

## 6 Socio-Economic Description

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## 6.1 Introduction

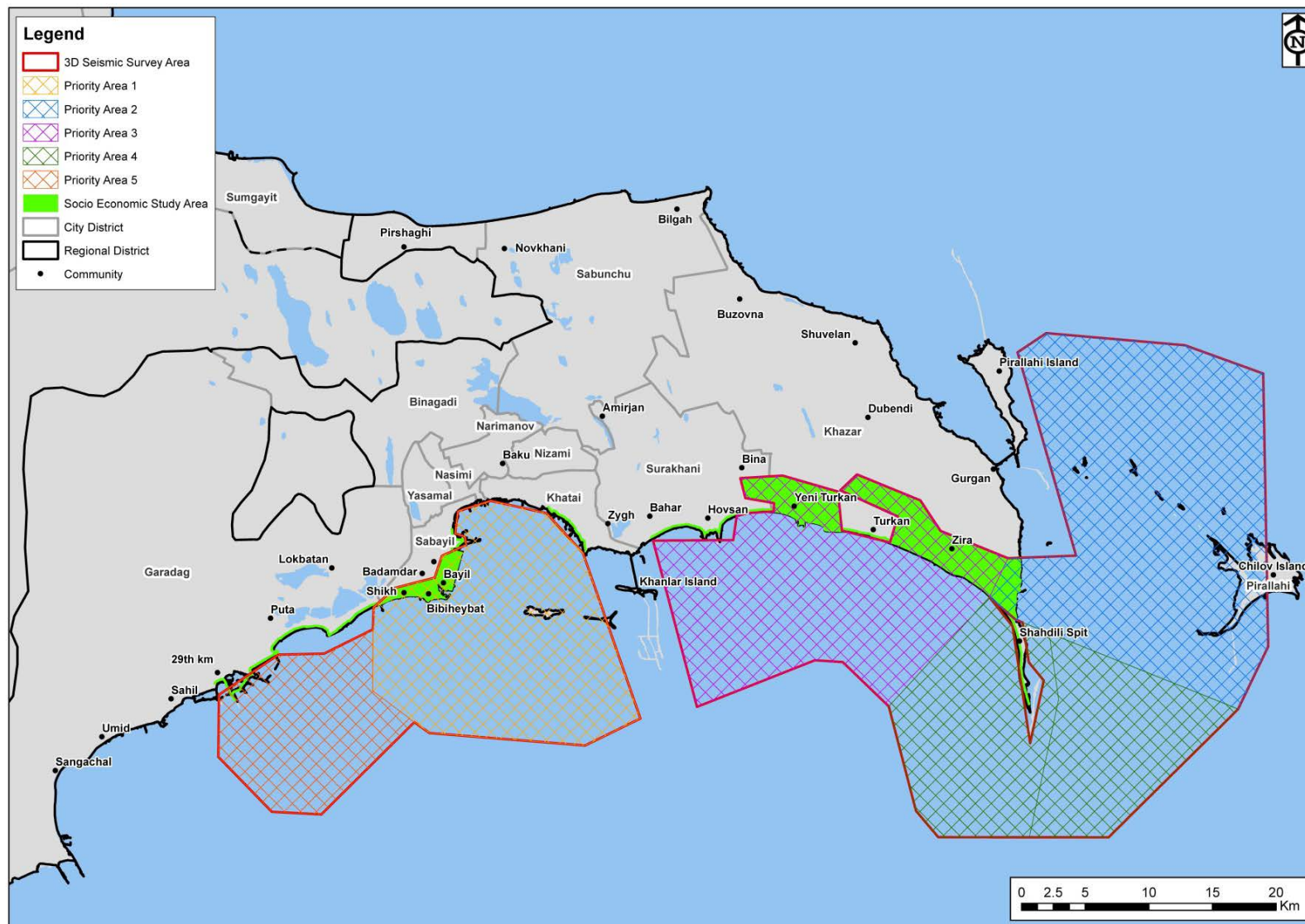
This Chapter describes the socio-economic baseline conditions relevant to the Shallow Water Absheron Peninsula (SWAP) 3D Seismic Survey. The purpose of the Chapter is to provide sufficient information to allow the potential socio-economic impacts of the 3D Seismic Survey activities to be assessed. The scope and content of the Chapter has been determined based on the anticipated socio-economic interactions identified during the 3D Seismic Survey scoping process. The Chapter focusses on socio-economic conditions within and in the vicinity of the onshore and offshore elements of the 3D Seismic Survey Area.

The 3D Seismic Survey Area comprises 5 Priority Areas, covering a total area of 1,520 km<sup>2</sup>. The onshore elements of the Survey Area are located in Priority Areas 1, 2 and 3, covering approximately 90 km<sup>2</sup> (refer to Figure 6.1). Information relating to the general setting of the onshore Survey Area including topography and physical infrastructures (roads, pipelines etc.) is provided in Chapter 5 Section 5.5.2 of this Environmental and Socio-Economic Impact Assessment (ESIA).

This Chapter provides the following information relevant to the SWAP 3D Seismic Survey:

- An overview of Azerbaijan national and regional socio-economic conditions;
- An overview of land use and ownership characteristics of land within the onshore 3D Seismic Survey Area;
- Characterisation of the types of land use (e.g. housing, agricultural, commercial and recreational use) within the onshore 3D Seismic Survey Area (according to Priority Area);
- An overview of public services and infrastructure including public road networks and subsurface utilities (water pipelines, wastewater sewers, etc.) within the onshore 3D Seismic Survey Area;
- A summary of small-scale coastal fishing, offshore commercial fishing and recreational activities currently undertaken within or adjacent to the offshore 3D Seismic Survey Area and along the associated coastline;
- A description of regional and international shipping routes known to cross the offshore 3D Seismic Survey Area, associated port infrastructure and the known location of subsea obstructions; and
- The types of vulnerable people who are expected to be located within communities potentially affected by the onshore seismic survey activities. Such people may be vulnerable due to their age, disability or other reason and may need special assistance and other types of support during the 3D Seismic Survey.

**Figure 6.1 Location of the SWAP 3D Seismic Survey Area and Priority Areas**



## 6.2 Data Sources

Socio-economic data presented in this Chapter has been taken from the following primary and secondary sources:

### Primary data

A socio-economic study was undertaken in November 2015 covering the onshore 3D Seismic Survey Area and the coastline from Sahil to the Shahdili Spit (refer to Figure 6.1). The socio-economic study area was defined based on the following key features:

- The boundaries of the 3D Seismic Survey Area;
- The physical presence of residential areas located within, or immediately adjacent to, the 3D Seismic Survey Area (as residents may be directly or indirectly impacted by seismic survey activities even if they are outside the 3D Seismic Survey Area);
- The physical presence of coastal facilities where users of the sea access the water via ports and jetties; and
- Fishing areas that are used for commercial and coastal fishing activities located adjacent to and within the 3D Seismic Survey Area.

The socio-economic study comprised the following:

- An initial review of secondary sources of information to identify key data gaps and undertake a land characterisation mapping exercise using high resolution satellite imagery;
- Nine catch interviews with individuals involved in small-scale fishing activities;
- Nine catch interviews with residents of local communities within the 3D Seismic Survey Area;
- Ten catch interviews with tourism and business owners (such as hotels); and
- A visual walkover along the coastal and onshore survey area to confirm land use and features that were mapped during the land characterisation mapping exercise.

### Secondary data

- Review of other available BP and third party ESIA's completed for projects in the Absheron Region and in the Azerbaijan sector of the Caspian Sea, specifically within or in close proximity to the SWAP 3D Seismic Survey Area (see Chapter 1 Figure 1.1), including:
  - Shah Deniz (SD) 2 ESIA<sup>1</sup>; and
  - South Caucasus Pipeline Expansion Project, Azerbaijan ESIA<sup>2</sup>.
- Primary data collected during an earlier coastal sensitivity mapping exercise completed in 2014<sup>3</sup>.
- Secondary data collected through consultation with local governmental and other organisations including:
  - The Ministry of Environment and Natural Resources (MENR);
  - The Ministry of Culture and Tourism (MoCT);
  - The Ministry of Labour and Social Protection (MLSP);
  - Caspian Shipping Company;
  - Azerbaijan Committee of Urban Planning and Architecture; and
  - Azerbaijan Fisheries Research Institute.
- Secondary data and literature publically available on the internet including data and reports published by The State Statistical Committee of the Republic of Azerbaijan, The Republic of Azerbaijan Ministry of Economy and Industry, US Energy Information Administration, United Nations Development Programme and the World Bank.

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<sup>1</sup> URS, 2013, Shah Deniz Stage 2 Project ESIA

<sup>2</sup> RSK, 2013, SCP Expansion Project, Azerbaijan, Environmental and Social Impact Assessment. Available at: [http://www.bp.com/en\\_az/caspian/sustainability/environment/env-and-social-documentation/SCP/SCPX-ESIA.html](http://www.bp.com/en_az/caspian/sustainability/environment/env-and-social-documentation/SCP/SCPX-ESIA.html). Accessed August 2015

<sup>3</sup> AECOM, 2014, Azerbaijan Coastal Oil Spill Sensitivity Atlas Mapping Version 1.2

## 6.3 National Context

### 6.3.1 Economy

Azerbaijan comprises 77 administrative districts including 11 city districts and 10 economic regions. The majority of Azerbaijan's major settlements are in coastal locations, with 22%<sup>4</sup> of the population resident in Baku.

Azerbaijan's economy is heavily dependent on its energy exports, with more than 90% of total exports accounted for by oil and gas products<sup>5</sup>. After oil and gas, the economy is dominated by the agricultural sector which, alongside fisheries and forestry, represented 5.27% of the Azerbaijan's GDP in 2014. The majority of those engaged in agriculture are self-employed and live in rural areas. In 2011, agricultural lands comprised approximately 4.8 million hectares, including both pasturelands and sown areas, which equates to approximately 55% of the total area of Azerbaijan.

Other important economic sectors include manufacturing and services such as tourism, financial and telecommunications. The overall contribution of the fisheries industry to the Azerbaijani economy and to national food security and poverty reduction is low. However, there are local areas where fisheries are important for the rural economy and the livelihoods of coastal communities<sup>6</sup>.

### 6.3.2 Poverty

In recent years, a significant reduction in poverty in Azerbaijan has been achieved<sup>7</sup> and was accompanied by a rise of 91% in gross national income (GNI) per capita between 2001 and 2013<sup>8</sup>. This rapid growth is due to the expansion of the oil and gas sector, high levels of public expenditure and substantial reforms supporting a market-based economy. However, in 2014, growth slowed down primarily due to falling oil prices and a decline in total oil and gas production.

Improvements in health and education have also been achieved across many parts of Azerbaijan. Basic infrastructure such as accessible roads and sanitation systems are typically lacking in some rural communities; and utility services such as electricity and water are not universally available when compared to the high level of development in the major cities.

Nationally, the level of inequality is high, particularly between rural and urban areas. Inequality is also high within urban areas with reported data showing significant disparities between the rich and the poor with regard to access to services<sup>9</sup>.

### 6.3.3 Population, Demographic Structure and Ethnicity

In 2015, the population of Azerbaijan was 9,593,000, with a gender distribution of 49.8% male and 50.2% female. The proportion of the population resident in urban areas has remained relatively constant at around 50% over the past 20 years. It is possible that the population of urban areas is under-recorded as many people who move to Baku for employment on a temporary or permanent basis may retain their formal registration in their place of origin.

