	VPO
	Environmental Management (Hazardous Waste Control and Management) Regulations	2021 (GN No.389/2021)	VPO
	Environmental Management (Control and Management of Electrical and Electronic Equipment Waste) Regulations	2021 (GN No. 390/2021)	VPO
	Environmental Management (Registration and Practice of Environmental Experts) Regulations (as amended by GN No. 500/2022)	2021 (Amend. 2022)	VPO
	Environmental Management (Fees and Charges) Regulations	2021	VPO
	Environmental Management (Climate Change and Carbon Trading Monitoring) Regulations	2025	VPO
	Forest Regulations, 2005 (as amended by the Forest (Amendment) Regulations, 2015 – Supplementary Legislation, and by 2018)	2005 (Amend. 2015, 2018)	MNRT
	Wildlife Conservation (Tourist Hunting) Regulations	2015	MNRT

Category	Title	Year	Responsible Organization
	Wildlife Conservation (Non-Consumptive Use) Regulations	2016	Ministry of Energy and Minerals
Regulations/ Rules	Mining (Safety, Occupational Health and Environment Protection) Regulations	2010	Ministry of Energy and Minerals
	Mining (Local Content) Regulations	2018	Ministry of Minerals
	Water Resources Management (Basin Water Boards) Regulations	2011	Ministry of Water
	Water Resources Management (Water Use Permit and Fees) Regulations	2013	Ministry of Water
	Petroleum (Wholesale, Storage, Retail and Consumer Installation Operations) Rules	2022	Ministry of Energy
	Petroleum (Natural Gas) (Processing) Rules	2019	Ministry of Energy
	Land (Assessment of the Value of Land for Compensation) Regulations	2001	MoLHHSD
	Land (Compensation Claims) Regulations	2001	MoLHHSD
	The Village Land Regulations	2001	MoLHHSD
	Hazardous Waste Control and Management Regulations	2019	VPO

Source: JICA Study Team based on JICA (2023) Environmental and Social Considerations Profile Final Report of Tanzania and related laws, acts and regulations.

Note: The names of responsible organizations are recorded as they were at the time each law was enacted or amended. Consequently, some names may differ from their current designations.

Table 11. Laws, Regulations and Standards Related to Environmental and Social Issues in Zanzibar

Category	Title	Year	Responsible Organization
Policy	Zanzibar Environmental Policy	2013	First Vice President's Office Department of Environment (FVPO-DoE)
	Zanzibar Blue Economy Policy	2022	Ministry of Blue Economy and Fisheries (MoBEF)
	Zanzibar Disaster Management Policy	2011	Disaster Management Commission, Second Vice President's Office.
	Fisheries Policy	2022	MoBEF
Act	Zanzibar Environmental Management Act, No. 3	2015 (Amend. 2023)	FVPO-DoE
	Zanzibar Disaster Risk Reduction and Management Act	2015	Disaster Management Commission, Second Vice President's Office.
	Water Act (Zanzibar)	2006	Ministry of Water, Energy and Minerals
	Fisheries Act, No. 7	2010	MoBEF
	Maritime Transport Act, No. 5	2006 (amend. 2013)	Ministry of Infrastructure, Communications & Transport (MoICT)
	Forest Resources Management and Conservation Act, No. 10	1996	Ministry of Agriculture, Natural Resources, Environment and Cooperatives
	Tourism Act, No. 6	2009 (regs amend. 2020)	Ministry of Tourism & Heritage
	Land Tenure Act, No. 12	1992	Ministry of Lands.
	Land Acquisition Decree (Cap. 95)	1909	Revolutionary Government of Zanzibar
	Oil and Gas (Upstream) Act, No. 6	2016	Ministry of Water, Energy and Minerals
	Occupational Safety and Health Act, No. 8	2005	Ministry of Labour, Youth, Women and Children Development (MLYWCD)
	Ancient Monuments Preservation Act	2002	Ministry of Tourism & Heritage
	Fisheries Act, No. 7	2010	Ministry of Blue Economy & Fisheries
	Maritime Transport Act, No. 5 (as amended)	2006 (2013)	Ministry of Infrastructure, Communications & Transport (MoICT)
	Public and Environmental Health Act, No. 11	2012	Ministry of Health

Regulations/ Rules	Environmental Assessment Regulations (Zanzibar)	2019	FVPO-DoE
	Marine Conservation Unit (MCU) Regulations	2014	Ministry of Blue Economy and Fisheries
	Tourism (Amendment) Regulations	2020	Ministry of Tourism & Heritage
	Oil and Gas (Upstream) Drilling Regulations	2022	Ministry of Energy
	ZMA Regulations	—	MoICT
	Marine Conservation Unit (MCU) Regulations	2014	Ministry of Blue Economy & Fisheries
	Urban Municipal Council Solid Waste Management Regulations	2019	Zanzibar Urban Municipal Council
	Public and Environmental Health (Health-Care Waste Management) Regulations	2025	Ministry of Health
	Environmental Management (Prohibition of Plastic Carry Bags) Regulations (Zanzibar)	2018	FVPO-DoE
Guidelines	Procedures for Conducting EIA	2019	FVPO-DoE
	General TOR for ESIA	2019	FVPO-DoE
	General TOR for Environmental Audit	2019	FVPO-DoE
	EIA Form）	2019	FVPO-DoE
	Cost for EIA Review and Certificate	2019	FVPO-DoE
	Zanzibar Policy Guidelines for Occupational Health, Safety and Wellbeing of Workers in the Health System		Ministry of Health
	Zanzibar Healthcare Waste Management Policy Guidelines	—	Ministry of Health
	Stone Town Design Guidelines	—	Ministry of Tourism and Heritage

Source: JICA Study Team based on JICA (2023) Environmental and Social Considerations Profile Final Report of Tanzania and related laws, acts and regulations.

Note: The names of responsible organizations are recorded as they were at the time each law was enacted or amended. Consequently, some names may differ from their current designations.

8 Environmental and Social Assessment Framework and Follow

(1) EIA

1) Mainland

The Environmental Management Act (EMA, 2004) and the Environmental Impact Assessment and Audit Regulations (2005, as amended in 2024) establish the EIA system and procedures in Tanzania Mainland. Under this system, projects are classified into four categories (A, B1, B2, and C) according to the First Schedule of the Regulations. Category A and B1 projects require a full Environmental Impact Assessment, while Category B2 and C projects are subject to simplified or no assessment, as summarized below.

Table 12. Project in Each Category of EIA in Mainland

Category	Type of Projects	Examples
Type A	Tourism and Recreational Development	Construction of resort facilities or hotels along lake or ocean shorelines; hill-top resorts; tourism facilities in or near protected areas (national parks, marine parks, forest reserves, etc.)
	Transport and Infrastructure	Construction or expansion of trunk roads, airports, airstrips, ports, and harbours; construction or expansion of existing railway lines
	Building and Civil Engineering Industry	Development of industrial parks and housing estates; developments along beach fronts
	Land Development Planning, Land Reclamation, Housing and Human Settlements	Land acquired for resettlement, establishment of refugee camps, land reclamation from water bodies, dredging of bars, estuaries, and dikes

Type B1	Tourism and Recreational Development	Other tourism or recreational constructions; major sporting facilities
	Transport and Infrastructure	Rehabilitation of trunk roads and airports; construction of jetties, docks, fish landing sites, inland container depots, and cargo terminals
	Building and Civil Engineering Industry	Major urban development projects (e.g. multi-storey buildings, markets, terminals); large-scale residential, commercial, hospital, or institutional buildings; schools with boarding facilities for more than 360 students
Type B2	Tourism and Recreational Development	Camping sites and temporary facilities
	Building and Civil Engineering Industry	Small-scale health centres and dispensaries; schools with less than 360 students
Type C	—	Projects with minimal or no environmental impact

Source: JICA Study Team based on the First Schedule of the Environmental Impact Assessment and Audit Regulations, 2005 (as amended 2024)

The detailed procedures for screening, scoping, impact assessment, review, and approval are defined in the Regulations. Project proponents are required to submit a Project Brief to the National Environment Management Council (NEMC) or its appointed agents. NEMC then determines whether a full EIA is required based on the project's type, scale, and location.

