

TECHNICAL WORKSHOP ON THE TRANSPORT GIS APPROACH HARMONIZATION BETWEEN ESCWA, UNECE AND IDB

BEIRUT, UN HOUSE, 9-11 JULY 2019

Economic And Social Commission For Western Asia



UNITED NATIONS

الاسواق

ESCWA

ESCWA Transport GIS Platform Ongoing Project with the support of IDB

By:

Dr. Yarob Badr

Regional Advisor on Transport and Logistics

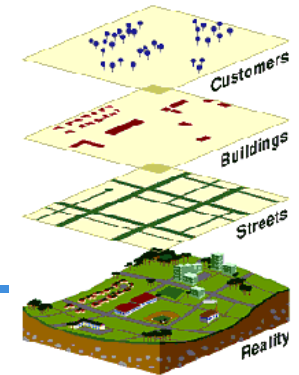
Economic Development & Integration Division-EDID

ESCWA

Project Background

- The 15th Session of ESCWA Committee on Transport held in Rabat on 27-28 January 2015 requested the development of an e-platform for periodic future updates of information concerning the components of the Integrated Transport System in the Arab Mashreq (ITSAM).
- In the same session, the League of Arab States (LAS) requested ESCWA support to expand ITSAM railways and roads networks to cover all Arab Countries.
- The Project Concept was presented and endorsed at the 16th Session of ESCWA Committee on Transport held in Cairo on 23-24 November 2016. A prototype project was developed in cooperation with the [United Nations Interim Force in Lebanon \(UNIFIL\)](#).
- First Training workshop on GIS, Cairo 22 January 2016
- A Web Based GIS version is underdevelopment with IDB support

GIS Components

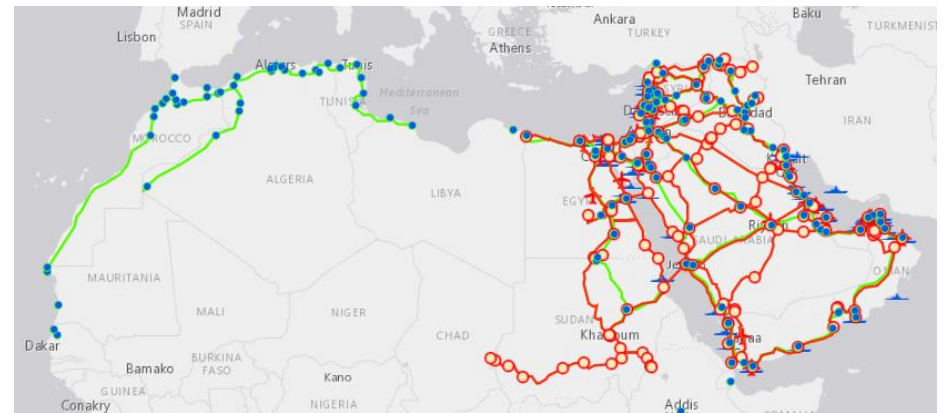


Five Layers:

1. COUNTRY
2. ROADS NETWORK
3. RAILWAYS NETWORK
4. AIRPORTS
5. PORTS

Table of attributes:

Inspired from the Glossary of Technical Data of the Trans-European Network GIS of the European Commission (Version 6 February 2014)



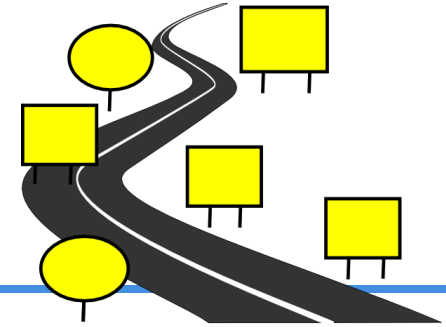
Country Layer (Polygons)

18 Countries (February 2016)



- Population
- Area
- Length of Roads
- Length of Railways
- Nr. of Airports
- Nr. of Ports
- Nr of Registered Vehicles
- Volume of Transit Transport
- Etc.