Azerbaijan is characterised by a relatively high birth rate, a population structure dominated by young people and active (external and internal) migration flows. In 2015, 71% of the population were aged

<sup>4</sup>The State Statistical Committee of the Republic of Azerbaijan, Demography. Available at: <http://www.stat.gov.az/source/demography/indexen.php> Accessed August 2015

<sup>5</sup> US Energy Information Administration, 2014, Country Analysis Briefs: Azerbaijan. Available at: <http://www.eia.gov/countries/cab.cfm?fips=AJ> Accessed August 2015

<sup>6</sup> Salmanov, Z., Qasimov, A., Fersoy, H. and van Anrooy, R., 2013, FAO Fisheries and Aquaculture Circular No. 1030/4, Fisheries and Aquaculture in the Republic of Azerbaijan: a review, Available at: <http://www.fao.org/docrep/017/i3113e/i3113e00.htm> Accessed August 2015

<sup>7</sup> World Bank Group, 2015, Azerbaijan Partnership Program Snapshot. Available at: [http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/409231443709836813/Azerbaijan-Snapshot.pdf?bcsi\\_scan\\_ab11caa0e2721250=0&bcsi\\_scan\\_filename=Azerbaijan-Snapshot.pdf](http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/409231443709836813/Azerbaijan-Snapshot.pdf?bcsi_scan_ab11caa0e2721250=0&bcsi_scan_filename=Azerbaijan-Snapshot.pdf) Accessed August 2015

<sup>8</sup> The World Bank, 2014, World Development Indicators. Available at: <http://data.worldbank.org/country/azerbaijan> Accessed August 2015

<sup>9</sup> United Nations Development Programme, 2013, Human Development Report 2013, The Rise of the South: Human Progress in a Diverse World. Available at: <http://hdr.undp.org/en/2013-report> Accessed July 2015.

between 16 to 64 years and potentially economically active<sup>10</sup>. In 2015, the dependency ratio<sup>11</sup> was 28%. Data from 2009 showed a dependency ratio slightly higher in rural areas (24%) than in urban areas (21%).

Azerbaijan has shown a natural increase in population. In 2014, the scale of increase was 12.2 per 1000 people. In 2011, life expectancy was 73.6 years (70.9 years for men and 76.2 years for women) which reflected a significant, positive change since 1990, when average life expectancy was 71.1 years (67.0 for men and 74.8 years for women). Migration patterns have changed from a period of net outward migration between 1970 and 2007, to a net increase in immigration, which in 2011 was 1,700 persons.

Based on the 2009 census (latest data available), the majority of the national population (91.6%) was ethnically 'Azerbaijani', with the remaining 8% comprising a range of ethnic groups including Lezgis (2%), Armenians (1%), Russians (1%) and Talyshs (1%). The religious distribution in Azerbaijan is relatively homogenous, with the majority of the population defined as Muslim. Other religions include Orthodox Christianity, Judaism, Catholicism and Protestantism.

Azerbaijan has a large population of Internally Displaced Persons (IDP) as a result of the conflict between Armenia and Azerbaijan in the early 1990s, over the Nagorno-Karabakh region. Nationally, 568,892 people are classed as IDPs which represents approximately 6% of the total population in 2014<sup>12</sup>.

### 6.3.4 Public Infrastructure and Utilities

The national public road network varies across the Absheron Region and the country as a whole, and ranges from fully engineered international motorways, to unsealed roads that can be difficult to use during winter months. Improvements to the road network have been identified as one of the country's priorities for production diversification and is included in the 2014-2018 State Program for the Absheron Economic Region<sup>13</sup>.

To the south of Baku, the public road and rail infrastructure located within the onshore 3D Seismic Survey Area includes the four-lane Baku-Salyan Highway and a railway line, which both run parallel to the coastline from the south of Azerbaijan to Baku. The traffic flow on the highway is estimated to be 10,000 to 20,000 vehicles a day<sup>14</sup>. To the east of Baku, a surfaced road runs along the coastline from Baku to Turkan. A number of freight railway lines run from Baku eastwards, including a line to Hovsan Port.

Regional mains water infrastructure systems in the Absheron Region include an existing water pipeline south-west Bibiheybat and existing pipelines running from Baku towards the east of the peninsula. The location of wastewater discharge monitoring stations are described in Section 5.6 of Chapter 5: Environmental Description; and reflect the sources of waste water effluent into the Caspian Sea.

Based on the data available and field observations, it is expected that above and below ground infrastructure present within Priority Areas 1, 2 and 3 is likely to include the following:

- Waste water drainage and sewer networks;
- Culverted streams;
- Oil transportation pipelines;

<sup>10</sup> The World Bank, 2014, Population ages 15-64 (% of total). Available at: <http://data.worldbank.org/indicator/SP.POP.1564.TO.ZS> Accessed August 2015

<sup>11</sup> The dependency ratio relates the number of children (0-14 years old) and older persons (65 years or over) to the working-age population (15-64 years old)

<sup>12</sup> Internally Displaced Monitoring Centre, 2014, Azerbaijan Available at: <http://www.nrc.ch/europe-the-caucasus-and-central-asia/azerbaijan/> Accessed August 2015

<sup>13</sup> The Republic of Azerbaijan Ministry of Economy and Industry, 2014, The State Program on Socio-economic Development of Regions of the Republic of Azerbaijan for 2014-2018 years Available at: [http://www.economy.gov.az/index.php?option=com\\_content&view=article&id=2097:dovlet-programi-2014-2018&catid=116&Itemid=263&lang=en](http://www.economy.gov.az/index.php?option=com_content&view=article&id=2097:dovlet-programi-2014-2018&catid=116&Itemid=263&lang=en) Accessed August 2015

<sup>14</sup> Azerbaijan Highway Authority, 2010, Per comms with the Head of the Technical Division during preparation of the Shah Deniz 2 ESIA



- Gas transmission pipelines;
- Telecommunication cable networks;
- Electricity cables; and
- Regional and local potable water pipelines.

Based on the observations made during the field surveys completed in 2015 (refer to Chapter 5) the condition of this infrastructure is likely to vary.

## 6.4 Regional Context

The six districts located along the coastline within and adjacent to the 3D Seismic Survey Area are located within the economic regions of Absheron and Baku City and include the districts of Baku, Garadagh, Sabayil, Nasimi, Khatai, Surakhani, Khazar and Pirallahi. The main communities along the coastline within and adjacent to the 3D Seismic Survey Area include: Sahil, 29<sup>th</sup> km, Puta, Shikh, Badamdar, Bibiheybat, Bayil, Baku, Zygh, Hovsan, Yeni Turkan, Zira, Shahdili Spit, and the islands of Pirallahi and Chilov (Figure 6.1).

Within the Absheron and Baku City economic regions, the economy is dominated by the industrial sector, primarily oil and gas. Economic activity by sector is presented in Table 6.1 for these two regions and for Azerbaijan as a whole.

**Table 6.1: Proportion of Small Enterprises by Economic Sector and Region (2013)**

Number of Small Enterprises	Azerbaijan		Baku City		Absheron Economic Region	
	Total	%	Total	%	Total	%
Agriculture, forestry and fishing	1,663	11	56	1	38	5
Industry	1,804	12	934	12	160	20
Construction	1,012	7	575	7	62	8
Trade and transport repair services	6,405	44	3,761	47	355	45
Transportation and storage	286	2	177	2	1	0
Real estate activities	226	2	187	2	10	1
Other fields	3,065	21	2,243	28	155	20
TOTAL	14,461	100	7,933	100	781	100

Table 6.1 indicates that in 2013 the distribution of small enterprises and sectors between Baku City and the Absheron Economic Region was broadly similar. Economic activity was dominated by enterprises involved in trade and transport repair services and, to a lesser extent, industry; agriculture, forestry and fishing; and construction<sup>15</sup>. During 2013, the agriculture, forestry and fishing sector accounted for 1% of the total enterprises in Baku City and 5% in the Absheron Economic Region, reflecting the relatively higher importance of agriculture, forestry and fishing activities in the Absheron Region for this economic sector.

<sup>15</sup> The State Statistical Committee of the Republic of Azerbaijan, Entrepreneurship. Available at: <http://www.stat.gov.az/source/entrepreneurship/indexen.php> Accessed August 2015



## **6.5 Land Ownership and Use**

### **6.5.1 Land Ownership**

Three types of land are legally identified in Azerbaijan:

- Private land;
- State land ; and
- Municipal land.

Following Azerbaijan's independence and the collapse of the Soviet Union, a systematic process of land privatisation was implemented. The land privatisation process is largely complete; although there remains large areas of State or municipal land. Currently, State land corresponds to the land where buildings belonging to State entities are located, whilst municipal land corresponds to publicly owned land plots.

Although the cadastral registration of rural municipal land has been ongoing since independence, there are cases where private farming activities are undertaken on municipal land. Some users may hold a formal registration for use of municipal land with the relevant authority. Where no formal registration is held, individuals benefit from informal recognition by the relevant authority and are not considered to use the land illegally. Private land can be rented out to third-party users, either formally or informally.

Information obtained from the socio-economic study within Priority Areas 1, 2 and 3 indicates that land ownership type includes both private land, with either formal or informal tenancy agreements, and municipal land. Residents interviewed indicated that they use municipal land and, in some cases, private land where the landowner is absent, for private purposes (such as agricultural crop farming) without any formal land tenancy arrangements in place. Where formal tenancy agreements are present, a typical lease arrangement was for 99 years with the land owner. Within Priority Areas 1, 2 and 3, it is considered likely that State land is present. Military areas were identified within Priority Areas 2 and 3 (refer to Chapter 5, Section 5.4.1).

### **6.5.2 Land Use**

Official land use categories in Azerbaijan include agricultural, residential, industrial, specially protected territories, forest, water bodies and protected areas. Land use characteristics and key socio-economic features located within the onshore 3D Seismic Survey Area (within Priority Areas 1, 2 and 3) have been identified using a combination of satellite imagery mapping and ground verification observations completed during the socio-economic survey.

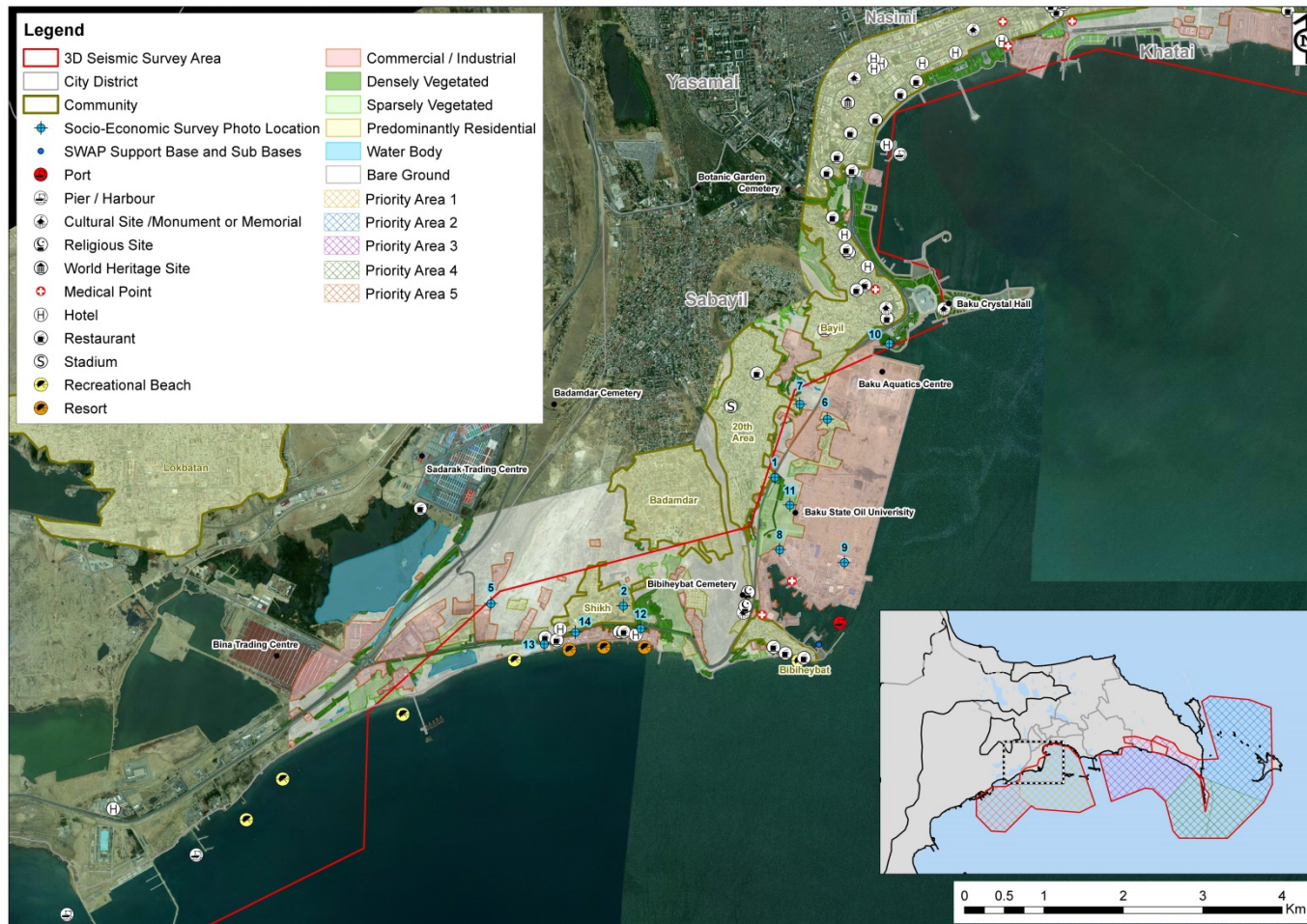
The results of the land use classification mapping analysis are presented in Figure 6.2, Figure 6.7, Figure 6.8, and Figure 6.13 below and use the following types of land use classification:

- Recreation and tourism;
- Commercial/industrial;
- Densely vegetated;
- Sparsely vegetated;
- Predominantly residential;
- Water body; and
- Bare ground.

