B1 INTRODUCTION

This Annex presents the methodology and assessment of potential socio-economic impacts associated with the construction and operation of the Gaziantep Integrated Healthcare Campus (the Project), located in Şahinbey District of Gaziantep, southeast Turkey.

B1.1 ASSESSMENT OBJECTIVE

The overall objective of this impact assessment is to identify aspects of the Project (during both construction and operation) that are likely to result in significant impacts on socio-economic resources or receptors; and define appropriate mitigation and/or enhancement measures to manage these impacts, detailing them as commitments in the Project's Environmental and Social Management Plans (ESMPs).

B1.2 SCOPE OF THE ASSESSMENT

To achieve this objective, the scope of work for this social impact assessment has included the:

- definition of the study area with regards to socio-economic impacts;
- characterisation of the existing socio-economic baseline conditions for the study area. This included the collection of primary and secondary data on demographics, employment and livelihoods, community health and education and access to infrastructure and social services;
- identification of socio-economic impacts that are likely to occur as a result of the Project;
- identification of practicable and appropriate mitigation and/or enhancement measures;
- evaluation of residual impacts, taking into account the implementation of all mitigation and enhancement measures; and
- incorporation of the Project's commitments, related to socio-economic impacts, within the Project's ESMPs.

B1.3 STUDY AREA

The social study area has been determined using guidance from the EBRD Performance Requirements and the IFC Performance Standards, and covers

the area likely to be affected by Project activities during construction and operation. The area likely to be affected by:

- Project activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the Project; also those facilities that are not funded as part of the Project, but would not have been constructed or expanded if the project did not exist and without which the project would not be viable; and

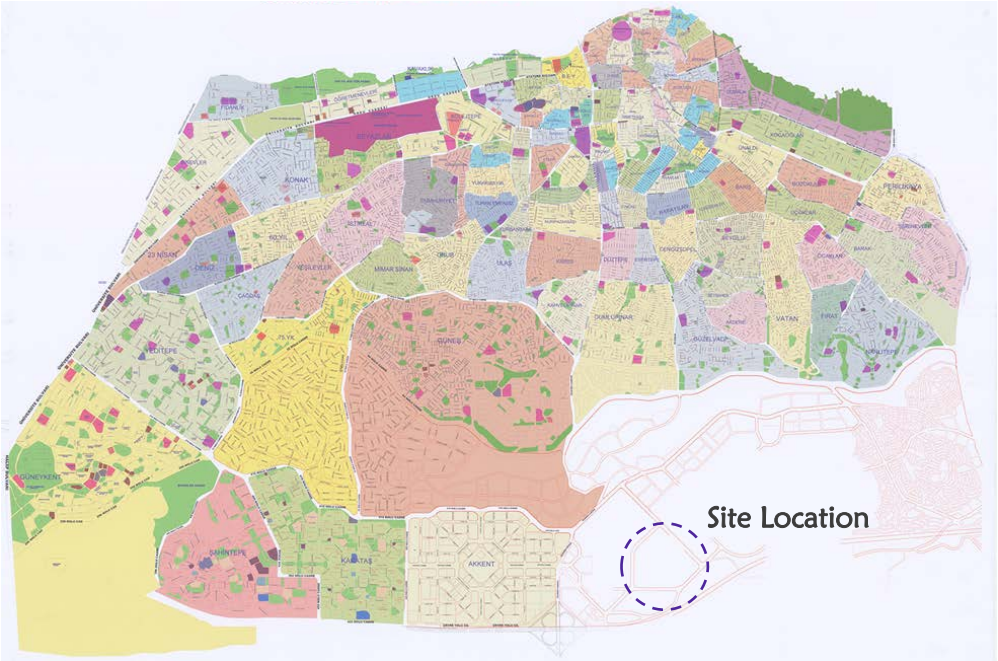
- cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the Project, from other existing, planned or reasonably defined developments at the time of this assessment.

The social study area for the Project therefore incorporates the following neighbourhoods located around the Project site:

- Akkent;
- Karataş;
- Guneş;
- 75 Yil;
- Dumlupınar;
- Bağlarbaşi;
- Kahvelipınar; and
- Mavikent.