While the EIA Regulations require the inclusion of Environmental and Social Management Plans (ESMPs) and Monitoring Plans in the EIA report, the current legislation does not explicitly define the developer's responsibility for environmental and social monitoring during construction and operation. Therefore, each project should clearly define these responsibilities at the outset.

Stakeholder participation and information disclosure are mandatory at various stages of the EIA process. The methods and timing of public consultations are specified in the EIA and Audit Regulations. Furthermore, EIAs must be conducted and signed by experts or firms registered and certified by NEMC.

2) Zanzibar

In Zanzibar, the EIA system is established under the Zanzibar Environmental Management Act, 2015 (Act No.3 of 2015; Amended 2023) and detailed in the Environmental Assessment Regulations, 2019 issued by the Zanzibar Environmental Management Authority (ZEMA) under the First Vice President's Office.

Under these regulations, all projects likely to have significant environmental or social impacts are subject to EIA prior to implementation. Similar to the mainland system, projects are screened and categorized based on potential impact level; however, Zanzibar applies a simplified three-tier classification (Type A, B, and C).

Table 13. Project in Each Category of EIA in Zanzibar

Category	Type of Projects	Description
Type A	Projects with major environmental or social impacts	Require a full Environmental and Social Impact Assessment (ESIA). Examples include roads, ports, airports, power plants, refineries, industrial estates, and large-scale tourism projects near coastlines or in sensitive ecosystems.
Type B	Projects with moderate impacts	Require a simplified or partial EIA (Project Brief and Environmental Management Plan). Examples include medium-scale infrastructure, expansion of existing facilities, or small ports and jetties.
Type C	Projects with negligible impacts	Subject only to environmental screening and registration; no EIA required.

Source: JICA Study Team based on the Zanzibar Environmental Assessment Regulations, 2019

Project proponents are required to submit a Project Brief or EIA application to ZEMA, which is responsible for screening and categorizing the project. For projects requiring a full EIA, the proponent must prepare ToR and conduct the assessment through registered environmental experts recognized by ZEMA.

ZEMA oversees the review, public participation, and approval process. The EIA Certificate of Approval is

issued by ZEMA on behalf of the First Vice President's Office. Stakeholder consultation is a legal requirement in the Zanzibar EIA process. The Regulations stipulate that affected communities and relevant authorities must be consulted during scoping and before approval. All approved EIA reports are subject to periodic monitoring by both ZEMA and the project proponent, and follow-up Environmental Audits are mandatory for large projects.

Table 14. The Comparison of EIA between Mainland and Zanzibar

Aspect	Tanzania Mainland	Zanzibar
Legal Basis	EMA 2004; EIA & Audit Regulations 2005 (Amend. 2024)	Zanzibar Environmental Management Act 2015 (Amend. 2023); Environmental Assessment Regulations 2019
Responsible Authority	NEMC (under VPO)	ZEMA (under 2nd VPO)
Classification	4 categories (A, B1, B2, C)	3 categories (A, B, C)
Registration of Experts	NEMC-registered	ZEMA-registered
Certificate Issued by	NEMC	ZEMA
Public Participation	Mandatory (Reg. 17-22)	Mandatory (Reg. 20-25)
Monitoring Responsibility	Not clearly defined in Act	Explicitly defined in Reg. 39 (proponent responsible under ZEMA supervision)

Source: JICA Study Team based on the Zanzibar Environmental Assessment Regulations, 2019

(2) SEA

1) Mainland

Strategic Environmental Assessment (SEA) in Tanzania Mainland is mandated by the Environmental Management Act, 2004 (EMA) and implemented under the Strategic Environmental Assessment Regulations, 2008 (GN Nos. 153 & 154), complemented by the National Guidelines for SEA issued by the VPO. SEA applies to policies, bills, regulations, strategies, plans and programmes (PPPs) likely to have significant environmental or social implications. Line ministries and agencies must undertake SEA during the formulation or revision of PPPs so that environmental considerations inform strategic choices before approval/adoption. The EMA explicitly envisages SEA for major sectors (e.g., oil & gas, power, transport and land use).

A. Area of SEA

According to the Strategic Environmental Assessment Regulations (2008), SEA is required for the following instruments and undertakings:

- Bills
- Regulations;
- Policies;
- Strategies;
- Plans;
- Physical plans;
- Programmes;
- General management plans of protected areas;
- Mineral or petroleum resource plan or project;
- Hydro-electric station project;
- Planned major water project;
- Any other matter as may be determined by the Minister responsible for environment.

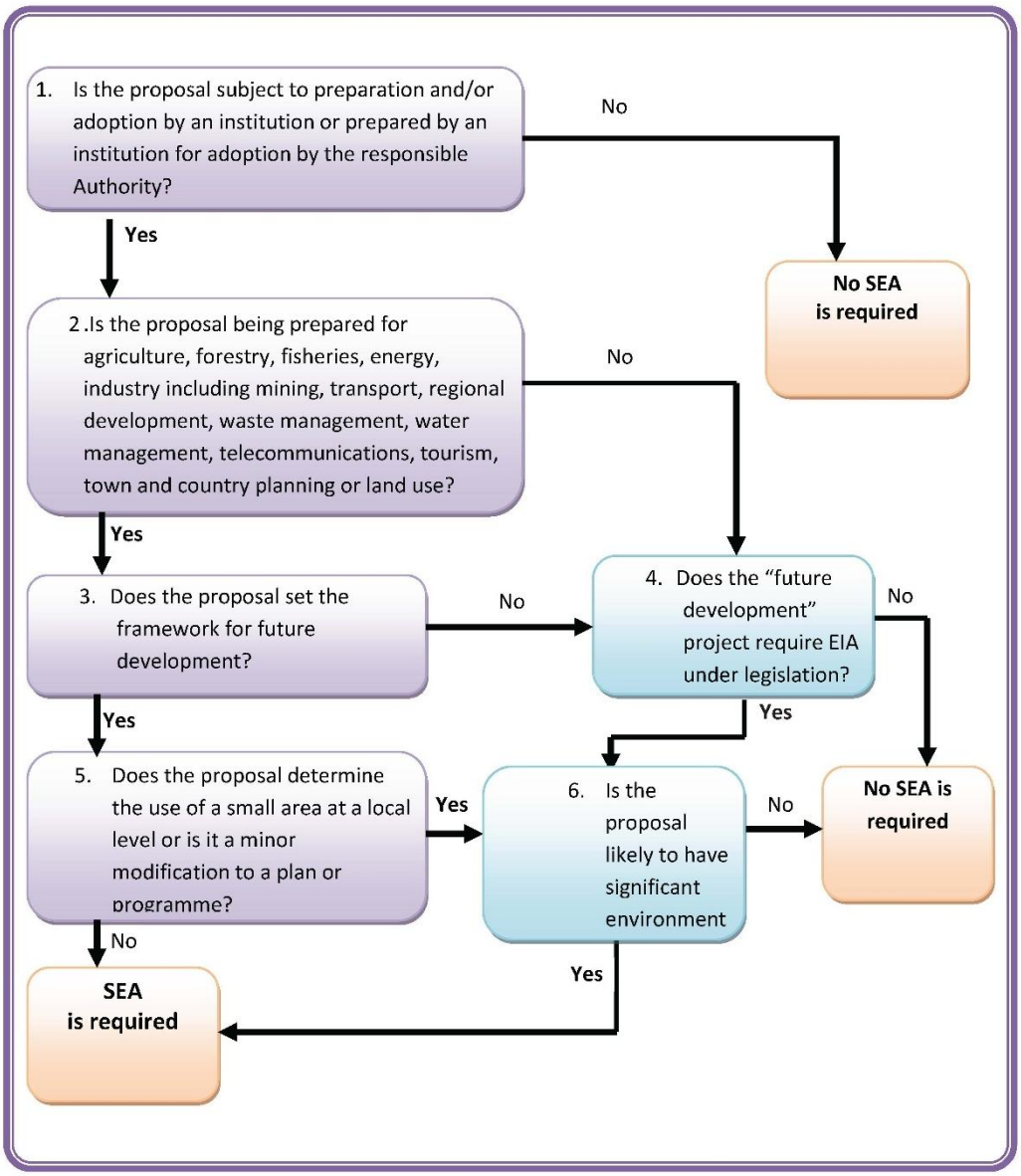
B. Process of SEA

The SEA process is defined under the SEA Regulations (2008) and the National Guidelines for SEA (VPO, 2012). It consists of six key steps: Screening, Scoping/TOR, SEA Study and Draft Report, Consultation, Review and Approval, and Monitoring.