#### **6.5.2.1 Priority Area 1**

Priority Area 1 is located mostly within the Sabayil District and includes the local communities of Shikh, Bibiheybat and part of Badamdar. Communities located adjacent to Priority Area 1 include '20<sup>th</sup> Area' and 'Bayil'. As shown within Figure 6.2, land use within Priority Area 1 is dominated by commercial and residential use and includes some open land areas.

**Figure 6.2 Land Use and Key Features Within Priority Area 1<sup>3,16,17</sup>**



<sup>16</sup> Satellite imagery supplied by BP for the Absheron Region, August – November 2014

<sup>17</sup> GoMap Online Navigator, Available at: [http://gomap.az/info/bwp\\_map/hpages/index\\_en.htm?l=mct&pt=800&llz=45.3649,41.2548,7](http://gomap.az/info/bwp_map/hpages/index_en.htm?l=mct&pt=800&llz=45.3649,41.2548,7) Accessed August 2015

### ***Housing and Residential***

The main residential areas within Priority Area 1 comprise the two communities of Shikh and Bibiheybat. The socio-economic survey indicated that local residents typically work in the agricultural sector or are employed by oil companies who are active in the region. Many householders are registered as IDPs, originally from the Nagorno–Karabakh region.

Figure 6.3 below illustrates the type of structures understood to be used as residential housing observed in Priority Area 1 during the socio economic survey (photograph number provided in Figure 6.3 corresponds to location on Figure 6.2 above). These include a mix of brick built houses and less formal structures constructed from corrugated metal.

**Figure 6.3 Typical Residential Housing Observed within Priority Area 1**



### ***Agricultural***

The open land observed within Priority Area 1 was primarily unused and often fenced (Figure 6.4) (photograph number provided in Figure 6.4 corresponds to location on Figure 6.2 above). The small areas of dense and sparse vegetation identified from the satellite imagery, was found to correspond to land generally used for agricultural activities such as the cultivation of crops. Agricultural activities recorded also included poultry keeping (goose, ducks, chicken, turkey) and keeping livestock in the form of cattle, goats and sheep. The produce from poultry keeping (eggs, meat etc.) was reported to be mostly used for household consumption whilst livestock rearing was for household consumption and market sale for income generation.



**Figure 6.4 Examples of Bare Ground Observed within Priority Area 1**



***BOX 1: Example from a resident farmer living in Bibiheybat interviewed during the Socio-Economic Study:***

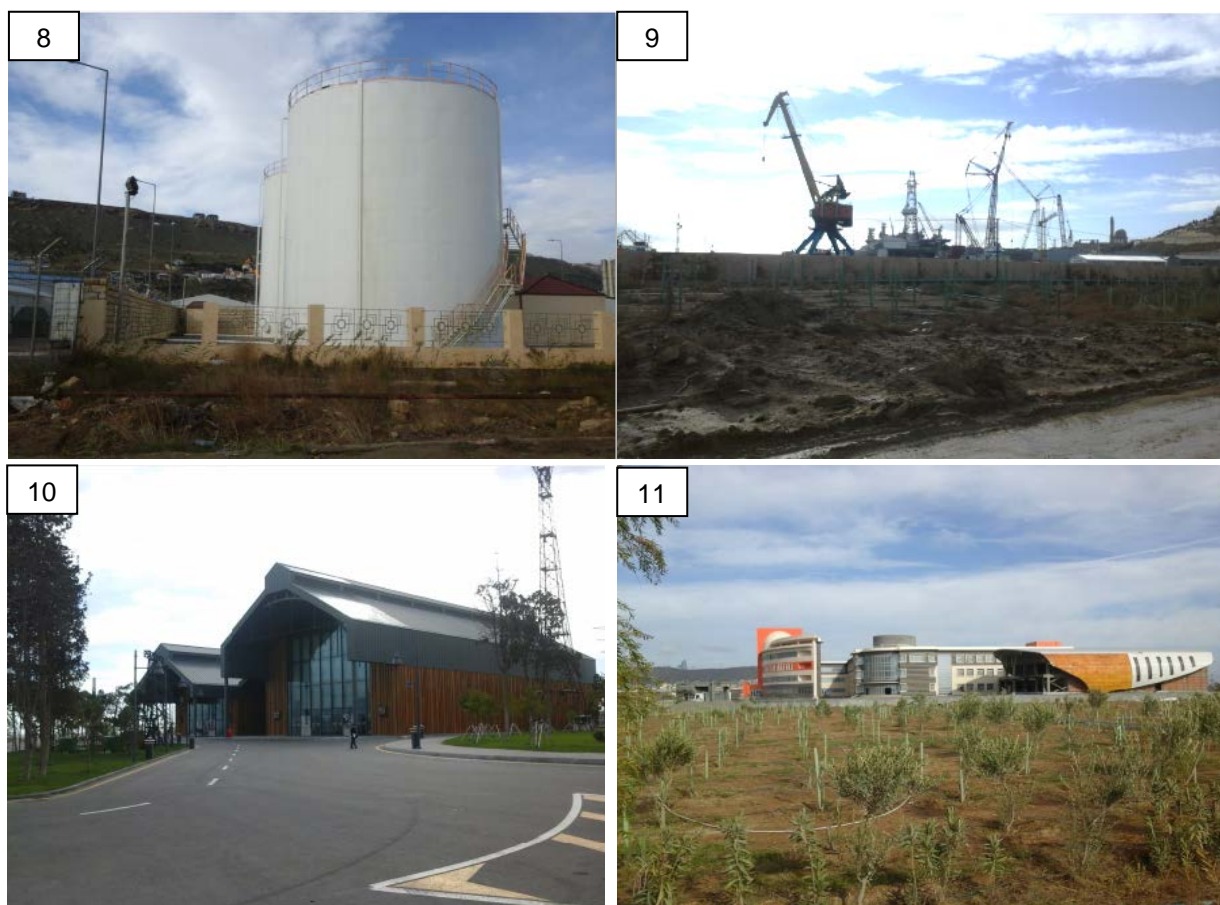
The interviewed farmer identified himself as an IDP who has occupied his land since he moved from the Zangilan district. He reported that land is State owned and he has no formal tenancy or other type of agreement for using the land and does not pay any rent. He primarily keeps poultry for household consumption. Chickens are mainly kept in March and April, whilst goose, ducks and turkeys are kept in winter months (November and December).

***Commercial / Industrial***

Observations during the survey confirmed that commercial use of land within Priority Area 1 is associated with the operation of industrial facilities, port and harbour infrastructure and oil and gas infrastructure which is either in use, or abandoned. Industrial land use was observed as being particularly dense on the coastal area west of Bibiheybat and coastline of Baku Bay. Industrial facilities observed include the Gas Storage Operation Department; Bos Shelf factory; AZENKO Puta Concrete Plant and GWO Drilling Production Factory.

Figure 6.5 provides examples of commercial and industrial land observed in Priority Area 1. The photos reflect the differences in the current condition of industrial land; some areas are characterised by both older and modern oil and gas infrastructure, whilst others are dominated by modern industrial buildings (photograph number provided in Figure 6.5 corresponds to location on Figure 6.2 above).

**Figure 6.5 Examples of Industrial Land Observed in Priority Area 1**



### ***Recreational***

Recreational land use along the coastline of Priority Area 1 includes a number of restaurants, hotels, resorts and associated sandy beaches, particularly within and near to Shikh. Prominent structures along the coastline include the MAMBO and Dostluq Beach Clubs, Shkih Aquapark, the Crescent Beach Hotel, the Ramada Baku hotel and the Aysberg Resort Hotel. Other recreational areas include the BMX Cyclopark (near Shikh) and the newly built Baku Aquatics Centre and associated park, located at the north end of the Bibiheybat oil field (refer to Chapter 5 Section 5.4.1). Cafes, restaurants and hotels are reported to be active throughout the year, although restaurants and coastal resorts are most active during the summer months (May to October).

Figure 6.6 provides examples of recreational use of land observed along the coastline within Priority Area 1 (photograph number provided in Figure 6.6 corresponds to location on Figure 6.2 above).

**Figure 6.6 Examples of Recreational Facilities Observed in Priority Area 1**



### 6.5.2.2 Priority Area 3

Priority Area 3 to the east of Baku is located mostly within the Khazar District and includes the community of Yeni Turkan and parts of Hovsan, Turkan and Zira. Land use includes residential and recreational use, with a few commercial/industrial facilities. Priority Area 3 has large stretches of open land including marsh vegetation along the coast and a semi-arid landscape. Shepherds with large flocks of sheep were observed throughout the coastal and inland area of Priority Area 3.

Land use characteristics within the western and eastern onshore sections of the Priority Area 3 are presented in Figure 6.7 and Figure 6.8 respectively.