These are illustrated in *Figure B1.1* along with the Project site location.

Figure B1.1 Project Location



B2 METHODOLOGY

B2.1 INTRODUCTION AND OVERVIEW

The social baseline was informed by social studies undertaken in July 2015 in seven neighbourhoods surrounding the Project site and supplemented with additional social studies undertaken in November 2015 and desk-based research. Quantitative data for the study area was obtained from secondary sources (as listed in *Section B2.2*).

Data collection methodologies included interviews with individuals who had specific interest or knowledge of the study area (key informants) and who were able to provide context to the baseline. These included healthcare and education professionals, NGO representatives and government officials. Focus group discussions (FGDs) were also undertaken with groups of men, women and youth separately in all neighbourhoods; and with Syrian refugees. Additional data were also gathered during stakeholder engagement undertaken in April, July and November 2015, as described in *Volume I, Chapter 4*.

B2.2 DESKTOP ANALYSIS

Desk top analyses were undertaken using the following publicly available electronic sources:

- Turkish Statistical Institute viewed online (www.turkstat.gov.tr);
- City Population website for additional population figures (www.citypopulation.de/php/turkey-gaziantepcity.php);
- OECD Country Report for Turkey;
- National Census for Turkey (2011);
- ECA Sustainable Cities report: Improving Energy Efficiency in Gaziantep, Turkey (2011) (viewed online: http://siteresources.worldbank.org/ECAEXT/Resources/258598-1284061150155/7383639-1321554584327/8272794-1322686395943/m02_01.pdf);
- Infrastructure Industry (2013), Republic of Turkey Prime Ministry Investment Support and Promotion Agency (viewed online http://www.invest.gov.tr/en-US/infocenter/publications/Documents/INFRASTRUCTURE.INDUSTRY.pdf); and

- Various news websites including BBC and Reuters.

Quantitative data specific to Gaziantep Province was not available for all parameters. In some cases, data was only available for Southeastern Anatolia Region and for the sub-region containing Gaziantep, Adiyaman and Kilis Provinces. These political divisions are described further in *Section B3.1*.