Step 1 Screening

Screening is the first step that determines whether a proposed policy, bill, regulation, strategy, plan or programme is likely to cause significant environmental effects and thus requires a full SEA. The responsible authority, such as a ministry or agency preparing the PPP, shall prepare a screening statement at the beginning of the process. This statement should describe the nature and objectives of the proposed PPP, outline its likely environmental and social effects, and present the authority's own opinion on whether an SEA is needed.

The screening is submitted to the Director of Environment (DoE) under the Vice President's Office. The DoE then evaluates the statement against criteria provided in the National SEA Guidelines. Based on this evaluation, the DoE advises whether a full SEA is required, or whether environmental issues can be managed through other means. The decision and its rationale are documented and communicated to the proponent. Figure 15 in the Guidelines illustrates the flow and criteria for screening and determination of SEA requirements.



Source: National Guideline for SEA (June 2017)

Table 15. Criteria in SEA screening in Mainland

Step 2 Scoping and Terms of Reference

Scoping defines the key environmental issues, scope, and methods of SEA, and forms the basis of the Terms of Reference (TOR). It identifies:

- To define the objectives, decision criteria, and indicators;
- To determine the assessment methods, data needs, and sources of information
- To identify key physical, ecological, social, economic, and institutional issues to be examined;
- To specify the spatial and temporal boundaries of the assessment;
- To identify Stakeholders to be consulted;
- To identify alternatives to be compared; and
- To determine experts to be engaged in the SEA (registered environmental experts or sector specialists).

The responsible authority, together with its SEA consultants, prepares a Scoping Report, summarizing how scoping was undertaken, what issues were identified, and which alternatives will be analysed. It

also describes which stakeholders and authorities were consulted, how their views were incorporated, and presents a draft TOR for the SEA study.

The TOR is then submitted to the Director of Environment for review and approval. Approval of the TOR is a prerequisite for proceeding to the next stage. This step is essential to ensure that the SEA focuses on significant strategic issues rather than duplicating project-level EIAs.

Step 3 Preparation of Draft SEA Report

The report should provide a comprehensive analysis of the environmental and social implications of the proposed PPP and its alternatives, identifying opportunities to integrate sustainability considerations into decision-making.

A typical SEA Report should include:

- Title of the report
- Title and Non-Technical Summary (in English and Swahili) describing the scope, methodology, and key findings;
- Introduction explaining the objectives of the SEA and the context of the proposed PPP;
- Description of the proposed policy, plan, or programme, including objectives, alternative options, affected sectors, and implementation schedule;
- Environmental and social baseline information and description of existing conditions and trends;
- Assessment of impacts and alternatives, identifying direct, indirect, cumulative, and transboundary impacts;
- Evaluation of alternative options, comparing them against environmental indicators and decision criteria;
- Recommendations, including policy adjustments, mitigation measures, and strategic interventions; and
- Environmental and Social Management and Monitoring Plan (ESMMP) that specifies the mitigation measures, performance indicators, institutional arrangements, cost estimates, and capacity-building requirements.

An ESMMP includes the following elements:

- A summary of key environmental and social impacts identified in the SEA, indicating the magnitude, nature, and significance of potential positive and negative effects
- Mitigation and enhancement measures to avoid, minimize or offset adverse impacts and to strengthen beneficial ones
- Institutional arrangements defining the roles and responsibilities of the responsible authority, implementing agencies, and the Director of Environment for carrying out the proposed measures
- An implementation schedule specifying the timing and sequence of actions during policy formulation, plan execution, and programme implementation
- A monitoring plan describing the indicators to be monitored, the methods and frequency of monitoring, the responsible institutions, and the format for reporting results to the Director of Environment
- A reporting procedure outlining how monitoring results will be compiled, reviewed and submitted, including the intervals prescribed by the Director of Environment.
- An estimate of costs for implementing and monitoring the proposed environmental and social measures

Step 4 Consultation and participation

Stakeholder consultation and participation are a mandatory requirement under the SEA Regulation. The responsible authority shall consult relevant sector ministries, government departments and agencies, and local

government authorities that are likely to be affected by or have a mandate related to the proposed PPP. These consultations aim to obtain technical inputs, promote coordination among sectors, and integrate environmental and social considerations into strategic decisions.

The responsible authority circulates the draft SEA report together with the draft PPP to the Director of Environment within the Vice President's Office and to other relevant ministries and institutions for their review and comments. Written comments are invited within a defined time frame, and all inputs received are taken into account during the revision of the SEA report.

Although the Regulations do not require direct consultation with communities or the general public, the responsible authority may, where appropriate, seek views from any interested persons in consultation with the Director of Environment. In such cases, the scope and method of broader consultation are determined by the responsible authority, depending on the nature and scale of the proposed policy or plan.

All consultations should be conducted in an open and transparent manner and at an early stage, so that the opinions expressed can effectively influence decision-making. The outcomes of the consultations, including institutions consulted, issues raised, and how they have been addressed, should be summarized in a Consultation Report and annexed to the SEA report submitted for review and approval.

Step 5 Revision of Draft SEA report

After the draft SEA report has been revised to incorporate comments obtained during consultation (Step4), the responsible authority submits it to the Director of Environment for technical review and consideration. The Director coordinates the review process to ensure that the SEA has been carried out in accordance with the approved Terms of Reference and that the findings are consistent with environmental policies and legal requirements.

A Technical Review Committee will be established to support the review process. This committee is composed of experts from relevant sectors such as environment, water, land, energy, transport, and natural resources. The committee examines the quality and completeness of the SEA report, the adequacy of data and analysis, the extent of consultation conducted, and the soundness of the proposed mitigation and monitoring measures. If necessary, the review process may include site visits or additional clarification meetings.

Based on the committee's assessment, the Director of Environment consolidates the comments and recommendations into a review report and submits it to the Minister responsible for environment .

Step 6 Approval

The Minister considers the review report and issues one of the following decisions:

- Approved, where the SEA report is found satisfactory;
- Approved with conditions, where modifications or additional measures are required; or
- Not approved, where the report is inadequate and must be revised before resubmission.

The final decision is communicated in writing to the responsible authority. Once approved, the SEA report becomes part of the documentation supporting the proposed PPP and must be considered in subsequent decision-making and implementation.

Step7 Monitoring

The responsible authority is required to monitor the implementation of the PPP and report the results to the Director of Environment. Monitoring focuses on assessing whether the mitigation measures identified in the SEA are being applied as intended, evaluating their effectiveness, and identifying any unforeseen impacts that may arise during implementation. It also provides feedback for improving policies or plans and for ensuring continuous environmental performance improvement.

