



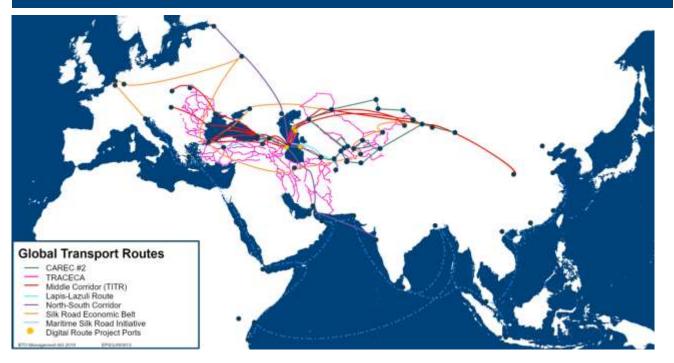
Strengthening Economic Resilience and Adaptability Through Europe and the Black Sea-Caspian Region Connectivity



## The Project promotes green ports and connectivity to improve the security, sustainability and connectivity of trade flows in the Black Sea and Caspian Sea region

The Project : Background

## **Promoting Green Ports and Connectivity in the Caspian Sea Region**



**Beneficiary Countries:** 

Azerbaijan, Georgia, Kazakhstan, Turkmenistan, Romania Uzbekistan, Kyrgyz Republic

### **Status Quo**

- The Caspian Sea lies at the heart of many potential trade routes
- Ports of Aktau, Kuryk, Turkmenbashi and Baku are intermodally perfectly positioned hubs
- Stakeholders in the region are committed to develop green and digitalized trade

### **OSCE Goal**

Improve the security,
sustainability and
connectivity of trade flows
from Asia to Europe through
the Caspian Sea Region

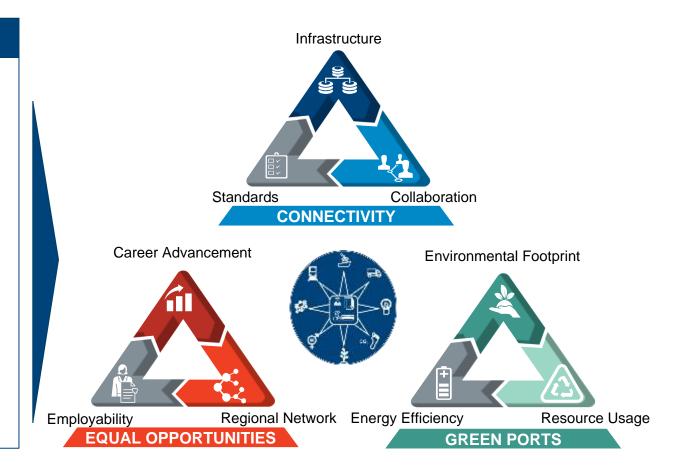


## The three main goals of the Project are reflected in the workstreams connectivity, green ports and equal opportunities

The Project - Goals

## **Main Project Goals**

- Ensure secure, smart and sustainable connectivity
- Support selected ports in effectively implementing green ports principles as a best practice in their operations
- Increase women's economic participation in the energy, logistics and transport sectors

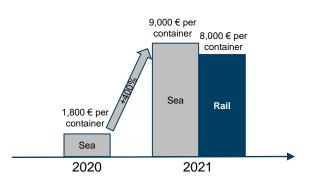




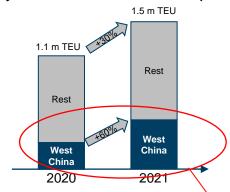
## The transport by rail from China to Europe has increased and the prices for sea transport skyrocketed, so the Middle Corridor and the Northern Route are attractive options

### Situation

TEU Transport Cost from China to Europe



TEU Transport Volume by Rail from China to Europe



# **Northern Route Middle Corridor** DB Schenker's network of Land Transport is well connected by New Silkroad rail system The Middle Corridor

provides better acces to Western China

### **Benefits of Rail Transport**

- For transporting goods from China to Europe, considering capital and freight costs Rail is the most economic option
- apart from economic advantages Rail offers the most environmentally friendly transport mode