Roads Network Layer (Arcs)



Infrastructure Attributes (by segment)

Operation Attributes

ITSAM Viewer Integrated Transportation System in the Arab Macheq

Esri World Geocoder

Infrastructure Attributes (by segment)

- ID Code
- Length
- Administrative Classification
- Functional Classification
- ESCWA Classification
- Nr. of Lanes
- Type of Pavement
- Design Speed
- Design Axle Load
- Etc.

M25	
Mode of Transport	Road
Commission Name	ESCWA
Road Name in Arabic	خط الكويت
Road Length (KM)	406.03
UID	NA
Country Name	Saudi Arabia
Road Status	Existing
International Road Name	Petroleum Pipeline
Singl Axle Load (ton)	NA
Number of Lanes	
Start Node	Hafar El Batin
End Node	Abu
Zoom to	

Operation Attributes

- Traffic Volume
- Average Speed
- Level of Service (LOS)
- Nr. of Crash Fatalities
- Fatality Rate
- iRAP classification
- Etc.

400km 26.895 46.622 Degrees

Esri, HERE, DeLorme, NGA, USGS | Esri, HERE, DeLorme **esri**

Railways Network Layer (Arcs)

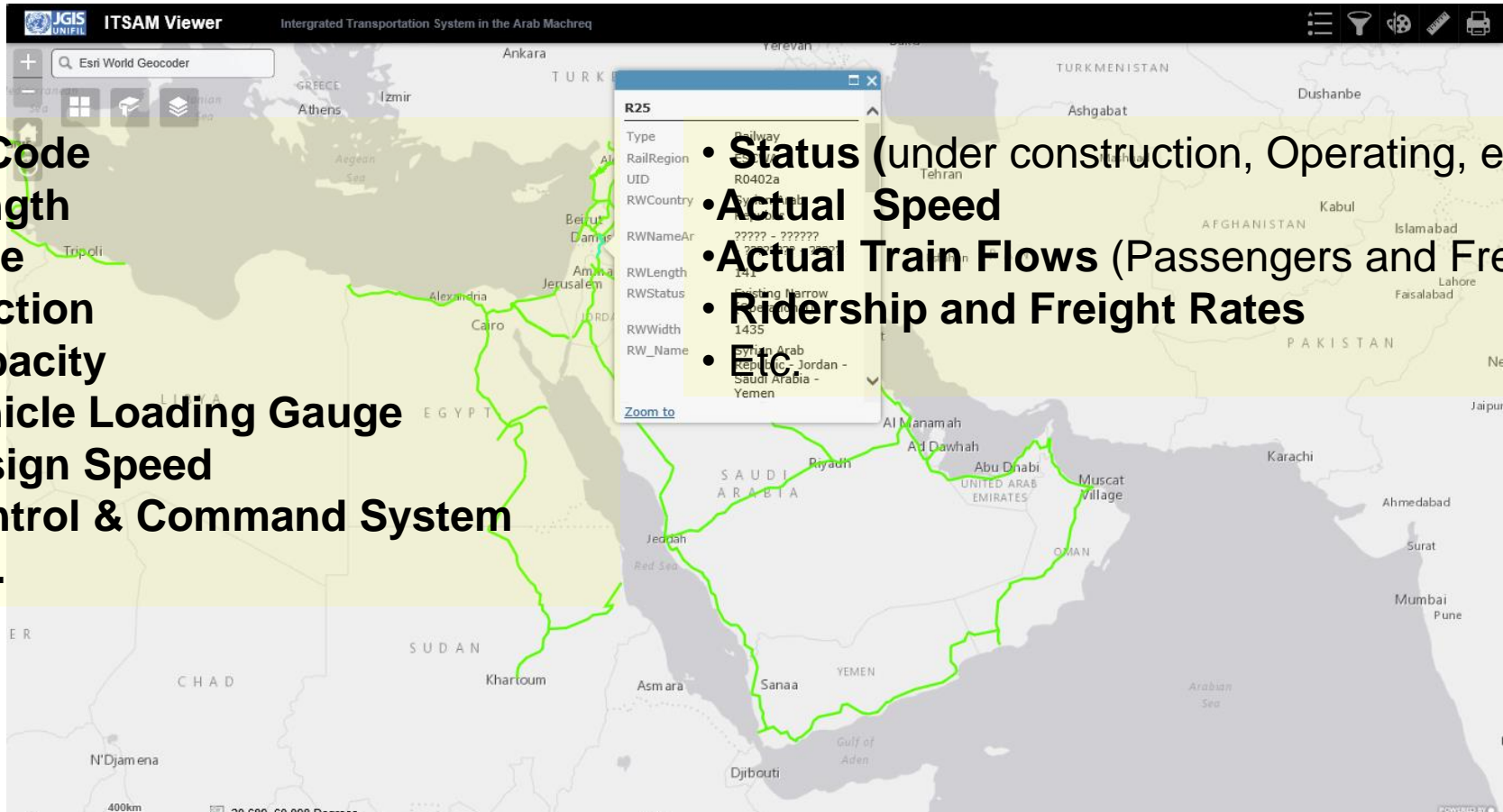


Infrastructure Attributes (by segment)

Operation Attributes

- ID Code
- Length
- Type
- Traction
- Capacity
- Vehicle Loading Gauge
- Design Speed
- Control & Command System
- Etc.

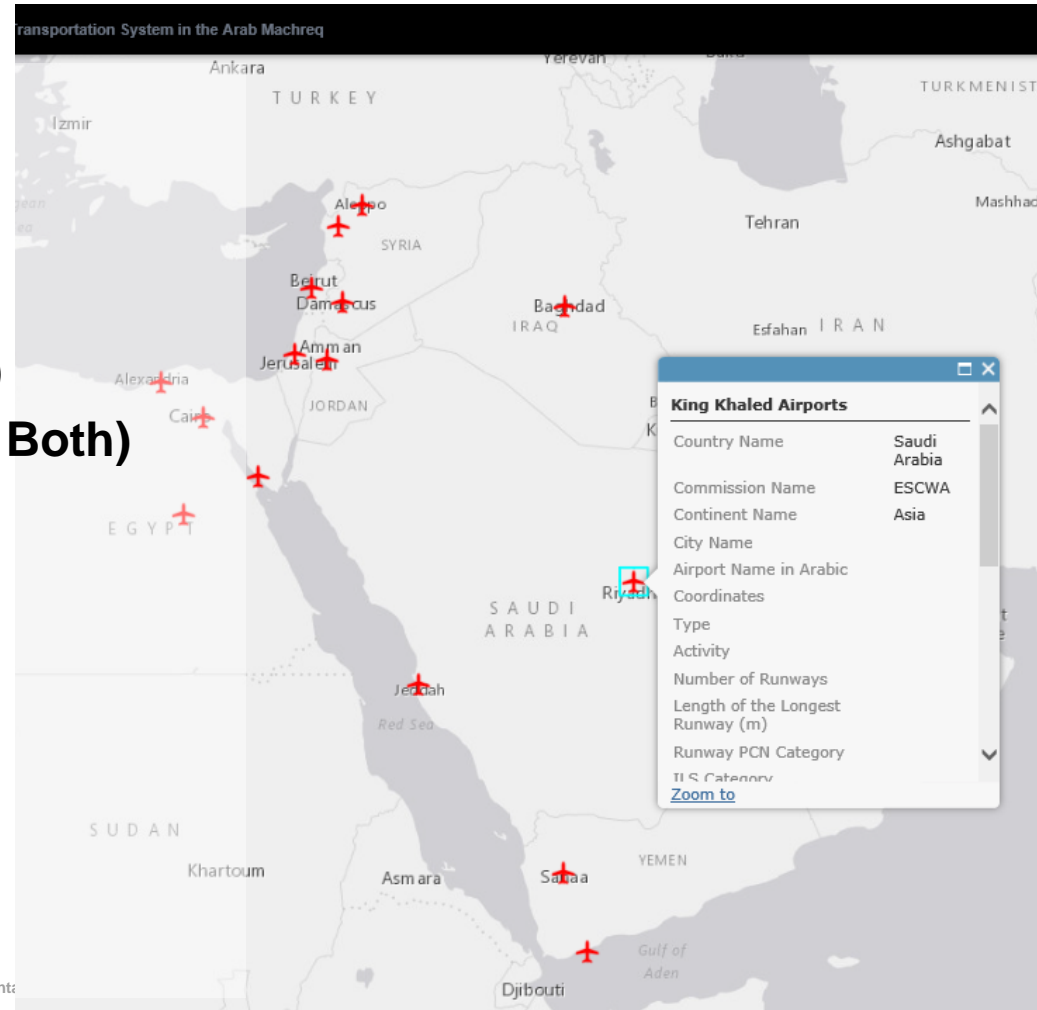
- Status (under construction, Operating, etc.)
- Actual Speed
- Actual Train Flows (Passengers and Freight)
- Ridership and Freight Rates
- Etc.