A monitoring framework is prepared as part of the Environmental and Social Management and Monitoring Plan (ESMMP) included in the SEA report. The framework should define the following key aspects:

- What needs to be monitored – the environmental and social parameters or indicators relevant to the identified impacts and mitigation measures;
- What information is required – the type and level of data necessary to assess implementation and effectiveness;
- Existing sources of monitoring information – available baseline data, sectoral monitoring systems, and reporting mechanisms that can be utilized;
- Information gaps and how to address them – identification of missing data and actions needed to fill those gaps;
- Actions to be taken if adverse effects are detected – procedures for corrective or remedial measures and communication with the Director of Environment; and
- Responsibilities, timing, and reporting format – the institutions responsible for each monitoring activity, the frequency of monitoring, and the format for presenting and submitting monitoring results.

The responsible authority compiles monitoring results into periodic reports, which are submitted to the Director of Environment annually or at intervals determined by the Director.

These reports summarize the progress of implementation, results of monitoring, and any corrective actions undertaken. Where necessary, the Director of Environment may verify the results through field inspections or request additional information to ensure compliance and proper follow-up.

Zanzibar

The SEA system in Zanzibar is established under the Environmental Management Act No. 3 of 2015, which mandates environmental assessment not only for projects but also for policies, plans, and programmes that may have significant environmental effects. The detailed procedure is outlined in the Environmental Impact Assessment and Audit Regulations, 2022, and administered by the Department of Environment (DoE) under the First Vice President's Office.

Step1 Screening

Screening is the initial phase of the SEA process and determines whether a proposed PPP requires a Strategic Environmental Assessment.

- Preliminary consultation is held between the responsible authority and the DoE to discuss the scope and objectives of the proposed PPP.
- A Steering or Technical Committee may be established to coordinate the SEA process.
- The responsible authority registers the proposed PPP with the DoE.
- The DoE examines the concept note or description of the PPP to decide whether the SEA is required.

The screening decision is issued in writing, specifying whether the SEA must be conducted and under what general scope.

Step 2: Scoping and Preparation of ToR

This step defines the level of detail and main issues to be addressed in the SEA. The responsible authority, in coordination with the DoE, undertakes the following:

- Identification of information needs and key environmental, social, and institutional issues to be studied;
- Identification of key institutions to be consulted and determination of the scope, frequency, and method of public consultation;
- Preparation of the ToR for the SEA study.

The draft ToR is submitted to the DoE for review and approval. Once approved, it becomes the official

basis for the SEA study.

Step 3: SEA Study and Report Preparation

The responsible authority conducts the SEA study following the approved ToR.

This involves:

- Identification and evaluation of likely environmental and social impacts;
- Examination of reasonable alternatives; and
- Preparation of the Draft SEA Report summarizing key findings, mitigation measures, and recommendations.

The SEA study must be undertaken by experts or consulting firms registered with the Department of Environment, as required by the Regulations.

Step 4: Stakeholder Consultations

Stakeholder engagement is a mandatory and integral part of the SEA process in Zanzibar. The responsible authority organizes workshops, hearings, or meetings to collect opinions and feedback from key stakeholders, relevant government agencies, and local communities. Comments and observations gathered through these consultations are documented and integrated into the SEA Report.

All records, such as attendance lists, meeting minutes, issues raised, and responses provided are submitted to the DoE as evidence of participation.

Step 5: Submission of the Draft SEA Report

The draft SEA report is officially submitted to the DoE for review.

The review process consists of several stages:

(1). Administrative review by the DoE:

The DoE reviews the draft report within approximately 14 days to ensure completeness and conformity with the approved ToR.

(2). Stakeholder review period:

The draft SEA report is circulated to relevant institutions and the public, including communities, for comments. A comment period of 25–30 days is typically provided for written feedback.

(3). Revision and resubmission:

The responsible authority revises the SEA report to reflect comments received and resubmits it to the DoE for final consideration.

This stage ensures transparency, accountability, and incorporation of stakeholder inputs before formal approval.

Step 6: Approval of the SEA Report

Following the review and revision, the DoE facilitates the final approval process:

- Sectoral or community workshops are held to validate the revised SEA report.
- The responsible authority integrates workshop feedback and submits both hard and electronic copies to the DoE.
- The Technical Review Committee (TRC) and DoE jointly finalize the review and formulate the approval decision.
- Upon agreement, the Director of Environment issues formal SEA approval and certification to the responsible authority.

The approval decision, including any conditions for implementation, is legally binding and must be incorporated into the PPP prior to its adoption.

Step 7: Monitoring and Evaluation

Monitoring ensures that the environmental and social mitigation measures proposed in the SEA are implemented during the execution of the approved PPP.

The responsible authority, in coordination with the DoE, monitors the significant environmental and social impacts that arise during implementation and reports periodically to the Department.

Monitoring activities include:

- Verification of compliance with SEA recommendations;
- Assessment of the effectiveness of mitigation measures; and
- Identification of unforeseen impacts or new issues requiring adaptive management.

The monitoring framework should define:

- What needs to be monitored – key environmental and social indicators relevant to the PPP;
- What information is required – data to assess implementation and effectiveness;
- Existing data sources and information gaps – and how these will be addressed;
- Actions if adverse effects occur – corrective measures and reporting procedures; and
- Responsibilities, timing, and reporting format – institutions in charge, monitoring frequency, and standard templates.

The DoE may conduct independent field inspections or request additional information where necessary.

Monitoring results feed into the evaluation of the PPP's performance and inform future SEA practices.

9 Gap Analysis in the Tanzanian Regulations and the JICA Guidelines for Environmental and Social Conservations

(1) EIA

The analysis compares key requirements on screening criteria, scoping content, public participation and disclosure, and monitoring between Tanzania Mainland EIA regulations and the JICA Guidelines. It focuses on how each framework treats environmental, social, cultural, economic and legal aspects, and on implementation responsibilities. Key findings are following.

1) Screening & Scoping

Each system requires a project brief and formal screening decision by the competent authority, NEMC on the Mainland and the DoE in Zanzibar. However, some thematic differences remain:

- Neither system explicitly lists workers' environment and occupational health and safety (OHS) as part of EIA scoping, while the JICA Guidelines explicitly require assessment of OHS and working conditions as part of environmental and social considerations.
- Consideration of cumulative impacts, alternatives, and indirect or transboundary effects is mentioned but not always applied consistently, particularly in Zanzibar where implementation capacity is still limited.

2) Public Participation & Disclosure

Both Mainland and Zanzibar frameworks mandate public consultation during the EIA process. Under Mainland regulations, NEMC organizes or supervises public hearings, allowing stakeholders and communities to express opinions on the project, the ToR, and the Environmental Impact Statement (EIS).

Zanzibar's 2022 EIA and Audit Regulations similarly require public hearings and consultations coordinated by the DoE and local government authorities.

However, significant procedural differences exist between the national systems and JICA's expectations:

- Tanzanian regulations emphasize consultation but give authorities discretion regarding how, when, and to what extent information is disclosed.
- In both systems, proactive and continuous public disclosure (e.g., posting draft EIS, disclosure of monitoring results) is not clearly required, whereas the JICA Guidelines emphasize early, continuous, and accessible information disclosure throughout project preparation and implementation.

3) Monitoring & Feedback

Under both the Mainland and Zanzibar systems, the competent authority (NEMC or DoE) and the responsible ministry are mandated to conduct environmental monitoring after approval.

Monitoring focuses primarily on compliance with EIA certificate conditions and overall supervision by the authority. However, neither system explicitly requires continuous, developer-led environmental and social monitoring with public feedback mechanisms, which is a key requirement of the JICA Guidelines.

The JICA Guidelines emphasize that project proponents must conduct environmental and social monitoring throughout construction and operation, disclose results, and take corrective actions as necessary. In contrast, Tanzanian regulations (both jurisdictions) rely largely on authority-led oversight and periodic audits rather than continuous developer-driven feedback loops.

4) Information Disclosure and Transparency

Mainland and Zanzibar regulations provide for disclosure upon request or at the discretion of the authority, but they do not mandate proactive publication of draft or final EIA documents. In contrast, the JICA Guidelines require open, transparent, and continuous disclosure of key EIA outputs (draft EIS, final EIS, approval conditions, and monitoring reports)

(2) SEA

This analysis compares the Strategic Environmental Assessment (SEA) systems of Tanzania Mainland and Zanzibar with the JICA Guidelines for Environmental and Social Considerations (2022). There are no fundamental institutional or legal conflicts between the two systems.