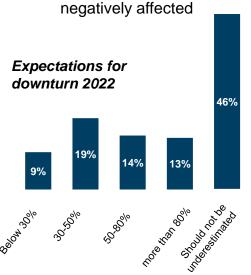
## The perfect moment for growth for the Middle Corridor

### Looking for alternatives

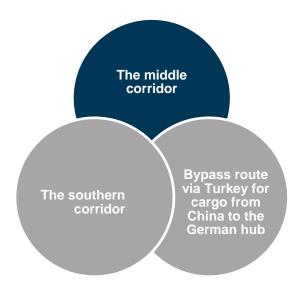
## Negative effect of current events on rail transport

The new silk road is still open, i.e. it is not sanctioned to transport through current route, but ...

>55% of involved transport companies say China-Europe freight trains are



## **Looking for alternatives**



runs through Iran and Turkey, but as Iran is subject to US sanctions as well, there is not much interest at the moment

### **The Middle Corridor**

Trans-Eurasian rail corridors experienced growth; in 2021, the BRI network, of which Kazakhstan is a major hub, handled about 15,000 trains

Railways connect 89 cities in China with 23 countries and 175 cities in Europe

Apart from Europe, the primary beneficiaries of this new trade route are the western regions of China and the countries of Central Asia, which have suffered from landlocked situations for centuries. They have become natural land bridges between global centers of economic power, and the future promises even better prospects. The revival of the New Silk Road is not far off.

Source: OSCE, BTO, newsilkroaddiscovery.com



## In order to increase trade in the region, logistic service companies see bottlenecks and have named wishes and requirements

Caspian Connectivity – Bottlenecks and Solutions

The main bottlenecks identified by the interviewed Logistic Service Providers are....

Reliability of transport / scheduling procedures

Customs clearance / documentation

**Timeliness / Velocity** 

To be able to use this route more frequently they wish for...

**Price transparency** 

Open access booking system

Regular schedules

Digitized documentation processes

### **Project Vision**

We want LSPs to be able to provide end-to-end responsibility on the Middle Corridor

DB Schenker takes the responsibility "end to end" including the integration of all key processes ...via the Middle Corridor





A common digital platform can eliminate the bottlenecks and fulfill the needs of international LSPs

Source: OSCE, BTO, DB Schenker 6



## The Middle Corridor has to be strengthened now to be able to meet the raising demand – a great opportunity for European – China trade as well as for the regional economies

Challenges for the Middle Corridor

### **Challenges**

- Logistic, infrastructure, and institutional development hurdles
- Lack of price transparency
- Multimodal (crossing Caspian Sea and Black Sea)
- Transportation time: Railway operations, customs clearance, port operations
- Several countries involved in the route
- Routes to Central Europe lead through either Ukraine or Romania – railway infrastructure in a poor state

"The corridor accounts for about 3-5 per cent of the total capacity of northern routes" (Cankat Yildiz from Middle Corridor Logistics)

The freight requires negotiation with various parties, making almost every train a test train

Preferential transportation rates cannot be obtained

The Northern Corridor has a better infrastructure and more mature business activities



Creating a uniform transport bloc that could better facilitate trade with both Europe and the PRC is the best possible policy solution for these regional economies.





## With the existing infrastructure and improvements on the digitalization and connectivity status quo we can reach a great level of economic integration across the Middle Corridor

Reaching a benchmark level of economic integration across the Middle Corridor

### Physical infrastructure

- The ports in the Caspian sea region are not running on full capacity, e.g. <30% in Aktau and Kuryk
- Both Georgia and Azerbaijan have invested in rail track development over the past decade, meaning that this segment of the corridor is now in good condition.