**Figure 6.7 Land Use and Key Features Within Priority Area 3 – West<sup>3,16,17</sup>**

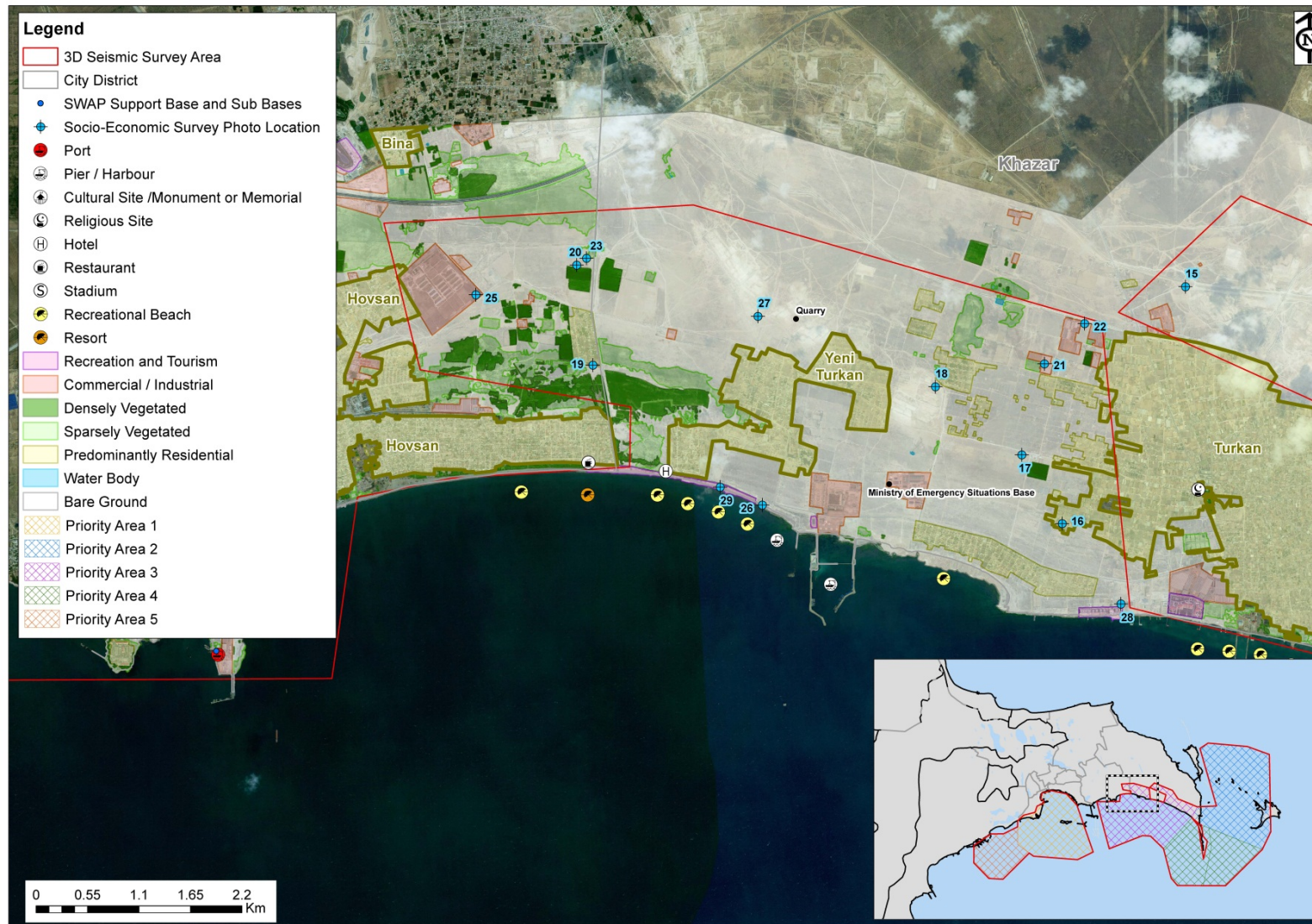
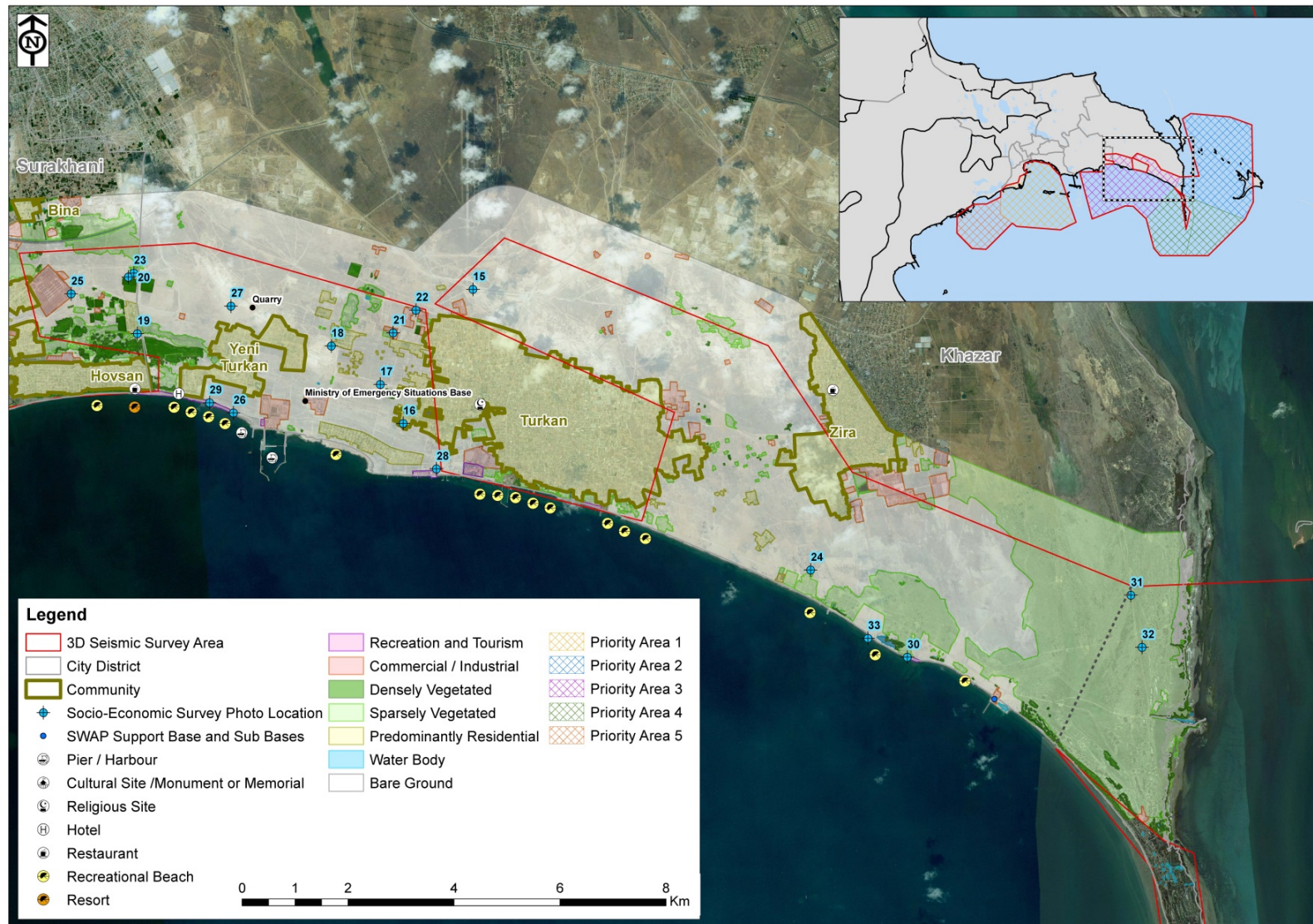




Figure 6.8 Land Use and Key Features Within Priority Area 3 – East<sup>3,16,17</sup>



### ***Housing and Residential***

Residential areas within Priority Area 3 include settlements typically organised in small clusters of brick built houses.

At the time of the survey, it was noted that a number of residences were not occupied and appeared to be second homes used during the summer months. The community of Turkan is known to be a more recent residential area which grew substantially after 1985; when public workers in the health sector were provided land for second homes by the Ministry of Health. It was also reported that there are a high number of elderly and retired people living within Turkan.

Figure 6.9 presents the typical types of housing structures present within Priority Area 3 (photograph number provided in Figure 6.9 corresponds to location on Figure 6.8 above).

**Figure 6.9 Examples of Residential Structures Observed in Priority Area 3**



### ***Agricultural***

The densely and sparsely vegetated areas located in the west of Priority Area 3 correspond to open land generally observed to be used for agricultural activities. Agricultural activities observed in Priority Area 3 include crop and livestock production, vineyards, orchards and growing of crops within greenhouses.

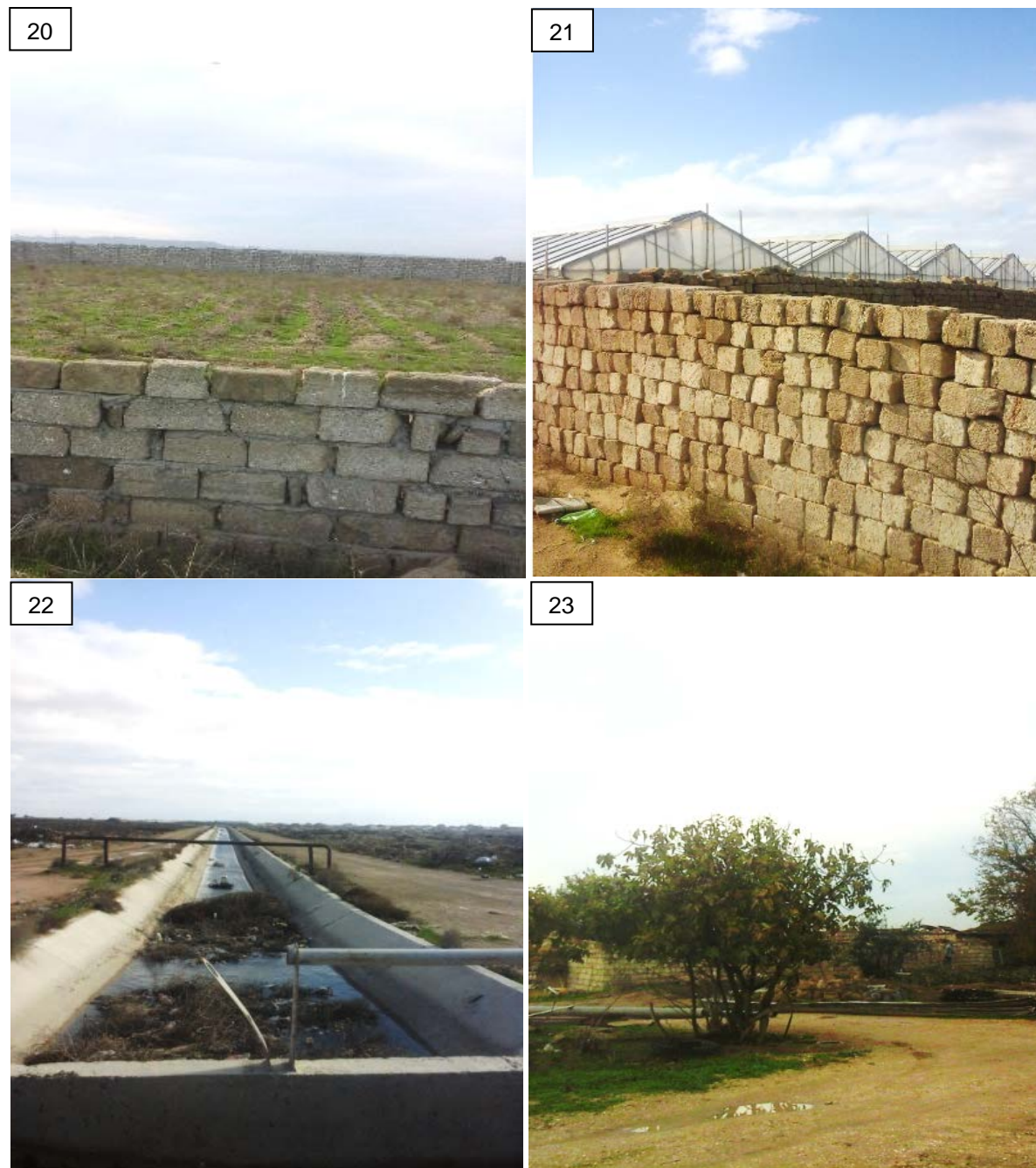
Main crops grown are understood to comprise vegetables (including onions, cucumber and potatoes) and fruit (including tomatoes), while pomegranate and quince are grown in orchards. The high season for tomato production is from March to May and from October to December; low season is January to February and June to September. It was reported by those interviewed that produce is typically for market sale rather than for household consumption.

Livestock production included small animals such as goats, sheep, and poultry. Across the farms observed, crop and livestock production was reported to be for both household consumption and



market sale. Produce from vineyards and orchards were mostly used for household consumption. Figure 6.10 illustrates agricultural activities observed in Priority Area 3, including a typical farm, glass greenhouse and an irrigation channel (photograph number provided in Figure 6.10 corresponds to location on Figure 6.8 above).

**Figure 6.10 Examples of Agricultural Land Observed in Priority Area 3**



***BOX 2: Example from farmers interviewed in Priority Area 3***

***Priority Area 3 West: farmer living in Hovsan***

The interviewed farmer undertakes agricultural activity on land owned by his family. He grows crops, keeps poultry, small cattle (including goats and sheep), has an area of pasture for horses, and an orchard of fruit trees. He farms throughout the year except for onions that he only grows between February and August. The farmer has approximately 100 small cattle, 10 birds (poultry), 60 pigeons and 4 horses.

He reported that his produce is mostly for household consumption with some sold in Hovsan. Example prices of produce at the local market were reported to be 7 AZN per kg for sheep (average weight of 13-14 kg) and 5 AZN per kg of onions.