However, several procedural and operational gaps remain: particularly in areas such as proactive public disclosure, developer-led monitoring and feedback, and the integration of cross-cutting issues such as climate change and gender. These can be effectively addressed through project-level enhancement measures, including detailed scoping, stakeholder engagement, and monitoring frameworks aligned with the JICA Guidelines. It focuses on five key aspects:

1. Screening and scoping;
2. Public participation and information disclosure;
3. Monitoring and feedback;
4. Institutional review and independence; and
5. Cross-cutting themes such as climate change and gender.

1) Screening and Scoping

Both the Mainland and Zanzibar frameworks require screening and scoping for PPP. However, neither system provides a standardized risk-based classification or clear significance criteria equivalent to JICA's Category A/B/C approach.

The scoping stage is mandatory, but methodological detail is limited, particularly regarding alternatives, cumulative impacts, and social inclusion. JICA Guidelines require structured scoping covering environmental, social, and climate aspects, with a clear rationale for issue prioritization.

2) Public Participation and Information Disclosure

Public participation provisions differ between the two jurisdictions:

- In Mainland Tanzania, the SEA Regulations (2008) require consultation mainly with government ministries and agencies, not necessarily with affected communities.
- In Zanzibar, consultation with communities and stakeholders is mandatory, but procedures for early-stage or continuous disclosure are not specified.

Both systems rely on the discretion of the authority for public access to SEA documents. In contrast, the JICA Guidelines require early, continuous, and accessible participation, along with proactive disclosure of draft reports, minutes, and final outcomes.

3) Monitoring and Feedback

In both Mainland and Zanzibar, the competent authorities (VPO–DoE and DoE) are responsible for supervising implementation of SEA recommendations. However, developer-led continuous monitoring, public reporting, and adaptive management, which are core to JICA's approach, are not defined in the regulations. Monitoring is largely limited to authority-led oversight and compliance audits after SEA approval.

4) Institutional Review and Independence

Both systems rely on an internal Technical Review Committee (TRC) composed of sectoral representatives to review the SEA.

While effective for inter-ministerial coordination, these committees lack external independence and rarely include academia, civil society, or independent experts.

JICA emphasizes transparency and the involvement of neutral technical experts in the review process.

5) Cross-Cutting Issues (Climate Change, Gender, and Vulnerable Groups)

Although the laws require general environmental and social consideration, neither Mainland nor Zanzibar SEA frameworks explicitly mention climate change, gender equality, or vulnerable groups as assessment categories. The JICA Guidelines require that such cross-cutting aspects be systematically analysed, with attention to climate resilience, gender balance, and inclusion.

10 Relative agencies and institutions

In both the EIA and SEA processes, the responsible authority is required to conduct the environmental and social assessment. The assessment prepared by the responsible authority is then reviewed by the NEMC in the case of EIA, and by the VPO–DoE in the case of SEA in Mainland Tanzania; while in Zanzibar, the corresponding review authorities are the ZEMA for EIA and the DoE for SEA. Table 9: Responsibility of Relevant Organizations

Name of Agencies/Institutions	Responsibilities
Mainland	
Ministry of Transport (MoT)	Responsible for planning, developing, and supervising national transport infrastructure, and ensuring integration of environmental and social considerations into transport projects.
National Environmental Management Committee (NEMC)	Screens and categorizes projects; reviews and processes EIA reports; and provides recommendations to the Minister responsible (Minister of State, VPO-ED) for environment on issuance of EIA Certificates.
Vice President's Office-Environmental Division (VPO- ED)	Determines the requirement for SEA; reviews SEA reports; coordinates inter-ministerial consultations; and provides recommendations to the Minister responsible for environment (Minister of State, VPO-ED) for SEA approval.
VPO, Minister of State Responsible for	Final authority for approval of EIA and SEA reports and issuance of EIA Certificates and SEA Approval Notices in Mainland Tanzania.

Environment	
Zanzibar	
Ministry of Infrastructure, Communication and Transport (MoICT)	Responsible for planning, developing, and supervising infrastructure and communication projects in Zanzibar, and coordinating with environmental authorities (ZEMA, DoE) to ensure environmental compliance.
Zanzibar Environmental Management Authority (ZEMA)	Screens and categorizes projects; reviews and processes EIA reports; and provides recommendations to the Minister responsible for environment on issuance of EIA Certificates in Zanzibar (Minister of State, First Vice President's Office – Environment and Climate Change: FVPO).
Department of Environment (DoE), First Vice President's Office (FVPO)	Determines the requirement for SEA; reviews SEA reports; coordinates consultations; and provides recommendations to the Minister responsible for environment for SEA approval (FVPO).
First Vice President's Office – Minister of State (Environment)	Final authority for approval of EIA and SEA reports and issuance of EIA Certificates and SEA Approval Notices in Zanzibar.

Source: JICA Study Team

11 Result of the consultation with recipient government on environmental and social consideration

A series of consultations were conducted with the relevant environmental authorities and sector ministries of both Mainland Tanzania and Zanzibar during the detail survey period to confirm the institutional arrangements and procedures for Environmental and Social Considerations.

These meetings were organized between September and October 2025 as part of the field survey activities of the JICA Study Team.

(1) Mainland

Separate consultation meetings were held on 17 September 2025 with the VPO–DoE, and NEMC to discuss the institutional arrangements and procedures for environmental and social considerations under the Project.

The main discussion points were as follows:

With VPO–ED:

- Procedural aspects:
  - The Project would likely require the preparation of a SEA, not EIA, although the formal decision on requirement will be made upon submission and review of the SEA registration and ToR.
  - VPO-ED explained that the SEA process typically requires approximately ten to twelve months from the registration of the ToR to the final Ministerial approval, depending on the complexity of the plan and the quality of stakeholder engagement.
  - The SEA process includes key milestones such as ToR review, public consultation, review of the Draft SEA Report, TRC meeting, and final approval by the Minister responsible for Environment.
  - VPO-ED noted that effective coordination with sector ministries and agencies is critical to avoid delays, particularly during the inter-ministerial review stage.

- The VPO–ED confirmed that the National Guidelines for Strategic Environmental Assessment (2017) remain the latest version currently in use, although the document has not yet been officially gazetted. VPO-ED also informed that a revision process is ongoing, aiming to update the Guidelines to align with the amended Environmental Management Act and national climate change strategies, with finalization expected within 2025.

➢ Key expectations for the Project

- VPO-ED welcomed the early engagement of the Project and requested that the SEA registration and ToR submission be made as soon as the draft planning framework is available and agrees to provide the technical guidance and review throughout the process as the competent authority.
- VPO-ED emphasized the Project needs to ensure that climate change adaptation, resilience, and gender mainstreaming, and to share the draft scoping matrix for technical review.
- VPO-ED also recommended that the SEA findings be aligned with national climate policies and strategies, including the National Climate Change Response Strategy (2021–2026) and the upcoming updated Nationally Determined Contributions (NDC), which is already reviewed internally and is going to submit to UNFCCC by October 2025.

With NEMC:

➢ Coordination and review process:

- NEMC explained its role in screening, categorizing, and reviewing EIA reports under the Environmental Impact Assessment and Audit Regulations (2005, as amended in 2024) and noted that, while SEA falls under the jurisdiction of the VPO–ED, both processes are complementary and interlinked. NEMC emphasized the importance of data sharing, consistent baseline information, and the alignment of mitigation measures between the two assessment frameworks.
- NEMC highlighted the key thematic areas to be addressed in the SEA, including climate change impacts, biodiversity conservation, land use and ecosystem conflicts, pollution prevention, and social inclusiveness, with particular attention to gender and vulnerable groups.
- The cumulative and transboundary impacts should be considered where relevant, in accordance with the national SEA guidelines and the EMA. NEMC recommended that the Project incorporate these thematic areas from the early stages of SEA preparation.

