

TERMS OF REFERENCE

Turkey: Mapping Exercise for Green Maritime Sector

Note: the contracting is expected after the travel ban related to the COVID-19 pandemic is lifted in the major part of the world and the inception of the study is expected shortly afterwards.

1. BACKGROUND

The European Bank for Reconstruction and Development (the “EBRD” or the “Bank”) has adopted the Green Economy Transition (“GET”) approach¹ to incentivise the Bank to finance projects that advance the transition to an environmentally sustainable, low-carbon and climate-resilient economy. It also seeks to prevent economies from being locked into carbon-intensive, climate-vulnerable and environmentally damaging infrastructure solutions. Implementation of the GET approach is based on the established business model of the EBRD and in line with its operating principles. The GET approach aims to increase the Bank’s green financing to around 40 per cent of total EBRD financing.

The transport infrastructure is a key enabler of economies’ growth by providing physical networks upon which the economies depend for the movement of people and goods. The EBRD’s vision is to promote safe, secure and sustainable transport systems, which embody market principles, balance economic, environmental and social needs and are responsive to the needs of industry and the individual.² One of EBRD’s priorities within the transport sector is to develop sustainable transport and to support development of sustainable transport networks in the region. Pollution prevention, air quality and biodiversity protection are important sustainable transport issues under the GET approach that the EBRD addresses at the policy and project level.

The EBRD has partnered with International Maritime Organisation (“IMO”) to promote sustainable maritime transport by signing a Memorandum of Understanding (“MoU”) to combine EBRD’s experience and expertise in investment and finance with IMO’s global mandate and outreach. The partnership with IMO is expected to contribute to transforming shipping into an environmentally friendly alternative to land transport in the regions where both institutions are active. International shipping transports over 80 per cent of global trade all over the world. Shipping is the most efficient and cost-effective method of international transport for most goods; it provides a dependable, low-cost means of transporting goods globally, facilitating commerce and helping to create prosperity among nations.

The EBRD has also been supportive of the development of new guidance from the World Association for Waterborne Transport Infrastructure (PIANC) on Climate Change Adaptation Planning for Ports and Inland Waterways (EnviCom WG 178). This guidance provides an introduction to the potential consequences of climate change and some of the challenges to be addressed if ports and waterways are to adapt effectively. It then introduces a four-stage methodological framework to help port and waterway owners and operators plan for improved

¹ <https://www.ebrd.com/what-we-do/get.html>

² <http://www.ebrd.com/documents/transport/strategy-for-transport.pdf>

resilience. The EBRD are keen to see this approach adopted in investments throughout its countries of operations.

In the context of the GET approach, the MoU between the EBRD and IMO and the recent PIANC guidance, the Transport Team of the EBRD is interested in scaling up its financing of commercially viable and environmentally sound, sustainable projects in the maritime sector in Turkey³. The Team wishes to engage a Consultant to conduct a market research study with identification of investment opportunities for shipowners, shipyards and ports (port authorities and terminal operators) to enable provision of sustainable transport solutions and compliance with international best practice and the IMO regulation.

2. OBJECTIVES

The objective of the assignment is to identify potential project and investment opportunities in the maritime sector in Turkey, consistent with the GET principles and criteria that could be implemented as EBRD's transport infrastructure projects. The identified investment opportunities are expected to facilitate compliance with IMO regulation related to cutting sulphur oxide emissions from marine fuels, a reduction in total greenhouse gas (GHG) emissions of at least 50% by 2050 compared with 2008, improvements in ballast water management, and go beyond IMO requirements and standard practice in the region in addressing climate change vulnerability of the maritime sector.

The Consultant is expected to be experienced in engaging with relevant stakeholders in the sectors and should have a proven and extensive client contact network within the sector in Turkey.

All identified investment opportunities should be potentially bankable and meet EBRD's project requirements.

3. SCOPE OF WORK

In order to achieve the main objective, the Consultant is expected to deliver the following outputs:

A. Identification of investment opportunities

1. Identify a long list and later a short list of key operators and potential investment opportunities in the maritime sector in Turkey. The short list will include (i) the top 25 major ship owners/operators, shipyards and ports, (ii) a brief description of their expected/potential project pipeline for investment in maritime sector, including greenfield, brownfield and yellowfield projects which can be potentially considered under the Bank's GET approach (please refer to Green Economy Transition Handbook – "Annex 5.3 GET finance for transport projects" for the details), and (iii) their high level contacts. The focus should be given to the companies with solid financials to allow the companies to finance identified investment opportunities through an increase in leverage.
2. Describe the regulatory and supervisory arrangements for the maritime sector in Turkey (both public sector and private sector), including details of key institutions, public agencies, and any relevant legislation and/or regulations.

³ <http://www.ebrd.com/documents/strategy-and-policy-coordination/strategy-for-turkey.pdf>

3. Map and provide details on the maritime infrastructure in Turkey, ports and shipyards in particular, and list the identified investment needs to facilitate, among others, compliance with the IMO standards and IMO emission cutting strategies. The EBRD will share its understanding of what measures are considered as standard environmental mitigation measures for ports and maritime and results of a separate assignment on GET in relation to “other environmental improvements” to be applied in the Turkish market context.
4. Identify potential projects and key existing initiatives in the port sub-sector to address vulnerability and resilience of the region to climate change (i.e. sea level rise, increasing storminess, wave), comment on risks and opportunities to reduce and/or manage these vulnerabilities in the context of specific projects/operators.
5. Identify and summarise the major commercial banks that are involved in maritime sector i.e ship and vessel financing as well as port financing in Turkey and include information on portfolios amounts as well as transaction type for the past 5 years where possible.
6. Arrange one day of meetings with the selected market operators to present their investment opportunities to the Team in the Bank’s resident office in Istanbul.