***Priority Area 3 East: Farmer living in Zira (Zira Baglari)***

The interviewed farmer explained that in 1985 plots of land were provided to employees of the Ministry of Health to build summer homes in the area. His land is family owned and his wife is the owner. Across the year he tends to vineyards which he uses primarily for his own consumption. High season for grapes is between July to September.

Reportedly the average price for grapes at the local market would be 1.5 AZN per kg.

***Commercial / Industrial***

Commercial and industrial land use within Priority Area 3 primarily comprises harbours, ports, industrial and commercial facilities as well as abandoned and operational oil and gas infrastructure. Examples of commercial and industrial facilities observed within Priority Area 3 include the Baku fishing port, Turkan Pump Station (Figure 6.11, Photograph number 26), and a poultry factory called Qushchuluq Fermasi (corresponding to the large commercial site located north west of Priority Area 3) (Figure 6.11, Photograph number 25). The bare ground area that can be observed north of Turkan corresponds to an area used as a quarry (Figure 6.11, Photograph number 27) (photograph number provided in Figure 6.11 corresponds to location on Figure 6.8 above).

**Figure 6.11 Examples of Commercial and Industrial Use of Land Observed in Priority Area 3**



### **Recreational**

Recreational land use within Priority Area 3 is characterised by numerous cafes, restaurants and sandy beaches and resorts located along the coastline. The majority of recreational activity is focused along the coastline adjacent to Turkan. There are two international hotels, the Cahargah Hotel, and the Eyvaz five star hotel located in front of Emin beach.

A number of metallic structures were identified along the coastline within Priority Area 3, which comprised a former yacht club and were reported to be currently used for recreational fishing.

#### ***BOX 3: Example from a tourism business interviewed as part of the Socio-Economic Study located at the west of Priority Area 3 - Eldar Recreational Centre in Turkan***

The interviewee reported that his recreational centre caters for residents of Turkan and provides a beach and resort facility. He has 7 full time employees that work throughout the year and does not typically hire additional staff during the peak summer months (May to September). The recreational centre has a capacity for 100 people. During high season he makes between 1300 and 1500 AZN a month, whilst in low season he reported a monthly income ranging between 100 to 300 AZN a month. He is not a member of any tourist association or group.

Figure 6.12 presents examples of recreational land use observed in Priority Area 3 (photograph number provided in Figure 6.12 corresponds to location on Figure 6.8 above).



**Figure 6.12 Examples of Recreational Areas Observed in Priority Area 3**



### 6.5.2.3 Priority Area 2

Priority Area 2 is located within Khazar District and is dominated by sparsely vegetated areas and unused land. The entrance to the Absheron National Park, located on the Shahdili Spit, is located within this area. The Park is a recreational attraction for observing wildlife, particularly birds. There are no residential areas or evidence of agricultural activities observed in Priority Area 2.

Figure 6.13 Land Use and Key Features within Priority Area 2<sup>3,16,17</sup>

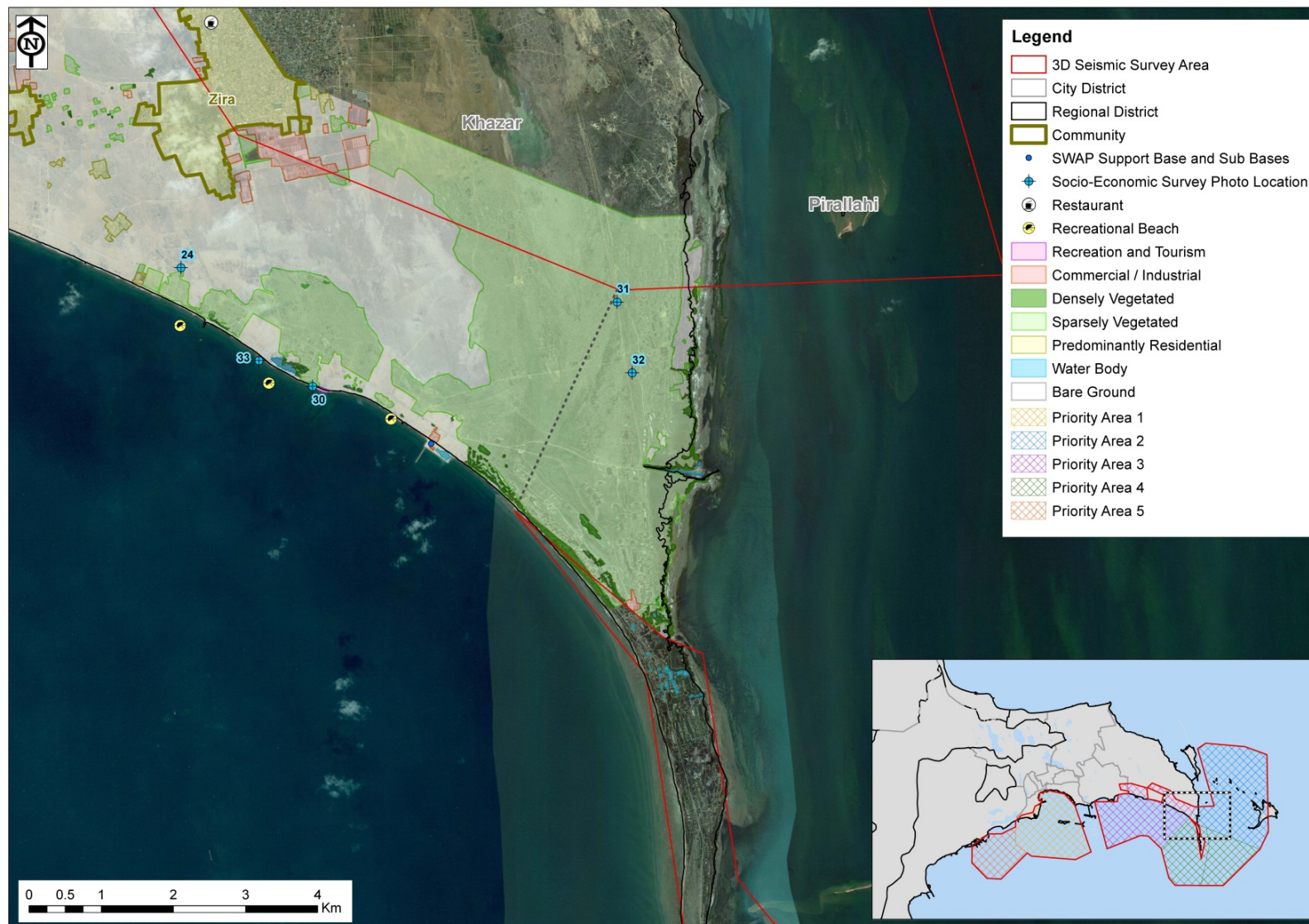




Figure 6.14 presents examples of sparsely vegetated areas and unused land observed in Priority Area 2 (photograph number provided in Figure 6.14 corresponds to location on Figure 6.13 above).

**Figure 6.14 Examples of Sparsely Vegetated Areas and Unused Land Observed in Priority Area 2**



## 6.6 Commercial Fishing

### 6.6.1 Fisheries Regulation

#### ***Legislation Regulating Fishing Activity in the Republic Of Azerbaijan***

Fishing activity is regulated through legislation, and respective rules and regulations. Coastal fishing is regulated by the “*Rules for state registration of small tonnage vessels, approved pursuant to Resolution 97 (dated 23 April 2008) of the Cabinet of Ministers of the Republic of Azerbaijan*”. The “*Classification of small tonnage vessels sailing under the state flag of the Republic of Azerbaijan*”, Order 073 issued by the Ministry of Emergency Situations on 16 June 2007 and Ministry of Justice Certificate 3350 on 26 June 2007 stipulate that the region in which small-tonnage vessels can fish is limited to 2-3 miles from the coastline.

According to the “*Procedure for the protection of fish resources and fishing in the Republic of Azerbaijan*” approved by Decision No 152 of the Cabinet of Ministers of the Republic of Azerbaijan dated 24 September 1999” the following fishing gear can be used at the following times of year:

- Scale fish nets – from 1 January to 1 April, and from 1 September to 31 December;
- Seine fish nets – from 1 February to 1 May;
- Fish net for mullets – from 1 January to 1 May, and from 1 September to 31 December;
- Stationary seines – from 1 January to 1 May, and from 1 September to 31 December; and
- Karavas and trap-type nets – from 1 January to 1 May, and from 1 September to 31 December.

According to Article 17 of the “*Regulations for protection and fishing of fish reserves in the Republic of Azerbaijan*” which approved as per Resolution No.152 of the Cabinet of Ministers of the Republic of Azerbaijan from 24 September 1999, use of the following fishing gear in the Caspian Sea:

- Scalp fish nets (length 18-25m, width 3m, eye sizes 40-55mm);
- Fish nets for kilka (length 18-25m, width 3m, eye sizes 28-44mm);
- Fish nets for mullets (length 351.5m, width 300mm, eye sizes 50-55mm);
- Seine nets (length over 1000m from the shore, width 5m, eye sizes 28mm);
- Karavas and trap type other fishing gear (length over 20m from the shore, width 1.5m, eye sizes 28mm); and
- Cone-shaped net (length 5.5m, diameter 1.5-2m, eye sizes 6.5mm).

A summary of the fishing regulatory authorities and their functions are provided in Table 6.2.

**Table 6.2 Fishing Regulatory Authorities and Their Functions**

Regulatory Authority	State	Function
State Maritime Administration (SMA)		Issue documents identifying the vessel owner, crew members of the vessel and the country where the vessel is formally registered.
Ministry of Emergency Situations (MES)		Inspects the technical condition of the vessel and issues a certificate of seaworthiness. Technical certificates for large vessels are issued by the Baku representative office of the Russian Maritime Register of Shipping.
Department for the Increase and Protection of Aquatic Biological Resources (DIPABR) - MENR		For vessels in possession of SMA and MES-issued relevant documents DIPABR - MENR shall: <ul style="list-style-type: none"> <li>• Issue formal permission to specific vessels and determine the quotas of catch (licenses) for fishery products; and</li> <li>• Conduct inspections to approve that the volume and species of the biological resources (species) caught by the vessels is in accordance with licence conditions.</li> </ul>
Marine Transport Police (MTP) at the Ministry of Internal Affairs		For vessels in possession of SMA, MES and DIPABR – MENR-issued appropriate documents, MTP shall: <ul style="list-style-type: none"> <li>• Inspect the vessel appropriate documents;</li> <li>• Confirm whether the vessel is designed for fishing or other purposes such as transporting dry cargo; and</li> <li>• Verify and confirm that the vessel is in possession of DIPABR MENR-issued formal documentation and shall not allow the vessel to head for sea without the correct documents.</li> </ul>
State Border Service (SBS)		For vessels in possession of SMA, MES and DIPABR – MENR-issued appropriate documents, SBS shall: <ul style="list-style-type: none"> <li>• Inspect to check the purpose of a vessel's journey out to sea; and</li> <li>• Not allow a vessel to head to the sea for catching fishery products within the fishing zone on 10-nautical mile territory, unless it has the correct documentation.</li> </ul>

### ***Fishing Licencing***

MENR is responsible for issuing commercial fishing licences. The fishing licences are issued to entities (stating the name of the captain) and individual fishermen, and specify the number of fishermen in the crew and their names, the area the fishermen are permitted to fish (i.e. fishing area), and the fishing quota per specie per fishing area authorised for the licenced period of one year. Licences are also issued for the fishing vessels and boats.

Fishing areas for which licences have been granted are generally named after the adjacent coastal town or settlement, and it is understood that MENR authorises fishing activities within these coastal areas adjacent to these towns or settlements, extending up to 3 nautical miles from the shoreline. Known fishing areas are listed in Table 6.3 and illustrated on Figure 6.1 and Figure 6.15. During 2015, the majority of the fishing licences were issued for Zira (in total 125 fishermen) followed by Hovsan (53) and Shuvelan (45)<sup>18</sup>.