➢ Technical guidance

- All EIA and SEA studies must be conducted by registered environmental experts or firms accredited by NEMC. NEMC maintains the national registry of accredited experts and firms and supervises compliance with professional standards. The JICA Study Team confirmed that any SEA activities under this Project will engage registered experts, in coordination with VPO–ED, in line with these national requirements.
- One of the most NEMC referred to the SEA Guidelines for Mainland Tanzania (2021) as the main reference document and requested that the Project follow its structure, including baseline, alternatives, cumulative impacts, and environmental management framework.
- The Council encouraged the inclusion of spatial analysis and GIS-based mapping, particularly to identify flood-prone areas, wildlife corridors, and climate-sensitive infrastructure.
- NEMC welcomed the Project's plan to integrate climate risk assessment and gender perspectives in the SEA and confirmed readiness to provide technical input during review stages.

- Climate and mitigation measures:
  - NEMC pointed out that in urban areas, the main source of environmental degradation and climate-related impacts from the transport sector is exhaust emissions from vehicles, particularly from heavy-duty trucks and poorly maintained vehicles.
  - It also emphasized the importance of considering the introduction of electric vehicles (EVs) and EV-based public transport systems as part of the long-term mitigation strategy to reduce greenhouse gas emissions and improve air quality.
  - NEMC also noted that during the Standard Gauge Railway (SGR) development, afforestation and tree planting were identified as mitigation measures under the SEA, but the implementation progress has been limited.
  - It was therefore recommended that the Master Plan review the current implementation status of such measures and propose practical and feasible adaptation and mitigation actions that can realistically be implemented and monitored during the plan period.

(2) Zanzibar

Separate consultation meetings were held on 7 October 2025 with DoE and ZEMA to confirm the applicable environmental and social assessment procedures and institutional responsibilities in Zanzibar.

The main discussion points were as follows:

<u>With DoE:</u>

- SEA authority & scope
  - The DoE clarified that a SEA is mandatory for major PPP likely to have significant environmental or social impacts, and that DoE serves as the competent authority responsible for screening, scoping, report review, and coordination of the Technical Review Committee (TRC).
  - The SEA for Zanzibar must be conducted separately from the Mainland process. Two SEA reports will therefore be prepared; one for Mainland Tanzania and one for Zanzibar.
- Institutional coordination:
  - Because coastal and marine areas are closely linked to the tourism sector and are particularly sensitive, the Project should collaborate and consult with the relevant tourism authorities and stakeholders.
  - DoE recommended adding the ZEMA as a JCC member (or observer), noting that DoE and ZEMA work closely on environmental management, including coastal and marine issues, even though ZEMA is not the competent authority for SEA.
- Guidelines & legal updates:
  - DoE confirmed that the Guidelines for Conducting SEA in Zanzibar (2020) are currently applied as the main procedural reference. A revised draft (prepared in 2024) seeks alignment with the updated Environmental Management Act and forthcoming national climate policies. Finalization and official adoption are expected in 2025 or early 2026.
- Process duration:

- The overall SEA duration in Zanzibar depends on plan complexity and the extent of stakeholder consultation. While the typical Mainland SEA takes around 10–12 months, the Zanzibar process may require a longer period due to additional inter-agency coordination and review. Although DoE did not specify an exact timeline, it noted that the approval phase after submission of the Draft SEA Report usually extends beyond six months.

➢ Cross-cutting themes:

- DoE welcomed the inclusion of climate change, coastal resilience, and gender perspectives in the SEA scope, and requested early sharing of the scoping framework for technical input.

With ZEMA:

➢ Institutional role and mandate

- Key functions include environmental monitoring, pollution control, enforcement of environmental standards, and issuance of EIA certificates for projects requiring environmental clearance. And ZEMA is not the competent authority for SEA, as this responsibility rests with the DoE. However, it is necessary to be involved as stakeholders in terms of environmental management and control.
- ZEMA and DoE closely collaborate in matters related to environmental management, particularly on coastal and marine ecosystems, where ZEMA plays a leading technical role.
- ZEMA emphasized the importance of ensuring consistency between SEA findings and subsequent EIAs, especially for infrastructure projects located along the coastline or within environmentally sensitive zones.
- ZEMA welcomed the proposal to include it as a JCC member or observer, noting that its participation would enhance inter-agency coordination and integration of coastal and marine perspectives in the SEA process.

➢ Environmental data and monitoring

- ZEMA encouraged early sharing of baseline environmental data with the Project, including GIS information on protected areas, mangrove and coral reef distribution, coastal erosion, and flood-prone zones.
- The Authority also noted the need to strengthen long-term coastal and marine monitoring systems, including beach profiling, water quality assessment, and coral reef condition surveys, to support evidence-based SEA analysis and follow-up

12 Provisional Scoping (types and magnitudes of possible adverse impacts)

The Project will formulate the integrated national transport master plan, meaning the target area of the Project is a whole entire territory of URT including Zanzibar, and target transportation mode also are several. Since the contents of the plan have not been specified at this stage, the impact on natural and social environment cannot be evaluated concretely.

Therefore, provisional scoping shown in below Table was performed based on the possible impact items. The provisional scoping has been done according to JICA Guideline.

Table 16. Provisional Environmental and Social Impact Scoping

No	Potential Impact	Rating		Brief description
		Before & During Construction	Operation	
Pollution	Air Pollution	✓	✓	**Before & During Construction**: Dust and exhaust emissions may be generated from excavation, paving, and material transport associated

				with infrastructure development, potentially deteriorating ambient air quality. Particularly in urban areas and Zanzibar's coastal zones, such pollutants tend to stagnate due to meteorological conditions, raising health concerns. **During Operation**: Increased traffic volume may result in higher NOx and PM emissions, while the introduction of public transport systems and improved port efficiency could contribute to emission reductions. For pipelines, air emissions may occur from heavy machinery during trenching and backfilling, and fugitive emissions of methane or volatile organic compounds (VOCs) from pumping stations should be monitored.
	Water pollution	✓	✓	**Before & During Construction:** Wastewater, turbid water, and sediment runoff may flow into rivers and coastal waters, causing changes in water quality. Pipeline construction may also cause water contamination through accidental spills of oil or lubricants, or river crossings disturbing sediment and aquatic habitats. **During Operation**: Ballast water, oil residues, and ship-generated waste associated with port operations may affect marine water quality. In Zanzibar, potential impacts on coastal tourism resources are of particular concern. For pipelines, leakage or rupture incidents could result in serious contamination of surface water and groundwater along the route.
	Soil contamin-ation	✓	✓	**Before & During Construction:** Fuel leakage from construction machinery and improper handling of chemicals may cause soil contamination. Pipeline works may pose additional risks of soil contamination due to accidental spillage of oil or lubricants during welding, joint coating, or hydrostatic testing. **During Operation:** Storage and handling of petroleum products at ports and oil leaks along roadsides may also lead to soil pollution. Pipeline leakage or seepage could cause long-term subsurface contamination and require remediation measures.
	Waste	✓	✓	**Before & During Construction**: Improper disposal of construction waste or excavated soil may lead to illegal dumping or contamination. Pipeline construction generates additional waste such as used pipe coating materials, welding residues, and hydrotest water, which require proper disposal. **During Operation**: Increased traffic volume may result in greater solid waste generation, particularly around tourist areas in Zanzibar, potentially affecting landscape and marine environments.
	Noise and vibrations	✓	✓	**Before & During Construction**: Construction machinery may generate noise and vibration, affecting living environments and wildlife. Pipeline trenching, welding, and compressor station construction can also cause temporary noise and vibration impacts on nearby communities. **During Operation**: Continuous noise may occur due to traffic concentration, and cargo-handling equipment at ports may also cause noise impacts. Compressor and pumping stations along pipelines may generate low-frequency noise during operation.
	Ground subsidenc e	✓		**Before & During Construction**: Excessive groundwater extraction or increased loads from reclamation works may cause land subsidence. In coastal and low-lying areas, this could exacerbate flood and saline intrusion risks. Pipeline trenching in soft soils or reclaimed zones may also lead to localized ground settlement or erosion.
	Offensive odours			At present, no significant odour emissions are anticipated under this master plan. However, localised odour emissions may occur at seafood handling facilities and waste retention points within the port area.
Natural Environmental Aspects	Geograph ical features	✓	✓	**Before & During Construction**: Excavation, cut-and-fill, and dredging works may alter topography. Port expansion, in particular, may modify seabed morphology, affecting coastal currents and sediment dynamics. Pipeline alignment through hilly or coastal areas may require slope cutting, potentially altering terrain and drainage patterns. **During Operation:** Regular maintenance dredging may also cause ongoing changes in landforms. Pipeline corridors may act as linear clearings visible in the landscape, altering natural geomorphology.