### **Required improvements**

- Faster border crossing procedures
- The adoption of International Road Transport Union (IRU) standards
- Provision of regionally standardized insurance and storage for containers shipped
- Information systems regarding conditions and access, as well as border delays, for all rail and road routes
- Transparent pricing
- Openness to foreign investment
- Transparent international agreements

- ✓ Lower time of transit
- Increase security and reliability
- ✓ Increase trade volumes
- ✓ Commercial viability

Source: OSCE, BTO, eurasianet.org

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## The project promotes a comprehensive connectivity approach based on standard harmonization, quality infrastructure, community building and digitalization

Workstream II - Connectivity



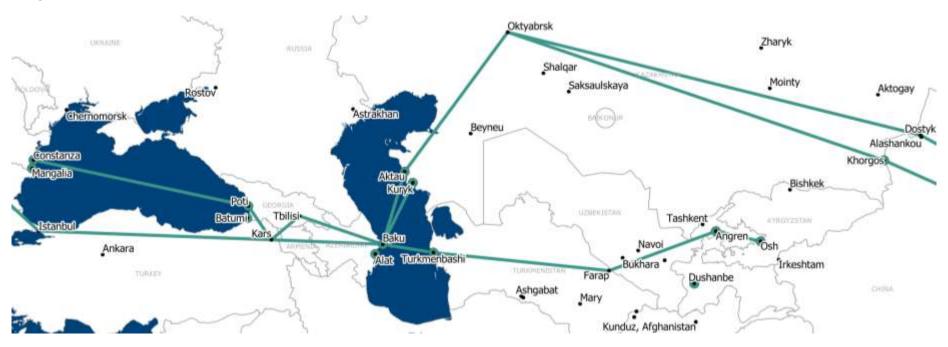


In the first phase of the project, OSCE co-ordinated the conduction of a feasibility study about the potential of a common digital platform starting in the Caspian Sea region – The Digital Route Project



## OSCE together and the stakeholders along the route are looking into the possibilities to connect parties along the route and digitize the supply chains

## **Digital Supply Chains**



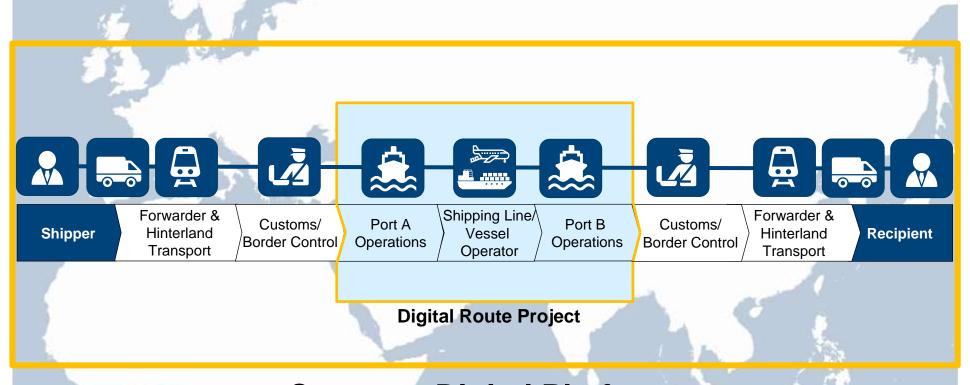


With the co-operation of private partners in Europe, the Caspian Sea region we aim to digitize the supply chains from Europe to Asia



## A common digital platform everyone can connect to may enable the facilitated trade from Asia to Europe

Vision – Global Digital Platform



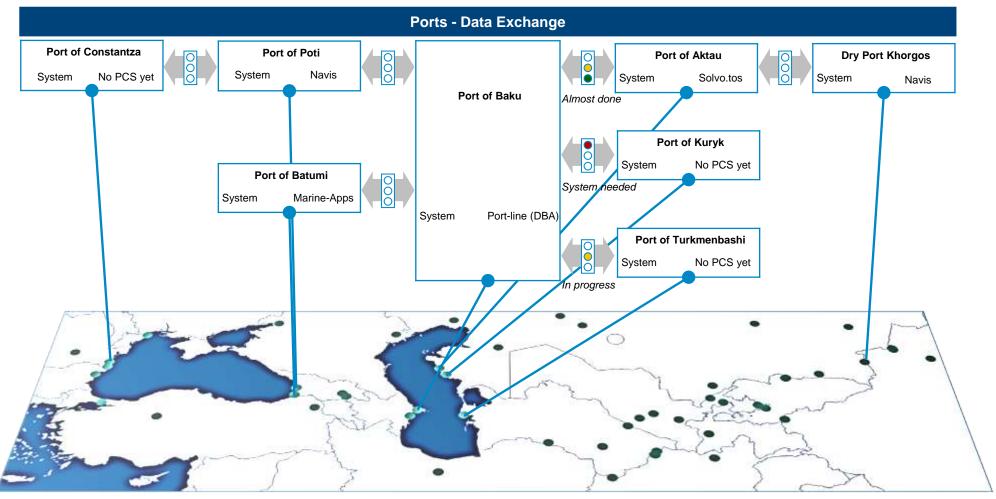
Common Digital Platform
- a hub that everyone connects to -