<sup>18</sup> MENR Letter, 3 July 2015. Response to a Request for Information from BP. Ref. 4/1009-6

**Table 6.3 Summary of Commercial Fishing Licencing Data 2015**

<b>MENR Data 2015</b>	
<b>Fishing Areas For Which Licenses Have Been Granted<sup>1,2</sup></b>	Zira; Novkhani <sup>19</sup> ; Buzovna; Hovsan; Shuvalen; Shikh; 29th km; Bayil; Zygh; Sangachal-Gobustan; Shykhlar <sup>19,20</sup> ; Bilgah; Turkan; Pirshaghi; Gobustan <sup>19,20</sup> ; and Kornilov, Pavlov and Karagedov banks direction <sup>19,20</sup>
<b>Species of Importance to Commercial Fishing</b>	Sprat (i.e. kilka) – <i>Clupeonella delicatula caspia</i> Svetovidov Sprat anchovy (i.e. anchovy kilka)– <i>Clupeonella engrauliformis</i> (Borodin) Caspian shad – <i>Alosa caspia caspia</i> (Eichwald) Brazhnikov's shad – <i>Alosa brashnikovi</i> (Borodin) Blackback shad – <i>Alosa kessleri kessleri</i> (Grimm) Roach – <i>Rutilus rutilus caspicus</i> Berg Black sea roach – <i>Rutilus frisii kutum</i> (Kamensky) Danubian bleak – <i>Chalkarburnus chalcoides</i> (Guldenstadt) Zahrte or bream – <i>Vimba vimba persa</i> (Pallas) Common carp – <i>Cyprinus carpio</i> Linne Golden grey mullet – <i>Liza auratus</i> Risso
<b>Species for Which Quotas are Specified (by common name)</b>	Sprat Shad Black sea roach Kulma Common carp Bream Grey mullet Zahrte
<b>Species That Cannot Be Fished Under Azerbaijani Fishing Regulations (as per 2015 License)</b>	Beluga – <i>Huso huso</i> (Linne) Ship sturgeon – <i>Acipenser nudiiventis</i> Lov. Russian sturgeon – <i>Acipenser guldenstadti</i> Brandt Kura sturgeon – <i>Acipenser persicus</i> Borodin Sturgeon – <i>Acipenser stellatus</i> Pallas Caspian trout – <i>Salmo trutta caspius</i> Kessler Zander – <i>Sander marinus</i> Cuvier

### Unlicensed Fishing

Unlicensed fishing activity relates to both fish catch exceeding the quota and species authorised by the regulatory authorities, as well as fishing without any license, i.e. unlicensed vessels or unlicensed fishermen.

Unauthorised equipment, boats, vessels or species is prohibited and is otherwise confiscated by the authorities. There is evidence of violations of fishery protection legislation every year as well as instances of fishing gear and catch being confiscated. In the first eight months of 2015 for example, there were 34 violations of fish protection legislation and 17 people were prosecuted. Confiscations included 1 fishing boat, illegal fishing equipment (7,033 pieces) and various fish species. The sum of imposed fines for this period was 40,288 AZN<sup>21</sup>.

<sup>19</sup> Location of commercial fishing area is outside of the SWAP Contract Area

<sup>20</sup> Not shown on Figure 6.1 or Figure 6.15 as the location is beyond the geographical extent of the map.

<sup>21</sup> Data from the Azerbaijan Fisheries Research Institute, 2015.

### **6.6.2 Overview of Commercial Fishing Relevant to the 3D Seismic Survey Area**

The agriculture and forestry industry (which includes the fisheries sector) represented 5.7% of the total GDP in 2014<sup>22</sup>. During 2013, within the Absheron and Baku City economic regions, the number of small enterprises involved in the agriculture, forestry and fishing sector, represented less than 5% and 1% of total enterprises across all sectors respectively (Table 6-1), reflecting the relatively low importance of the fishing industry for the regional economy.

Commercial fishing is undertaken across the 3D Seismic Survey Area by a number of legal entities and individual companies. Figure 6.15 below illustrates the number of licenced fishermen per MENR licensed fishing area, and the communities where known numbers of licenced fishermen live.

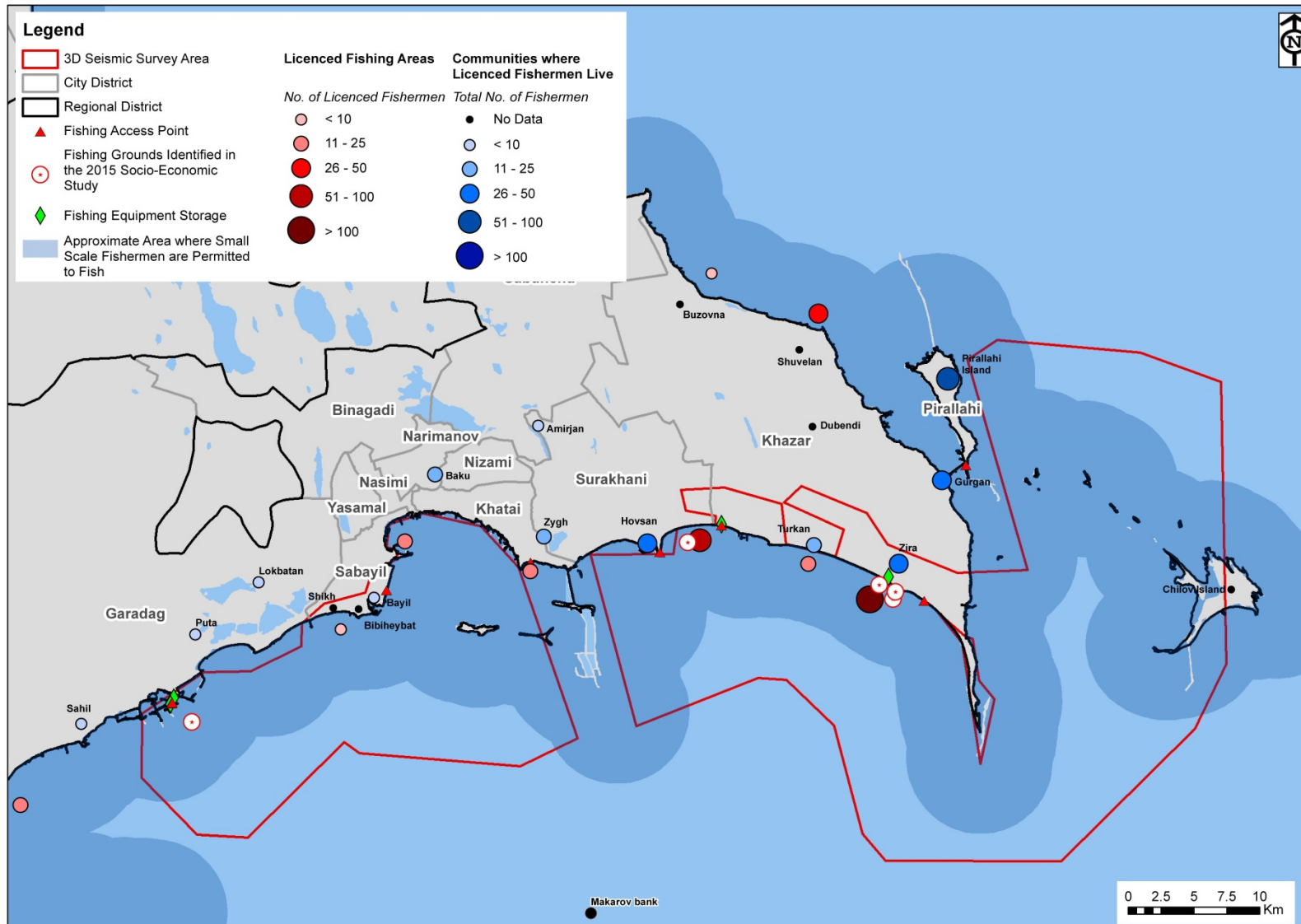
It is understood that two types of commercial fishing occur within the 3D Seismic Survey Area: offshore commercial fishing (using heavy tonnage vessels) and small scale coastal fishing (using medium size boats). These commercial fishing types (including fishing methods, equipment and key species caught) are described in Section 6.6.3 and Section 6.6.4 below.

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<sup>22</sup> The State Statistical Committee of the Republic of Azerbaijan, Agriculture. Available at: <http://www.stat.gov.az/source/agriculture/indexen.php> Accessed: August 2015



**Figure 6.15 Licenced Fishing Areas and Communities Where Licenced Fishermen Live Within and Adjacent to the 3D Seismic Survey Area**



### 6.6.3 Offshore Commercial Fishing

Heavy tonnage fishing vessels made of steel and approximately 30m length and 5m width are used to undertake offshore commercial fishing. These types of vessels are typically equipped with onboard ice preservation techniques. Due to decline of the anchovy kilka population which used to be caught at 80-120m depth, fishing vessels have adjusted their methods to catch kilka at shallower depths of 20-40m.

Fishing methods and equipment typically used in offshore commercial fishing are described below:

- **Underwater electric lighting method:** Electric lighting is the most common method used in the Caspian Sea to catch kilka. The lighting system attracts kilka, which are then caught using cone-shaped bag nets, centrifugal fish pumps, or air hoist (most common method for kilka fishing);
- **Fish pumps and air hoist:** Fishing method consisting of fish pumps installed on the vessel. Fish are attracted using lighting and are then sucked in by the pump. This method is implemented without fisherman's participation, being particularly efficient when the fish population concentration is high; and
- **Cone-shaped fishing nets:** This method involves launching the nets from the boat and encircling the fish. The net is left under water for approximately 5-10 minutes before being lifted out the water. Cone-shaped nets are used at a maximum water depth of 20-90m.

Vessels used for offshore fishing are typically fishing trawlers and seine trawlers. Overall characteristics of these vessels are:

- **Fishing trawlers:** mainly designed for catching fish in the open sea using trawl nets. The use of a trawl net is not permitted to catch fishery-important kilka in the territorial waters of Azerbaijan; and
- **Seiner-trawlers:** designed for catching fish with bag nets (bottom net), and are the type of vessels used in Azerbaijan. Vessels are normally equipped with different gear including fish pumps, cone-shaped bag nets, and electric lighting. In Azerbaijan and for kilka fishing only, the use of cone-shaped fishing nets is permitted.

The Makarov Bank, shown in Figure 6.15, is a kilka fishing ground. There are five commercial vessels currently operating in the Azerbaijan sector of the Caspian Sea which fish for kilka. Four of these vessels are based and depart from Lenkoran port (in the south of Azerbaijan) and mostly operate closer to the border waters with Iran (primarily within the KurKamen, Borisov and Karagedova banks). It is not financially viable for these vessels to travel further (i.e. to the north of Azerbaijani sector of the Caspian Sea). The remaining vessel (LTRV-50 "Shahriyar") owned by the Caspian Fish Company is based and departs from Pirallahi Island. It is understood that the vessel is licenced to accommodate a maximum crew of 6 fishermen and fish a quota of 25 tons of Sprat during a 12 month period in the waters between Pirallahi Island and the Kornilov, Pavlov and Karagedov banks (located between 50 and 100 km south of the 3D Seismic Survey Area). Between November and March this vessel is operated approximately twice a month for periods of up to one week (limited by the fuel capacity of the vessel) and predominately at the Makarov Bank. Fishing is carried out only at night time using cone nets and electric lighting<sup>23</sup>.

### 6.6.4 Small Scale Coastal Fishing

Small scale coastal fishing is undertaken using medium sized small tonnage vessels made of Duraluminium or wood and of approximately 5m length and 2m width. The distance from the shore where small scale coastal fishing is normally undertaken is within 2-3 nautical miles from the coast line. The fishing areas where small scale fishermen are authorised to fish is specified in fishing licences issued by the MENR. Small scale fishing is undertaken using both active and passive fishing methods. Active methods involve use of nets that are launched and collected from the boat whilst passive methods are primarily represented by the use of stationary fish traps. The following gear is typically used by small scale fishermen in the 3D Seismic Survey Area:

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<sup>23</sup> Mehman Akhundov, 2015, *Per.comms*.