	Sediment	✓		**Before & During Construction:** Dredging and material placement may disturb sediments, increasing turbidity and resuspending contaminants. In Zanzibar, such disturbance may affect coral reefs and seagrass beds. For pipelines crossing rivers or wetlands, trenching and backfilling may cause sediment disturbance and temporary increases in turbidity.
	Biodiversity	✓	✓	**Before & During Construction:** Clearing of forests, wetlands, and coastal vegetation or disturbance of marine habitats may directly affect ecosystems. Pipeline construction may fragment terrestrial habitats, disturb wildlife corridors, and affect breeding grounds, particularly where alignment crosses protected or sensitive ecosystems. **During Operation**: Increased traffic and vessel movement may cause habitat fragmentation and wildlife collisions (e.g., roadkill, ship strikes). Pipeline maintenance activities may also disturb wildlife if access roads cut through sensitive habitats
	Protected area	✓	✓	**Before & During Construction:** Infrastructure development within or adjacent to protected or sensitive areas may threaten conservation objectives and fragment critical habitats. Roads and railway constructions may increase risk of collisions with protected wildlife particularly where animal corridors across major transport routes. **During Operation:** Increased accessibility and human activity around protected areas may lead to illegal encroachment, poaching, or habitat disturbance. Continuous coordination with park management authorities and enforcement of protective measures are necessary to ensure long term ecosystem integrity and sate wild movement.
	Hydrology/ Water Regime	✓	✓	**Before & During Construction:** Temporary works, land reclamation, culvert/ bridge installation, and trenching may alter natural drainage, increase runoff and turbidity, induce local flooding, scouring, or bank erosion. In coastal and island zone including Zanzibar, excavation and groundwater abstraction may exacerbate saltwater intrusion. **During Operation**: Long-term changes in catchment hydrology due to paved surfaces and embankments may raise peak flows and flood frequency, causing scouring at crossings and sedimentation at ports. In low-lying/coastal areas, sea-level rise and storm surges may intensify backwater effects and saline intrusion unless adaptive drainage capacity is secured.
	Water usage	✓	✓	**Before & During Construction**: Large volumes of water may be used for material production, dust suppression, and worker camps, increasing groundwater and surface water extraction. Pipeline hydrostatic testing and cleaning require significant amounts of water, which should be sourced sustainably. **During Operation**: Urbanization and hub development may raise water demand, stressing supply facilities. In Zanzibar, limited freshwater availability may lead to shortages during peak tourism seasons or dry seasons.
	Climate Change	✓	✓	**Before & During Construction:** Construction activities, including excavation, material transport, and energy use, may also contribute to greenhouse gas (GHG) emissions. It will be important to promote low-carbon construction practices, such as the use of energy-efficient machinery and locally sourced materials. Abnormal rainfall and high temperatures may cause construction delays, slope instability, and material deterioration. **During Operation**: Sea-level rise, storm surges, and high waves may increase inundation and erosion risks for coastal infrastructure, while higher temperatures could accelerate pavement deterioration. At the same time, the implementation of the Master Plan will influence national GHG emissions through changes in transport demand and modal balance. If the plan successfully promotes public transport, railway, and pipeline development, it could reduce long-term transport-related emissions. Conversely, expansion of road-based mobility without mitigation measures may increase fossil fuel consumption and GHG emissions.

Social Environmental Aspects	Involuntary resettlement	✓	✓	**Before & During Construction:** Land acquisition and route selection for roads and trains may require relocation of houses, shops, and livelihoods. Pipeline corridors may require long, continuous right-of-way (ROW) acquisitions, potentially affecting multiple settlements and agricultural lands. Key concerns include unregistered occupants, vulnerable groups, and timely compensation. **During Operation**: Whilst compensation and land rights adjustments are, in principle, to be completed prior to construction, additional access restrictions or safety zones may be introduced after commissioning for safety or management reasons, which could newly limit the use of adjacent land. In such case, particular in Zanzibar, complicated Land Committee procedures may prolong agreement processes.
	Local economies, such as employment, livelihood, etc.	✓	✓	**Before & During Construction:** The implementation of transport infrastructure projects under the Master Plan is expected to stimulate regional economies through job creation, local procurement, and increased demand for goods and services. It will be important to ensure that such economic opportunities are equitably distributed and that local communities can participate in employment and supply chains. **During Operation:** Improved logistics efficiency and enhanced connectivity are expected to support long-term economic growth, reduce transport costs, and expand access to markets and services. However, it will also be necessary to monitor potential disparities, as economic benefits may concentrate in major corridors and urban centres, while peripheral and rural areas may experience fewer gains.
	Land use and utilization of local resource	✓	✓	**Before & During Construction**: Development of transport infrastructure may alter farmland, forests, and fishing grounds. Pipeline ROW clearing may convert agricultural or forested land and restrict future land use along the corridor. **During Operation:** Corridor development may increase land demand, causing conversion from agricultural to commercial or residential uses. In Zanzibar, coastal land conversion driven by tourism pressure is likely.
	Social capital and regional decision-making organization	✓	✓	**Before & During Construction**: Insufficient information sharing and community consultations may undermine trust and disrupt existing social networks. **During Operation:** Implementation of the Master Plan may require adjustments to existing institutional arrangements and coordination mechanisms among national and local authorities. In Zanzibar, coordination between local councils and the Land Commission is often complex, particularly regarding land allocation and development approvals. Strengthening inter-agency coordination and clarifying institutional roles will be crucial for smooth plan implementation. For pipeline development, sustained consultation with local authorities will be essential to ensure effective governance and prevent social fragmentation along the corridor.
Social Environmental Aspects	Existing social infrastructure and services	✓	✓	**Before & During Construction**: Construction activities and traffic restrictions may temporarily hinder access to schools, hospitals, and markets. **During Operation**: While improved connectivity enhances logistics and mobility, population growth in urban centres may increase pressure on utilities and public services such as water, electricity, and healthcare. Pipeline maintenance activities may temporarily restrict access roads or utilities if routes overlap with existing infrastructure.
	Indigenous and ethnic minorities	✓	✓	Before & During Construction: Specific indigenous or ethnic minority groups are limited in both Mainland Tanzania and Zanzibar. However, where settlements overlap with planned routes, cultural traditions and land-use rights should be respected. Early engagement and consensus building with affected communities are essential during social impact assessment. During Operation: Maintenance or expansion works should continue to respect traditional land-use patterns and community access to cultural or spiritual sites. For pipeline and corridor projects, cross-regional routes may pass near culturally sensitive areas, requiring heritage screening and community liaison.