Source: STM, BTO 11



## The xml data exchange initiative is currently focused on the Caspian Sea ports but can act as a lighthouse project along the full transport routes

Data Exchange Status: xml-Inititative



Source: BTO, OSCE



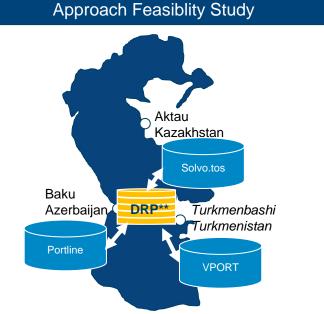
## Right now we are also looking into the realization of a decentralized approach to kick-off the electronic exchange between the ports of Aktau, Turkmenbashi and Baku

## WP 2 - Road Map Implementation - Approach PoB\*

## Decentralized Approach DBA/PoB Kazakhstan Solvo.tos Baku Azerbaijan O Turkmenbashi Turkmenistan **Portline VPORT**

- Data exchange through web services set up by the respective ports
- Document exchange via scans of the port-relevant documents
- Decentralized approach
- - PoB: Port of Baku
  - DRP: Digital Route Project

Long-term Goal



- Data and document exchange via one system solution
- Other parties possibly able to connect, or, only indirectly through PCS

Source: DBA, PoB, OSCE, BTO



## The xml-exchange of data between the Caspian Sea Ports is a decentralized approach and will facilitate data exchange for the most relevant cargo types

## Xml-Exchange: a Pilot for Digital Data Handling

### Decentralized Approach: xml-exchange



- Data exchange through web services set up by the respective ports
- Document exchange via scans of the port-relevant documents
- · Decentralized approach

- Port of Baku is ready for the xml-data exchange, i.e. ready to send and receive xml-data
- Port of Aktau has been in cooperation regarding the .xml exchange with Port of Baku, it has been agreed on defining a timeline for realizing the first full exchange (status end of 2020)
- Port of Turkmenbashi has been invited for a conversation, the current status is unknown
- To our knowledge a regular meeting was established by the participants

OSCE / BTO will help to overcome the problems.

Source: DBA, PoB, OSCE, BTO



## Green logistic hubs create the opportunity for sustainable connectivity and support the progressive decarbonization of the transport system

Workstream I - Green Ports





Green ports can be defined as ports with a management approach where sustainability as a concept underlies the measurement of a port's success



## The OSCE is supporting ports in implementing environmental management standards and get the ECOPORTS certification

### **Environmental Management Standards**





So far, Port of Baku and Constantza have received the ECOPORTS certification, Port of Aktau has now almost finished the process supported by the OSCE, Kuryk and Turkmenbashi are about to engage in the process.

#### **EcoPorts**

- Environmental management system and global standard, especially designed for ports and port terminals while using the basic structure of international standards like ISO 14001
- Teaches ports and port terminals to introduce an own environmental management system based on EcoPorts global standards
- It gives ports insight in the effects of their own business model on the environment
- Implementation of ECOPORTS can be certified after validation by the independent auditor Lloyd's Register