- **Fish nets:** The most commonly used in the 3D Seismic Survey Area are scale and seine nets. Scale and seine nets are mainly set at a depth of 2-3m. Nets are placed at different depths ranging between 5 and 8m. The length of the nets is 18-25m and do not lie on the seabed.
- **Stationary seines:** Stationary nets are normally no longer than 1km and typically start from the shoreline with posts placed directly on the seabed. The posts are placed at various depths ranging between 1.5 to 2.5m. One end of the net is placed at the seabed at different water depths and the other end can normally be seen from the surface.
- **Karavas and trap-type nets:** This type of net are normally 20m long and start at the shore with posts placed on the seabed at water depths ranging between 1.5 and 2.5m.

During 2015, in relation to the fishing areas included within MENR licences as shown on Figure 6.15, 93 boats and 381 fishermen associated with these boats are authorised to fish. Results from the socio-economic survey across Priority Areas 1, 2 and 3 indicated the following:

- The fishermen interviewed within Priority Areas 1 and 3 indicated that fishing is their primary source of household income;
- Typical target species include: herring, kutum (roach), grey mullet, vobla (roach), kulma (white bream), and carp;
- Favoured fishing grounds are located on the coast adjacent to Zira, east of Hovsan and south-west of Puta (Figure 6.15);
- High season is March to April and September to November with many fishermen stating that they fish either every day, or up to 3-4 days a week. High winds (about 14 m/s) restrict fishing activities;
- Of the fishermen interviewed, all reported fishing was for commercial purposes with catch sold to market; and
- In Priority Area 3, interviewed fishermen reported that fish caught are sold through the Caspian Fish Company.

**BOX 4: Example from a fisherman interviewed in Priority Area 1 as part of the Socio-Economic Study.**

The interviewed fisherman resides in Baku and is the captain of a crew of 4. He holds a fishing licence and undertakes fishing activities off the coast from Garadagh, fishing within 2 nautical miles of the shore and using a Kazanka boat. The equipment he uses includes nets or spin fishing gear, and the main species he catches are: herring, kutum, and grey mullet (with a yearly quota catch for these species of 6000kg a year). All the fish caught are sold at market.

He reported that high fishing season is in March and April and then between September and November. Across the year, and depending on the weather conditions and seasonality, monthly income ranges between 300 and 800 AZN (1200 to 3200 AZN for the whole crew). He reported that he goes fishing every day (regardless of low or high season), except when the wind is too strong. The approximate price of species caught and sold at the market are:

- Kutum 6 AZN / kg
- Grey mullet 6 AZN / kg
- Herring 3 AZN / kg

The fisherman indicated that fishing is his primary source of household income.

Figure 6.16 illustrates fishing structures located along the coast which are used for shelter by the fishermen, and the type of boats used for coastal fishing observed in Priority Area 3.

**Figure 6.16 Boat and Typical Fisherman's Shelter Observed in Priority Area 3**



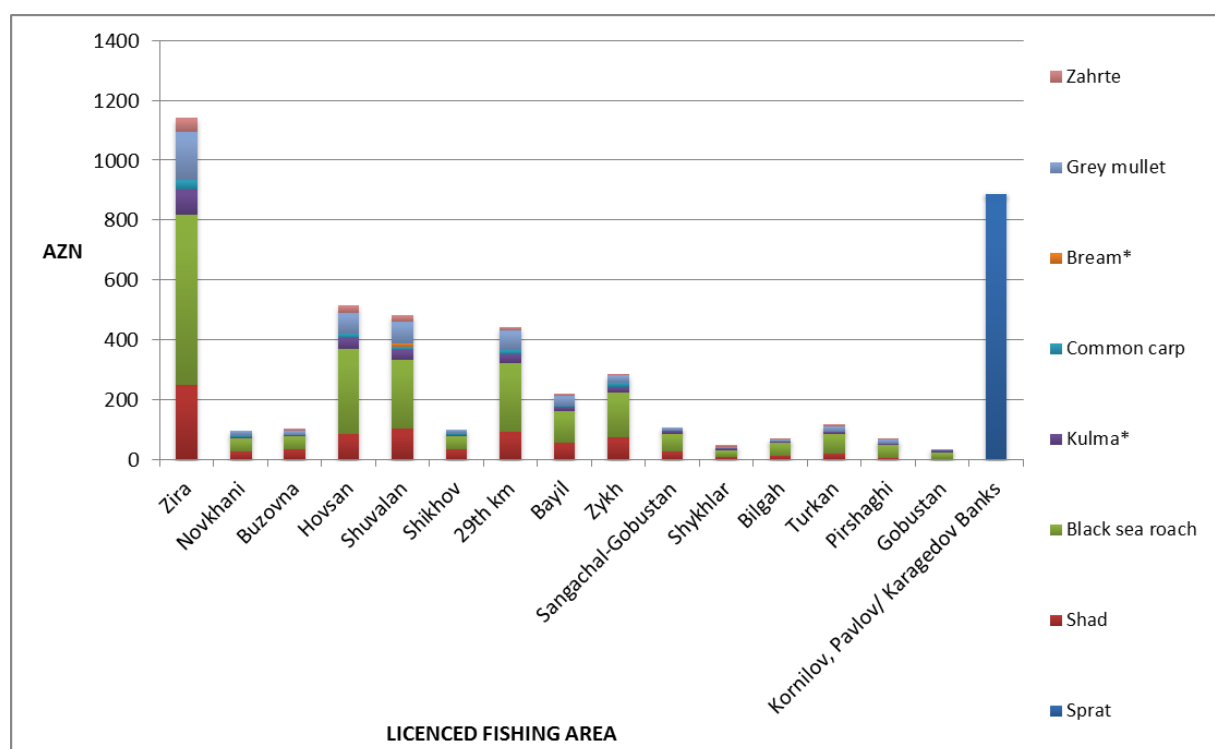
### 6.6.5 Economic Value of Fishing

Each year the MENR issues fishing licences that are typically valid for the period of one year. The licence specifies the fishing quota per species (specified by common name) per fishing area for the fishing entity or individual fishermen (see Section 6.6.1 and Table 6.3).

Using MENR 2015 assigned catch quotas and estimated market prices per fish species provided by the Azerbaijan Fisheries Research Institute<sup>24</sup>, the economic value of fishing activities per fishing areas (as defined in Section 6.6.2 and illustrated in Figure 6.15) has been calculated and shown in Figure 6.17.

<sup>24</sup> Price per fish species (AZN / ton) for legal entities and physical persons of the Republic of Azerbaijan: Kilka (14.2); Sprat/shad (35.5); Mullet (28.4); Common carp (28.4); Azerbaijan roach (28.4); Carp (56.8); Pipe fish (71); Zander (56.8); Black sea roach (71); Danubian bleak (71); Zahrte (28.4); Crustaceans (71); Other fish species (28.4)

**Figure 6.17 Economic Value of Fishing Activities per Fishing Quotas and Species for 2015**<sup>Error!</sup>  
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As shown on Figure 6.15, based on the data provided by MENR, Zira is the fishing area with the most licenced fishermen (over 100), followed by Hovsan and Shuvelan.

### 6.6.6 Seasonality and Alternative Activities

The seasonal variation in offshore commercial fishing as well as small-scale coastal activity within the Azerbaijan sector of the Caspian Sea is summarised below:

- **December to February** – mid to low season due to unfavourable winter weather conditions. Typically fishing undertaken by 50% of the commercial fishing fleet or less;
- **March to April** – high season with fishing particularly favourable during dull, cloudy weather conditions when electric lighting to attract fish is particularly effective;
- **May to June** – low season when kilka species are spawning and migrate to the Northern and Central Caspian Sea;
- **July to August** – mid - low season due to clear and cloudless weather; and
- **September to November** – high season with fishing particularly favourable during dull, cloudy weather conditions when electric lighting to attract fish is particularly effective.

Generally heavy tonnage fishing vessels, as well as smaller coastal fishing boats stay relatively idle during May- September, as well as during short-term demurrage (several days) in winter (December-March) due to varying weather conditions. Small scale fishermen interviewed reported high and low seasons consistent with the above; however, they reported carrying out fishing activities all year round. It was reported that windy days would be the only days small-scale fishermen would stop their activity.

<sup>25</sup> To prepare this figure, the quota assigned per species to each fishermen and legal entity were added and organised by licenced fishing area. Total by species and by fishing area were then multiplied by the prices per ton per and fish species corresponding to legal entities and physical persons of the Republic of Azerbaijan

<sup>26</sup> At the time of writing, no species prices per ton were available for Kulma and Brama. Hence the price assigned by the Azerbaijan Fisheries Research Institute for 'other fish species' (28.4 AZN/ton) has been assumed

During low season, alternative economic activities undertaken by fishermen to support their socio-economic status and household income include the following:

- Maintenance or overhaul of vessels;
- Repair or construction of fishing gear;
- Selling fishing gear;
- Finding temporary work as labourers in the construction sector; and
- Small-scale private businesses selling foodstuff and agricultural products.

### **6.6.7 Fisheries Organisation**

Fishermen organisations in Azerbaijan tend to be privately managed, as there is no regulatory body for the management of these types of organisations. Fishermen organisations do not take part in the process of decision-making by the State with regards to the fishery sector. Cooperation between various fishermen organisations is carried out on the economic level; however, these organisations do not receive any subsidies, support or tax incentives from the State. Some of the fishermen interviewed during the socio-economic survey are members of an organisation called the Hunter and Fisherman Society of Azerbaijan.

### **6.6.8 Fishing Trends**

Historically, kilka has been the main commercial species caught in Azerbaijan - being the single authorised commercial fishing species until 2012. Commercial catch of anchovy kilka has gradually decreased during the last 12-15 years due to the reduction of kilka reserves since 2001. Due to the reduced reserves of anchovy kilka, there has been a recent change (between 2012-2015) in the commercial fishing licences issued by MENR where the number of licences issued to the larger kilka fishing vessels has decreased. In parallel, the number of licences issued for other fish species and for small boats has increased.

Azerbaijan has also experienced a reduction in the number of recorded violations of fish protection legislation. The likely reason for this change is improved activity of the Department of Protection and Reproduction of Aquatic Bioresources of MENR during the last 3-5 years by prosecuting violation, and the reduction in natural reserves of sturgeon (including beluga, sturgeon, sturgeon stellate, ship sturgeon) and the corresponding reduction of illegal fishing of these prohibited species.

## **6.7 Tourism and Recreation**

### **6.7.1 Tourism and Recreational Business**

As described within Section 6.5, recreational land use across the onshore 3D Seismic Survey Area includes beach clubs, hotels, cafes and restaurants with other facilities within Priority Area 1 including the newly built Baku Aquatics centre near Bibiheybat. There are no recreational facilities within the Priority Area 2 other than the entrance to the Absheron National Park.

At the time of the socio-economic survey, a number of owners of cafes, restaurants and hotels within Priority Areas 1 and 3 were interviewed. Within Priority Area 1, customers were reported to comprise mostly local residents and foreign visitors, primarily associated with the oil and gas industry. In Priority Area 3, costumers were reported to include tourists, foreign visitors, residents of Baku and local residents from Gunashli, Hovsan, Akhmadli and Turkan.

#### ***Priority Area 1***

Information from the socio-economic survey indicated that the size of hotels and restaurants ranges from five clients a day up to 150 clients a day, with the number of workers employed ranging from five to 20 employees. The workforce typically varied to coincide with high demand during the tourism season (May to October). The hotels located by the sea used the immediate beach and shoreline areas as part of their resort, even where this is public land.

***BOX 5: Example from a restaurant visited as part of the Socio-Economic Study located in Zuruji***

The interviewee reported that his restaurant mainly caters for local residents and also provides general catering services. He has 10 full time employees, but during high season in May to October, he hires 10 more employees to support the higher demand. The restaurant has a capacity for 100 people. During high season he makes between 2000 and 5000 AZN a month, whilst in low season he reported a monthly income ranging between 1000 and 3000 AZN.

**Priority Area 3**

Interviews with recreational business owners in Priority Area 3 indicated that they cater for tourists, foreign guests, local residents (Gunashli, Hovsan, Akhmadli and Turkan settlements), and residents from Baku city. The types of businesses observed included restaurants, cafes, tea houses, hotels, and resorts.