B. Market assessment in the context of the GET approach and best market practice

The study will examine emerging best environmental practices in the maritime sector in Turkey and identify key initiatives or pilot/standards setting projects under preparation and implementation including:

1. Identifying the environmental aspects/priorities and current internationally recognised climate change mitigation and adaptation measures and climate change corporate governance practices for each type of maritime transport infrastructure (including but not limited to ships, vessels, port-related infrastructure, services and maintenance section).
2. Identifying the context of climate vulnerability for the maritime sector in Turkey, analysing current climate data and future forecasts to determine the main physical climate hazards and risks to maritime transport infrastructure and operations (including but not limited to sea level rise, changes in temperatures, changes in precipitation, changes in frequency and severity of extreme events). This should also consider key value chains and economic activities that rely upon ports, i.e. perishable agricultural goods, just-in-time manufacturing logistics.
3. Assessment of international best practice measures aimed at improving the resilience of the maritime sector to the consequences of climate change (for example those coming from the PIANC guidance, amongst others). This should include physical infrastructure measures as well as operational and management measures including weather forecasting systems, early warning systems and emergency response systems in relation to extreme weather events, as well as their potential for application in the Turkish maritime sector.
4. Assessment of existing and anticipated IMO requirements, EU Best Available Techniques and other environmental standards and regulatory requirements in the shipping sector (Emission Control Area, Alternative Fuel Directive, Ballast Water management, MARPOL VI including Energy Efficiency Design Index).
5. Screening and review of, among others, relevant IMO, EU and IEA initiatives and long-term scenarios for the decarbonisation of the maritime sector. Identification of the key

enabling practices, technologies and underlying energy efficiency measures, as well as their potential for application in the Turkish maritime sector.

6. Review of case studies and well performing infrastructure projects, i.e. in areas of cutting emissions and other environmental benefits, in order to identify potential GET components that can be implemented in other EBRD's transport infrastructure projects. Priority shall be given to those investments which are applicable to Turkey's maritime infrastructure as explored under Task A. Identification of investment opportunities:
 - a. Analyse the willingness and the technical capability of the Turkish maritime sector for implementing such potential GET investments;
 - b. Identify incremental GET investment opportunities in shipping, port and shipyard operations for enhancing climate resilience and optimising energy, water and resource savings; such as reinforcing breakwaters, energy efficiency technologies, electrification and automation, cold ironing, wastewater management, noise protection.
 - c. Assess the innovativeness and replicability potential of the identified investments;
 - d. Provide CAPEX and OPEX estimations and an indicative timeline for implementation.
 - e. Assess the economic savings expected to result from each proposed investments, in terms of IRR, NPV and payback period.
7. Provide an overview of the current performance of the Turkish maritime sector compared to the international benchmarks indicated above, by identifying technical KPIs representative of the energy and resource efficiency performance.
8. Provide an overview of the current resilience of the Turkish maritime sector to weather-related hazards, including an estimate of the current annual average economic costs due to weather-related damage and disruption to the sector. This should also consider key value chains and economic activities that rely upon ports.
9. Estimate the physical energy, water, material and CO₂ savings, other environmental benefits and the achievable level of the technical KPIs following the implementation of GET investments identified.
10. Estimate the physical climate resilience outcomes that can be delivered by the implementation of GET investments identified, in line with the requirements of EBRD's GET Handbook (Green Economy Transition Handbook – Annex 5.3 GET finance for transport projects).

C. Maintenance activities in Turkey

It is the Bank's understanding that Turkey is able to attract maintenance/shipbuilding activities from Black Sea, Eastern Mediterranean and other markets. The Consultant shall (i) identify vessel stock for Turkey's potential market, (ii) quantify the potential for green retrofits including (LNG, EED, ballast water and other technologies), expected investment for the next 5 years that will be required by vessel owners.

The assignment will involve desk research, report writing, site visits, and, interviews with local players and other public authorities. The Consultant is required to work with IMO representatives through their network of the permanent representatives, relevant Ministries and maritime affairs and administrations.

4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

The contracting for the assignment is expected after the travel ban related to the COVID-19 pandemic is lifted in the major part of the world and the inception of the study is expected shortly afterwards. The assignment is expected to last approximately 2 months and the Consultant is expected to submit the following deliverables to the Bank's representatives:

| Outputs | Timing |
|---|--------------------------|
| Emails with progress reports | On a weekly basis |
| Long list | 3 weeks after inception |
| Short List (A) with immediate opportunities identified | 4 weeks after inception |
| Short List (B) with immediate and medium term opportunities | 5 weeks after inception |
| Draft Final Report | 7 weeks after inception |
| Final Report and Short List | 8 weeks after inception |
| Projects presentation workshop | 10 weeks after inception |

On the basis of the Scope of Work section and knowledge of the maritime sector in Turkey, the Consultant will prepare and submit the report and short list of investment opportunities, which can potentially qualify as 100% GET or have GET component. The short list is to include a brief evaluation of the potential lending target, indicative scope of green investment and estimated value of possible EBRD lending together with estimated timeline for the required investment.

The Consultant is expected to use existing studies and their expert judgement and experience to deliver this study.

All reports will be in English and delivered in electronic format (Word for Windows and Excel for Windows). Along with the Draft Final Report, the Consultant shall also deliver supporting Excel sheets used for the technical and economic analysis of the proposed investments.