#### **ECOSLC**

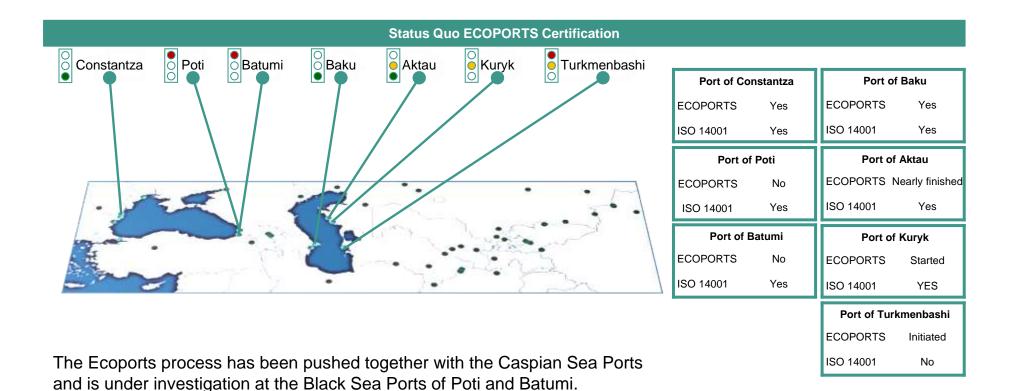
- ECOSLC is an independent neutral and non-profit Foundation, located in the Netherlands, that develops sustainable strategies, management systems and certification, for ports and the logistics chain
- ECOSLC assists ports, terminals and transport companies to introduce the CIRCLE LINES system for sustainable port, transport and logistics chain management
- ECOSLC conducts the certification procedure for ports outside of Europe

Source: BTO, ESPO (2019), ECOSLC



## OSCE is engaged in supporting leading ports in the Caspian and Black Sea Region to obtain or update their ECOPORTS certification

Status of Ecoports Implementation



Source: BTO, OSCE

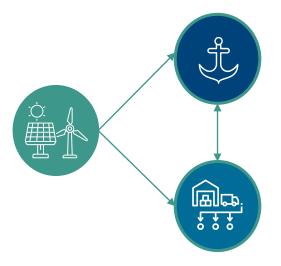


## The renewable energy potential of the greater Caspian Sea\* and Black Sea region can be used to electrify ports and associated logistic hubs in a sustainable way

Workstream I - Renewable Energy Potential of Ports and logistic Hubs



The Black Sea and Caspian Sea region has great wind, solar, hydroelectric and geothermal potential



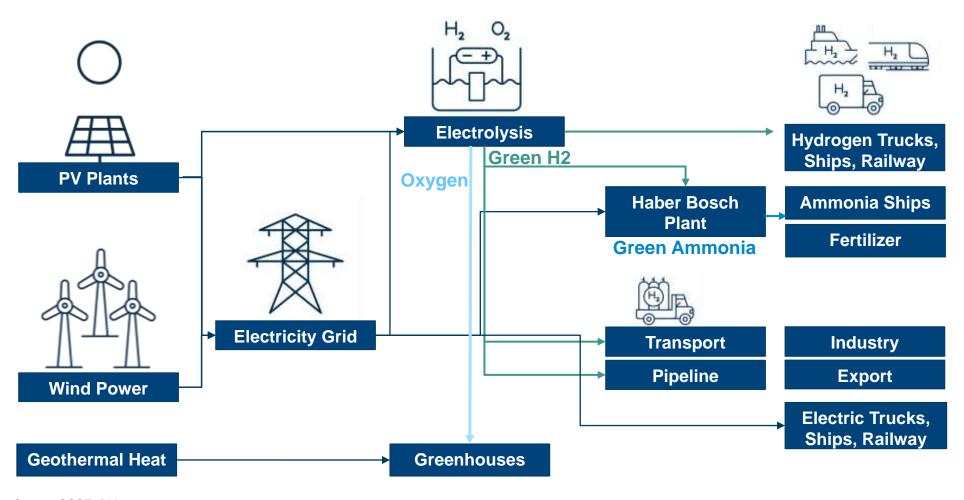
- This potential can be used to meet the demand for ports and their associated logistics infrastructure
- Depending on the potential of the respective country, they can electrify their ports and hubs in a sustainable way
- 3. The potentials can be used to establish **self-supplying ports** and **logistic-associated hubs**