	Socially Vulnerable group (Poverty, disable, minority group)	✓	✓	**Before & During Construction**: Vulnerable populations may be affected by relocation, rising prices, or competition for jobs. **During Operation:** While public transport improvements may increase accessibility, rising land and rent could displace low-income residents. In Zanzibar, island and fishing communities may face economic exclusion. Special assistance programs should be considered along pipeline corridors where poor households lose land or access to resources.
	Misdistribution of benefits and damages	✓	✓	**Before & During Construction**: Employment and procurement benefits may concentrate among specific regions or contractors, while burdens such as noise, dust, and restricted access may disproportionately affect nearby residents. **During Operation:** Benefits of improved port and road access may favour economic centres, with limited spillovers to peripheral or island areas. In Zanzibar, concentration of tourism benefits may widen district disparities. Pipeline-induced benefits (e.g., energy supply) may be unevenly distributed, creating perception gaps between directly affected and unaffected regions.
	Local conflict of interest	✓	✓	**Before & During Construction**: Land acquisition, compensation levels, and construction routes may cause conflicts among residents, local governments, and contractors. Pipeline routing decisions may also generate disputes over land rights, compensation, and safety concerns along communities. **During Operation**: Port expansion may lead to disputes over navigation routes or fishing grounds, and conflicts may arise regarding noise and safety standards. For pipelines, incidents such as leaks or land-use restrictions could trigger local opposition or protests.
	Working Environment/ Occupational Health and Safety	✓	✓	**Before & During Construction:** Risk include heat stress, noise/vibration exposure, dust and welding fumes, working at height, trench collapse, lifting operations, confined spaces (manholes, tanks), electrical hazard, and communicable diseases at camps. Pipeline works add hot-work, hydrotest pressure, and potential exposure to hazardous gases and volatile substances such as H2S, VOCs and other hydrocarbons. **During Operation:** Routine port, rail, and pipeline operations may involve traffic conflicts, machinery entanglement and potential leaks of flammable or toxic gases.
	Gender	✓	✓	**Before & During Construction**: Influx of external workers may increase risks of GBV and safety concerns during nighttime movement. **During Operation:** If transport design does not reflect women's mobility needs (e.g., safe transfers, lighting, bus stop locations), barriers to use may persist. In Zanzibar, nighttime safety in tourist zones remains a concern.
	Children's rights	✓	✓	**Before & During Construction**: Construction sites and material storage areas may pose safety risks to children, and school routes may be temporarily disrupted. **During Operation**: Increased traffic may heighten road-crossing hazards for schoolchildren. If proper regulation is not In Zanzibar, particular attention should be paid to schools located near tourist and port areas. If appropriate transport regulations are not properly enforced, children may face restrictions or refusal to board public transport, which could adversely affect their access to education and daily commuting. Pipeline ROWs near communities should include safety fencing and awareness programs for children.
	Cultural Heritage	✓	✓	**Before & During Construction**: Excavation, cut-and-fill, and dredging may affect archaeological sites and historic landscapes. **During Operation:** Landscape alteration and visitor concentration may impose conservation pressure. In Zanzibar, impacts on Stone Town (World Heritage Site) and underwater cultural heritage must be avoided through prior coordination with relevant authorities (e.g., STCDA, DoE, ZEMA).
Other	Infectious diseases such as	✓	✓	**Before & During Construction**: Influx of external workers may increase risks of sexually transmitted infections (HIV/AIDS) and other communicable diseases.

	HIV/AIDS			**During Operation**: Increased human mobility at transport hubs and ports may sustain infection risks. Worker camps along remote corridors may pose additional health risks, requiring preventive education, screening, and hygiene management.
	Accident	✓	✓	**Before & During Construction**: Risks of labour accidents and third-party injuries may increase due to heavy machinery, high work, and nighttime construction. Inadequate traffic control may also cause collisions with pedestrians and motorcycles. Pipeline construction involves additional risks such as welding accidents, trench collapse, and explosion hazards. **During Operation**: Higher traffic volumes may raise accident risks on roads and ports, including hazardous-material transport. Pipeline rupture or explosion could cause fires, spills, or casualties, requiring strict emergency preparedness.

Source: JICA Study Team

Table 17. Potential Positive Impacts (All Modes including Pipeline)

No	Positive Impact	Phase	Brief Description
1	Improved Connectivity and Accessibility	Operation	Development of roads, railways, ports, airports, and pipelines will enhance inter-regional connectivity and reduce travel time, facilitating efficient movement of people, goods, and energy across Mainland Tanzania and Zanzibar.
2	Economic Growth and Employment Creation	Construction / Operation	Construction activities will create temporary employment and stimulate local economies. In the long term, improved logistics and reduced transport costs will promote trade, industrial development, and regional investment. Pipeline projects will also generate direct and indirect jobs and strengthen energy security.
3	Reduction in Vehicle Emissions through Modal Shift	Operation	Enhanced rail, maritime, and pipeline transport will reduce dependence on road freight, contributing to lower GHG emissions, traffic congestion, and accident risks.
4	Promotion of Clean and Energy-Efficient Transport	Operation	Introduction of electric vehicles (EVs), EV-based public transport, and energy-efficient pipeline operations can contribute to cleaner air and long-term climate-change mitigation.
5	Enhanced Urban Environment and Mobility	Operation	Development of public transport systems (e.g., BRT, commuter rail, EV buses) will reduce congestion, noise, and air pollution in urban centres, improving quality of life for residents.
6	Regional Integration and Trade Facilitation	Operation	Efficient multimodal transport corridors—including pipelines—will strengthen regional connectivity and trade competitiveness, supporting national and continental strategies such as *Agenda 2063*.
7	Improved Disaster Response and Resilience	Operation	Strengthened transport and energy networks will facilitate faster disaster response and evacuation during floods or other emergencies. Pipelines enhance supply reliability during crisis situations.
8	Gender and Social Inclusion Opportunities	Construction / Operation	Transport and pipeline projects provide opportunities for women and youth in construction, logistics, and environmental monitoring, while improved transport accessibility enhances safe mobility and access to education, healthcare, and markets.
9	Technology Transfer and Institutional Capacity Building	Construction / Operation	Implementation of large-scale transport and pipeline infrastructure will promote technology transfer (e.g., GIS, monitoring systems) and strengthen institutional capacity for sustainable asset management.
10	Support for Climate Change Mitigation and Adaptation	Operation	Modal shift to rail and pipelines, together with electrification of vehicles and improved coastal resilience planning, will help reduce national GHG emissions and contribute to achieving Tanzania's NDC targets.

Source: JICA Study Team

13 Terms of Reference for Environmental and Social Considerations

Since the Project will formulate the Integrated National Transport Master Plan 2050 covering both the Mainland and Zanzibar, which corresponds to a policy, plan and programmes (PPP) level framework rather than a project level intervention, it is appropriate to conduct SEA under the Project.

The Terms of Reference for environmental and social considerations shall include the following:

1. Conduct scoping to identify key environmental and social issues and to define the consultation framework in coordination with VPO-ED (Mainland) and DoE (Zanzibar);
2. Review and assess the current natural and socio-economic conditions in Mainland and Zanzibar;
3. Review the objectives, alternatives, and proposed development strategies from the viewpoint of environmental and social considerations;
4. Review relevant environmental and social laws, regulations, policies, and institutional frameworks at international, national, and regional levels, and conduct a gap analysis with JICA Guidelines;
5. Identify and assess potential environmental and social impacts associated with the implementation of the Master Plan;
6. Analyse possible alternatives to avoid or minimize adverse impacts;
7. Propose mitigation and enhancement measures to be reflected in the Master Plan;
8. Develop an environmental and social management framework for implementation and monitoring;
9. Support the counterpart agencies in conducting stakeholder consultations; and
10. Prepare separate draft SEA reports for each Master Plan, namely *Volume 1: Mainland and Volume 2: Zanzibar*, in accordance with their respective legal and institutional frameworks.

The draft SEA reports shall be submitted to the competent authorities for review and approval. The report for the Mainland shall be submitted to the VPO-ED, and the report for Zanzibar shall be submitted to the DoE, in accordance with the Environmental Management Act (EMA) and SEA Regulations, including public consultation and Ministerial approval procedures.

14 Other relevant information

None