Airports Layer (Points)



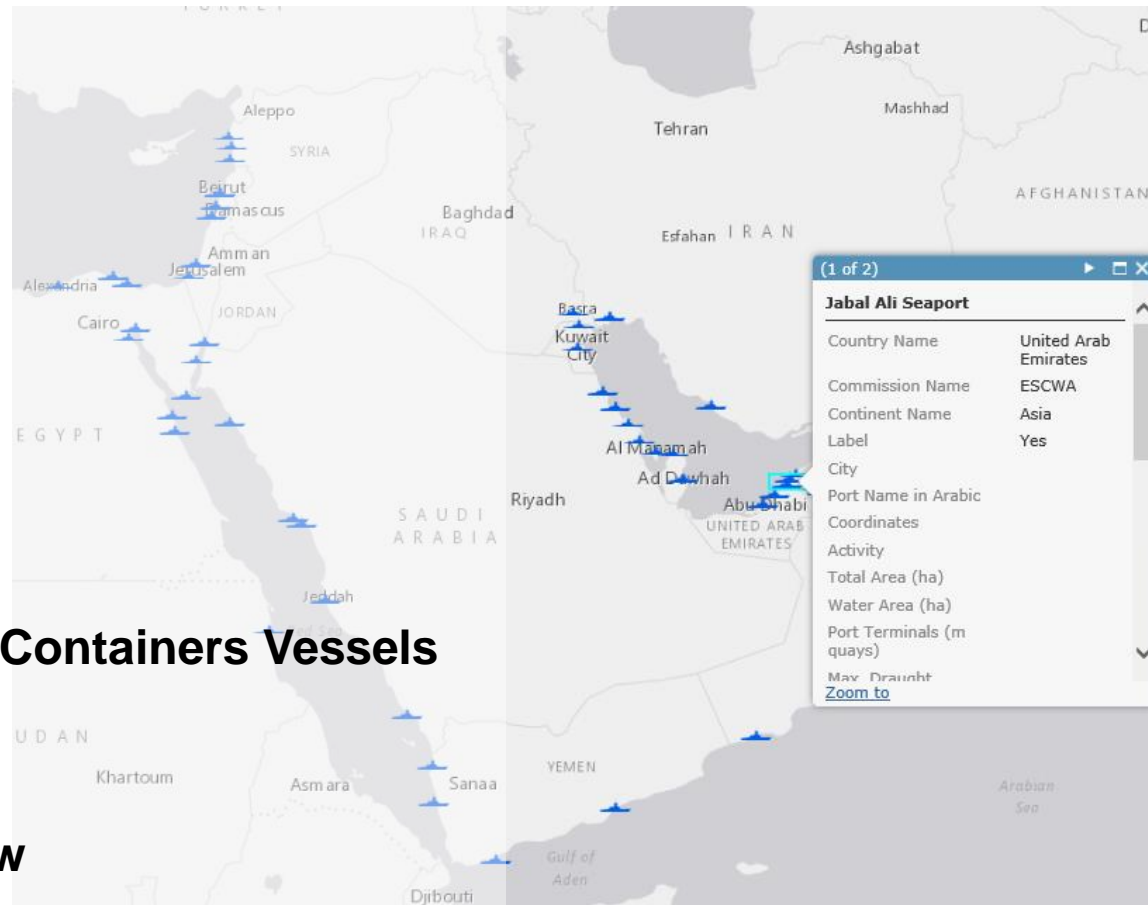
- City Name
- Airport Name
- Airport Name in Arabic
- Website (URRL)
- Type (International/Domestic)
- Activity (Freight/Passengers/ Both)
- Nr. of Runways
- Length of longest runway
- PCN Category
- ILS Category
- Capacity
- Passengers Traffic Flow
- Freight Traffic Flow
- Etc.