<sup>\*</sup> This includes Azerbaijan, Georgia, Kazakhstan and Turkmenistan Source: OSCE, BTO, thenounproject, Caspian Policy Center



## We are also studying the existing initiatives and projects for example a study on hydrogen and ammonia production potentials in the Port of Baku

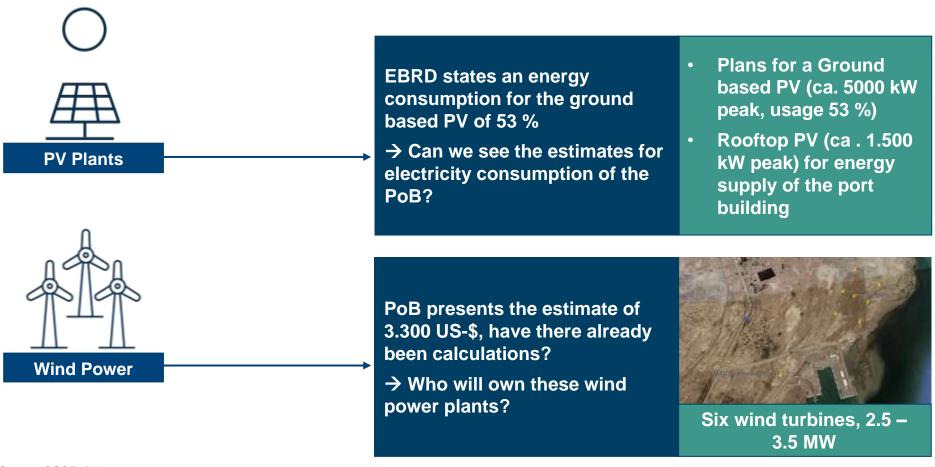
Energy System Port of Baku





### There are plans both for the construction of both wind and PV plants

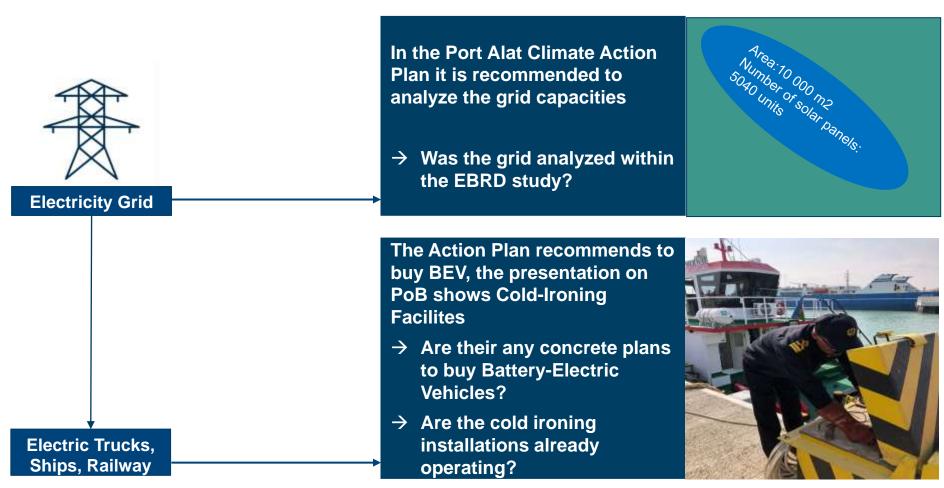
## Renewable Energy System





To have a realistic idea on the potential of green hydrogen and ammonia production we need to factor in the electricity grid and the energy consumption of other applications