With regards to the hotels and restaurants interviewed, capacity ranged from 10 to 30 rooms or tents (pavilions) with a capacity from 40 to 100 people. During the high season, the number of employees increases to 13, while during low season there can be as few as one to two full time employees for smaller establishments. The hotels located by the sea used the immediate beach and shoreline area for recreational activities, such as bathing.

***BOX 6: Example from a tourism business interviewed as part of the Socio-Economic Study located at the west of Priority Area 3 - Tropikanka Café in Hovsan***

The interviewee reported that his resort mainly caters for families and local residents from the Gunashli, Hovsan and Akhmadli communities. The resort also has access to a beach which provides up to 15 sunshade huts for customers. The beach is used for recreational activities which do not include fishing. High season was reportedly to be from July to August.



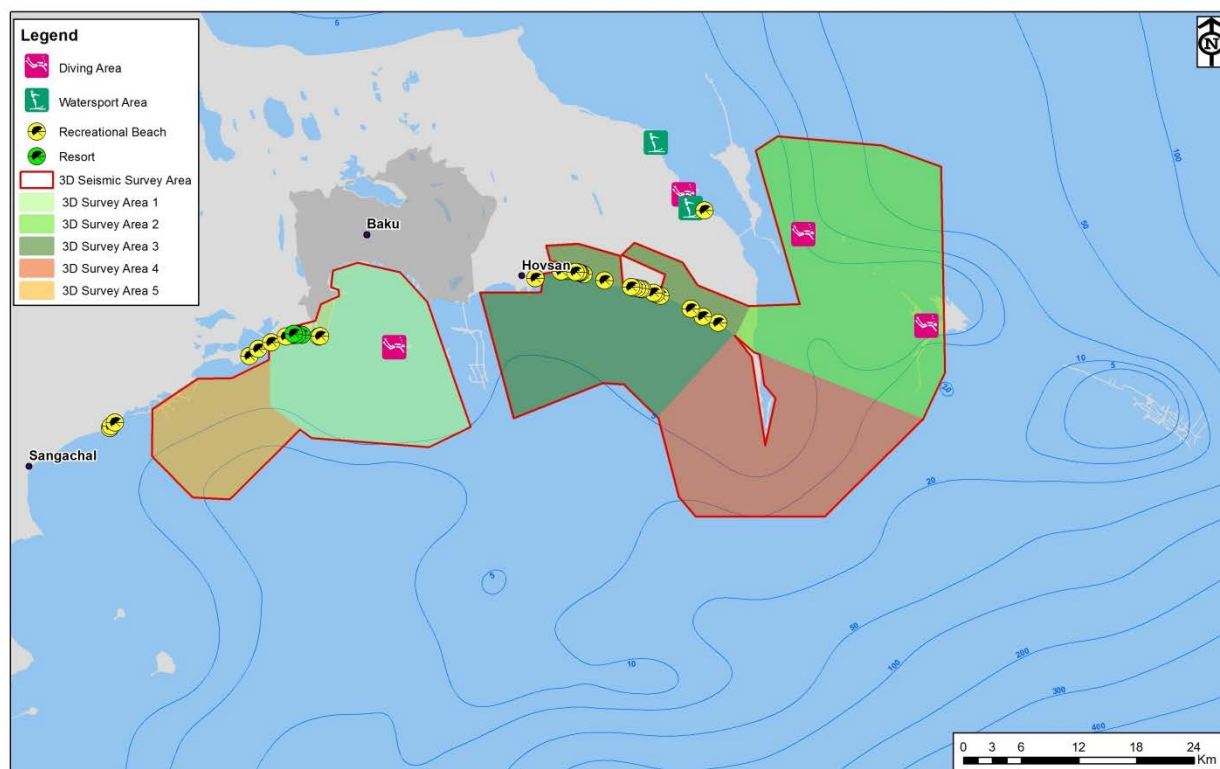
**6.7.2 Recreation, Water Sports and Diving**

During the socio-economic survey, observations of the beaches along the coastline indicated that there are a number of locations along the coast of the Absheron Region that are used for recreational activities and water sports (including diving, sailing and kite surfing) and were available for beach users particularly in the beach clubs and hotels. At the time of the survey (November 2015), no people were observed undertaking any of these activities due to winter time.

While diving for recreation is not known to be a popular recreational activity in the Azerbaijan sector of the Caspian Sea, three diving clubs are active in the Absheron Region who undertake diving in locations illustrated in Figure 6.18. Diving is undertaken within the 3D Seismic Survey Area near to

Boyuk Zira Island (just south of Baku Bay) within Priority Area 1 and near to Chilov and Malaya Plita Islands within Priority Area 2. Boyuk Zira Island is understood to be visited less frequently than the sites to the east of the Absheron Peninsula and is generally used by experienced divers who travel to the island by boat. Diving is known to take place year round; although is less popular during winter months and not undertaken during windy or stormy weather.

**Figure 6.18 Recreational Areas and Known Diving Sites Within and Adjacent to the 3D Seismic Survey Area**



## 6.8 Shipping, Ports and Existing Offshore Infrastructure

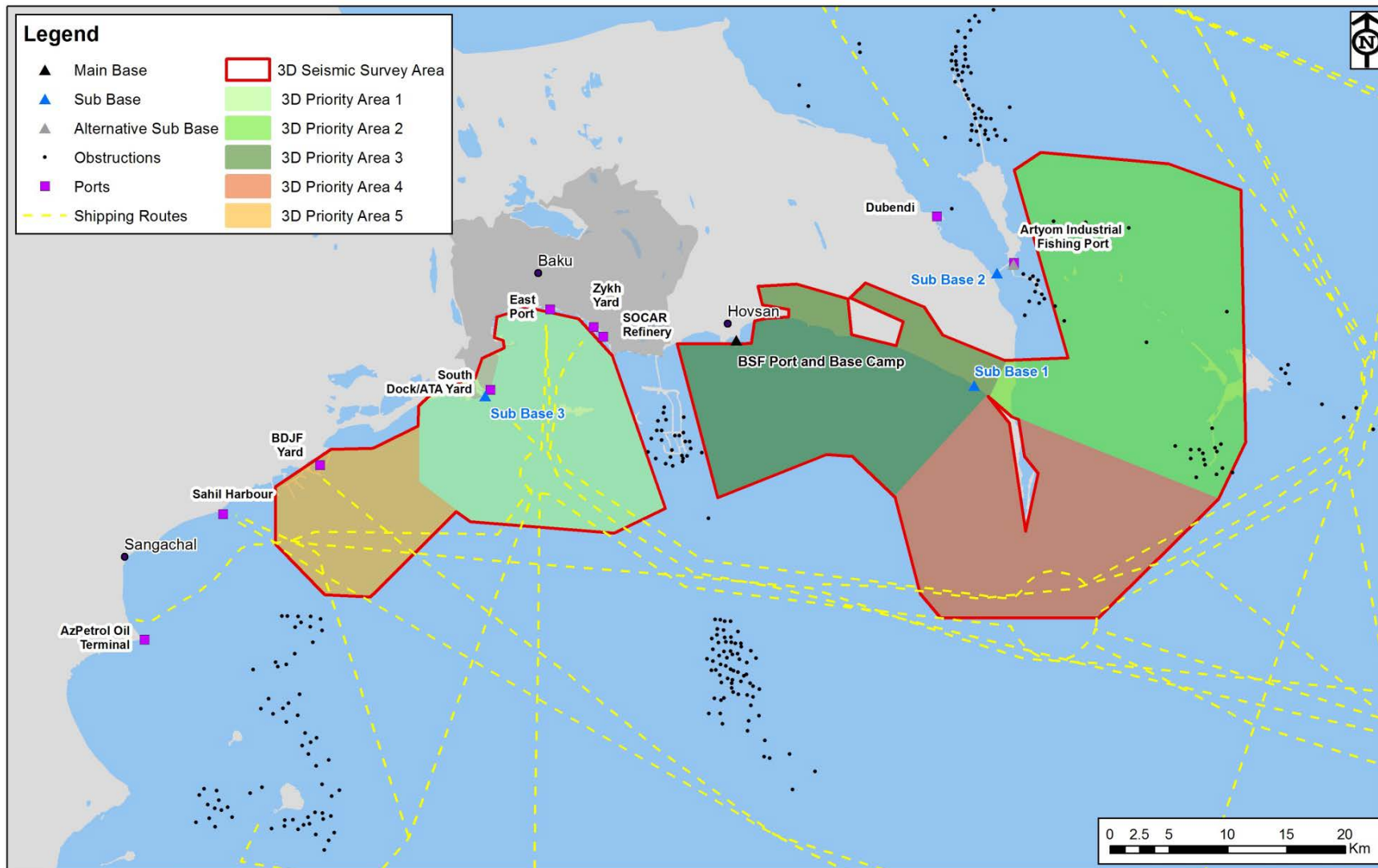
The primary commercial ports of Azerbaijan are situated on the Absheron Peninsula and in the vicinity of Baku. Shipping activities in the waters of the Central and Southern Caspian Sea include cargo shipping, passenger vessels, scientific surveys and other vessel movements supporting the oil and gas industry.

The primary commercial ports of Azerbaijan are situated on the Absheron Peninsular and in the vicinity of Baku. Shipping activities in the waters of the Central and Southern Caspian Sea include commercial trade, passenger, scientific and supply vessel operations to the offshore oil and gas industry. The main shipping routes, ports and obstructions (e.g. operational and abandoned oil and gas related structures) are illustrated in Figure 6.19. There are three shipping routes that pass through the SWAP 3D Seismic Survey Area, including the Baku-Turkmenbashy and the Baku-Cheleken shipping routes, which pass through the centre of the SWAP 3D Seismic Survey Area.

There is a concentration of both operational and abandoned oil and gas infrastructure with potentially poor navigational lights and markings, located within the 3D Seismic Survey Area. Subsea pipelines are also present which connect Sangachal Terminal with the ACG and Shah Deniz offshore platforms.



**Figure 6.19 Shipping Routes, Ports and Obstructions in the Vicinity of the 3D SWAP Seismic Survey Area**





## 6.9 Vulnerable Groups

Individuals may be considered vulnerable based upon their disability, age, illiteracy and also due to their marginal livelihood status. Vulnerable groups are those where any adverse change could have disproportionate impacts to household income, mental well-being and food security.

Based on the information collected during the socio-economic survey, vulnerable groups and vulnerability characteristics within some of the potentially affected communities are presented in Table 6.4 below.

**Table 6.4 Vulnerability Characteristics of Communities Located Within the 3D Survey Area**

Community	Key Figures	Vulnerability Characteristics
Bibiheybat	Population: 1000 - 1200 Female headed households: 40-50 people Elderly: 30% of population Disabilities: 30-50	Bibiheybat is a community of approximately 1,000-1,200 people. Of the families within the community, roughly 40-50 families are female-headed households.  There are a number of IDPs from the Zangilan occupied region who have moved into the area. There are many elderly people within the community and approximately 30-50 people with disabilities.
Hovsan	Population: 45,000 Female headed households: 20-25% Elderly: not known Disabilities: not known	Hovsan settlement is a community of approximately 45,000 people and 150 dachas. Of the families within the community, roughly 20-25% are female-headed households. There are many elderly people within the community.
Yeni Turkan	Population: 2,000 Female headed households: 3% Elderly: 20% Disabilities: not known	Yeni Turkan settlement is a community of approximately 2,000 residents. There are only a few female-headed households, estimated to be approximately 3% of the population.  There are many elderly people in the community, estimated to be approximately 20% of the population. The number of people with a disability was not estimated by interviewees.
Zira (Zira Baglari)	Population: 120-160 Female headed households: low proportion Elderly: high Disabilities: low (only a few)	Zira Baglari settlement is a community of approximately 120-160 residents. The community has a high number of Doctor's living there, as in 1985 land plots were 'gifted' by the Ministry of Health to employees in order to build summer homes.  There are many elderly and retired people living in the community; as well as those who only live there seasonally. Due to the remoteness of the community there are few younger people living here. There are only a few female-headed households and only a few people with disabilities.