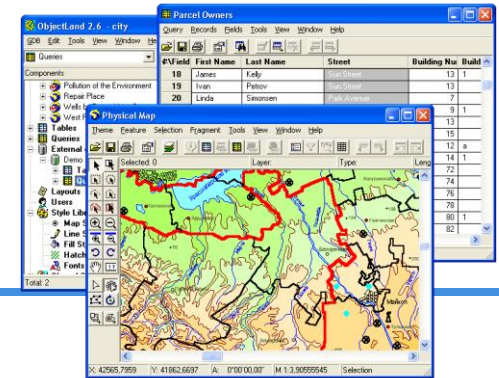
Ports Layer (Points)



- **City**
- **Port name**
- **Port name in Arabic**
- **Website (URRL)**
- **Activity**
- **Total Area**
- **Water- Area**
- **Lengths of quays**
- **Maximum draught**
- **Maximum draught for Containers Vessels**
- **Port Traffic**
- **All Cargo Traffic Flow**
- **Containers Traffic Flow**
- **Passengers Traffic Flow**
- **Etc.**



Accessibility Arrangements:



Mapping Geometrics:

ESCWA

Attribute Editing (information):

National Focal Points+ Official Authority

Reading, Query and Analysis:

Public, through registration

Coordination Meeting on Regional Connectivity

IDB, ESCWA, ECE, CETMO

Beirut, 24 April 2018

Adding 2 layers

Border Crossings

Logistic Zones

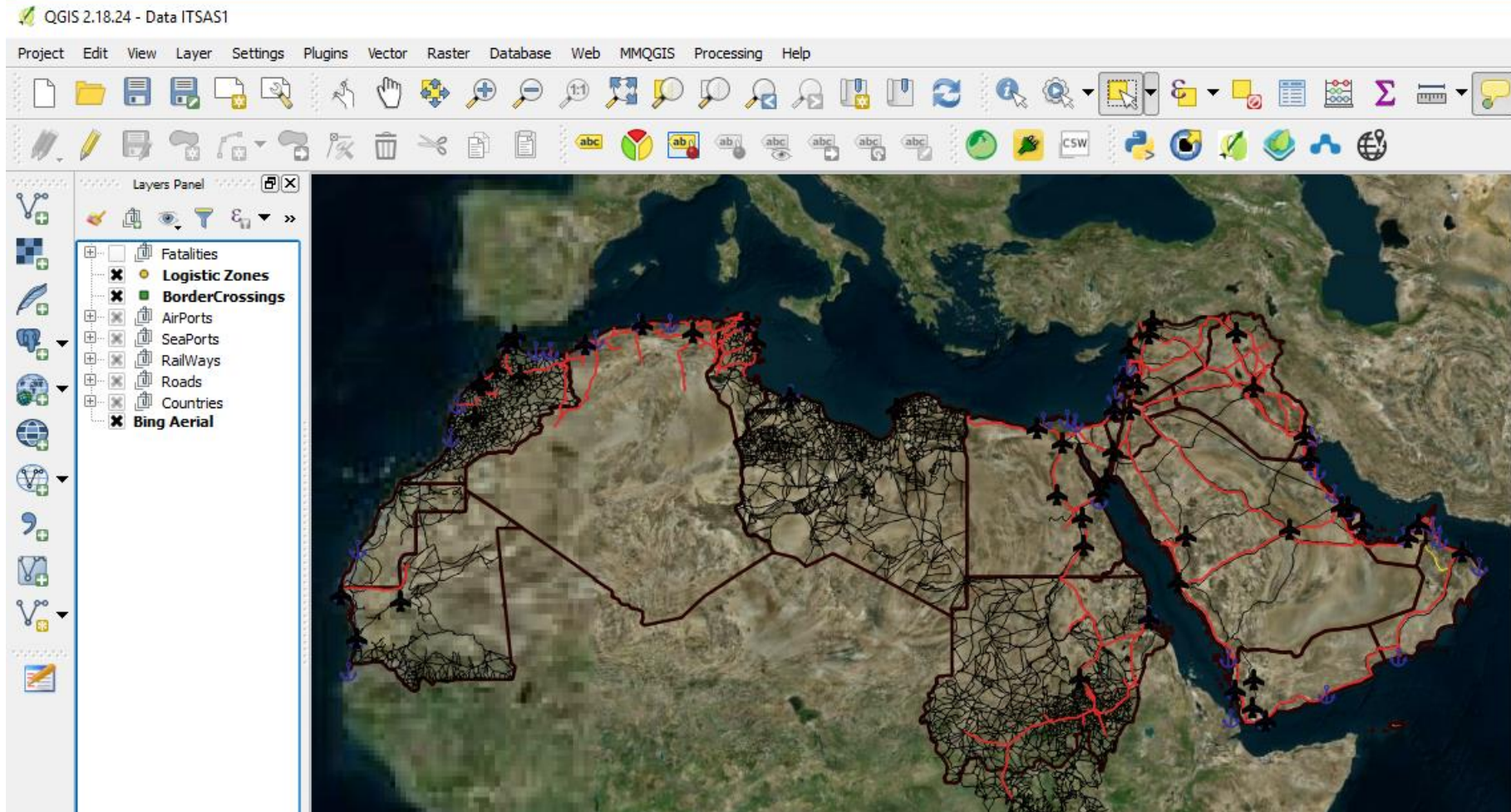
Consolidated Mega Template for Transport GIS