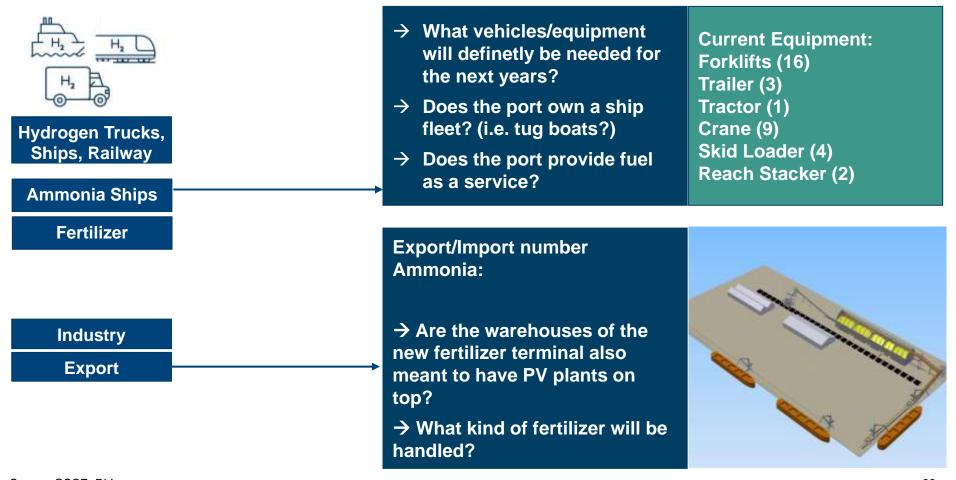
Energy System Port of Baku





## The study will give a comprehensive overview on hydrogen and ammonia production potentials in the Port of Baku

### Energy System Port of Baku





## The study will give a comprehensive overview on hydrogen and ammonia production potentials in the Port of Baku

### **Activities and Results**

# Activites

### Port Fleet Analysis and Ammonia Import

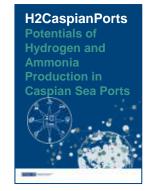
- List the port's vehicle fleet and ship fleet
- Characterize in number, fuel consumption per year and estimated lifetime
- Consolidate data on ammonia import and project future import numbers

## H2 and Ammonia Production Facilities

- Explain production methods for gaseous hydrogen and ammonia
- Characterize production methods with key parameters
- Create factsheets for steam reforming, electrolysis, plasmalysis, thermolysis, haber-bosch process plant

## Potential Demand & Production Dimensions

- Estimate potential annual demand for hydrogen and ammonia
- Calculate approximate dimensions and resources for potential project plants



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Results

Database Port Fleet and Ammonia Imports

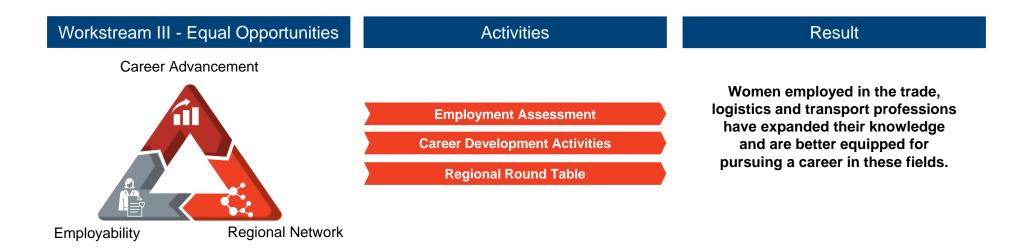
Fact sheets on production methods

Potential demand and production dimensions



The project promotes women's representation and employability in ports and logistics through a combination of policy recommendations and innovative capacity building activities

Workstream III - Equal Opportunities





The trade and logistics sectors remain among the least gender diverse ones. Women's equal participation in the economy contributes significantly towards economic recovery, sustainable growth and the creation of cohesive societies

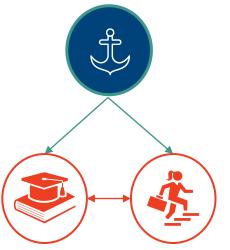


## The OSCE supports the beneficiary countries to advance career prospects for women in logistics

## Opening Opportunities for Women in Trade and Logistics



14 women professionals from the Caspian and Black Sea ports will participate in the 'Women in Port Management' Training organized by the OSCE in cooperation with IPER and the Port of Le Havre, France (2-week online component June 2022, 1-week in-person component September 2022)



### **Training Objectives**

- 1. Give the participants an extensive insight into port operations and management, with a focus on port sustainability and digitalization
- Improve their professional performance and help them advance in their career
- 3. Make their company or administration benefit of their new skills



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