ESCWA, ECE, CETMO

ESCWA Open Source QGIS

IDB Support for regional training workshop

Screen Pictures From QGIS



Screen Pictures From Cloud GIS

The screenshot displays a web-based GIS application interface. At the top, a blue navigation bar contains the 'GIS' logo, a 'Home' button, and tabs for 'Map', 'Layer', 'Feature', 'Analysis', and 'Tools'. On the right side of this bar, the text 'Hi ITSAS PROJ' is visible. Below the navigation bar is a toolbar with icons for 'New Map', 'Map Properties', 'Refresh', 'Duplicate Map', 'Delete Map', 'Add Layer', 'Import CSV or XLS', 'Share or Publish', 'Export Map', and 'Bookmarks'. The main map area shows a satellite view of Saudi Arabia with a network of roads overlaid. Some roads are highlighted in red, while others are black. A search bar at the top left of the map area contains the coordinates '1843701.8562, 4657155.2594' and indicates 'Selected objects: 1'. On the left side, a 'Layer List' panel titled 'test ITSAS 1' shows a list of layers: 'logistic_zones', 'border_crossings', 'airoports', 'seaports', 'rails', 'roads' (highlighted in blue), 'countries', and 'Bing Maps Satellite'. On the right side, an 'Attribute Table' is open, showing the details for the selected road segment. The table has columns for 'Edit attributes', 'Edit geometry', 'Delete', and 'Close'. The data rows include fields like 'FID', '_1_data_date', '_2_type', '_3_itsam_code', '_4_road_arabic', '_5_road_country', '_6_road_region', '_7_road_length', '_8_road_status', '_9_start_node', '_10_end_node', '_11_road_age', and '_12_intrldsec'.

Edit attributes	Edit geometry	Delete	Close
FID			4
_1_data_date			NA
_2_type			Road
_3_itsam_code			M50
_4_road_arabic			????? - ???????
_5_road_country			Saudi Arabia
_6_road_region			ESCWA
_7_road_length			310.63
_8_road_status			Existing
_9_start_node			Sakakah
_10_end_node			Arrar
_11_road_age			NA
_12_intrldsec			Sakakah -