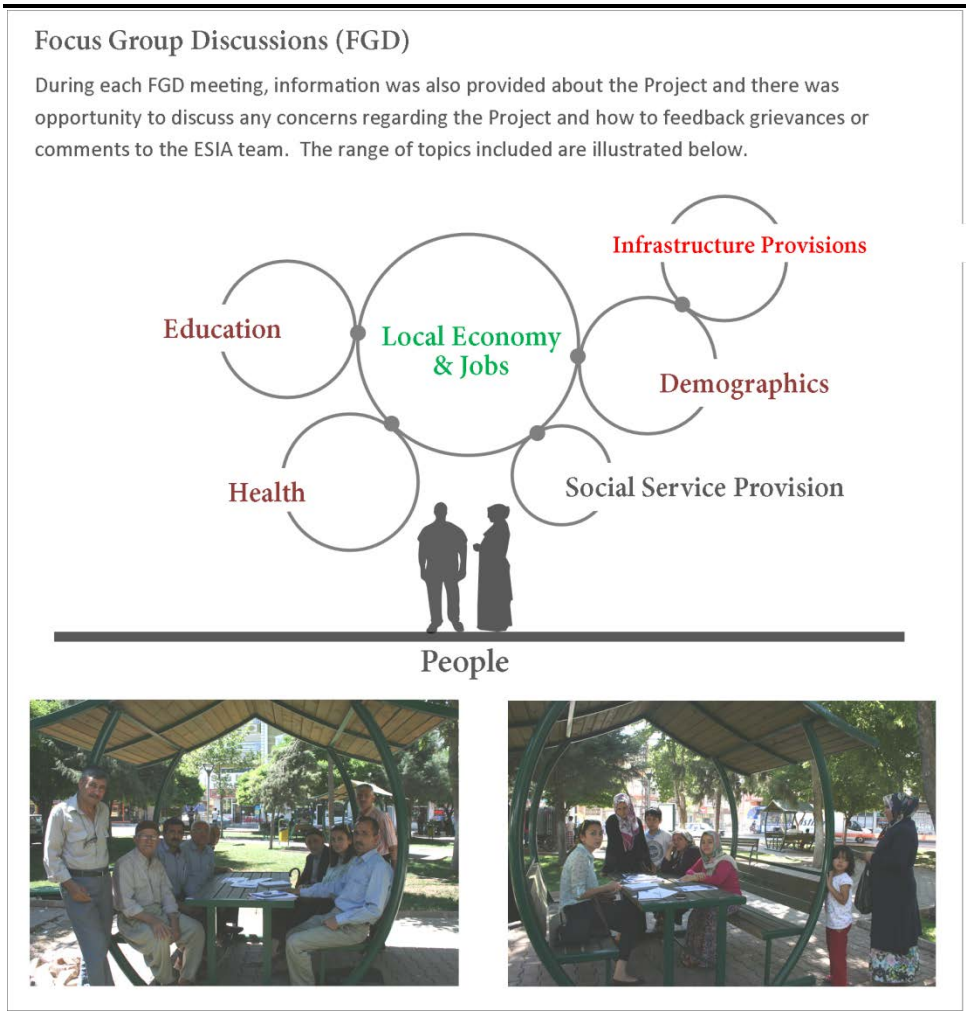
B2.3 FOCUS GROUP DISCUSSIONS

Focus group discussions were arranged with separate groups of men and women using a semi-structured interview approach to explore a range of topics including:

- demographics;
- livelihoods and land tenure;
- local economy;
- governance and administrative structures;
- education and healthcare services; and
- local services, utilities and infrastructure.

Separate focus group discussions were organised with Syrian refugees to understand access to healthcare, livelihoods and employment issues. Focus group discussions are illustrated in *Figure B2.1.*

Figure B2.1 Focus Group Discussions



B2.4 KEY INFORMANT INTERVIEWS

Meetings were held with a number of officials from Şahinbey District Municipality as well as two local schools, NGOs (from the health sector and others) and local businesses to understand the social context and any challenges associated with the Project. These meetings also informed the social study team of the broader expectations of the Project by local stakeholders and interested parties.

B2.5 OBSERVATION

The social study team used community observation and *ad hoc* conversations to support baseline findings and provide additional data and context to the data obtained through focus group discussions and key informant interviews.

B2.6 IMPACT ASSESSMENT METHODOLOGY

B2.6.1 Prediction Methods

The social impact assessment follows the methodology described in *Volume I, Chapter 5, ESIA Methodology*. The magnitude and vulnerability designations used for the social impact assessment are described below. Vulnerability is considered in the context of livelihoods and livelihood assets (such as health, education or physical assets). Vulnerability also considers access to the structures and processes important for protecting or improving livelihoods. The social baseline considers the levels of vulnerability that may emerge as a result of demographic characteristics, livelihoods and available governance and infrastructure.

Table B2.1 Magnitude Designations

Value	Definitions
Large	Change dominates over baseline conditions. Affects the majority of the area or population in the Area of Influence and/or persists over many years. The impact may be experienced over a regional or national area.
Medium	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of medium duration. Frequency may be occasional and impact may be regional in scale.
Small	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of households and / or is of a short duration.
Negligible	Change remains within the range commonly experienced within the household or community.
Positive	In the case of positive impacts, it is generally recommended that no magnitude be assigned unless there is ample data to support a more robust characterisation.

Table B2.2 Vulnerability Designations

Value	Definitions
High	Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the Project and opportunities associated with it.
Medium	Some, but few areas of vulnerability; still retaining an ability to at least in part adapt to change brought by the Project and opportunities associated with it.
Low	Minimal vulnerability; consequently, with a high ability to adapt to changes brought by the Project and opportunities associated with it.

B2.6.2 Significance Criteria

The significance criteria used in the assessment is outlined in *Figure 2.2* (*Volume I, Chapter 5: ESIA* Methodology) and the significance definitions used for the social impact assessment are outlined in *Table B2.3*.

Table B2.3 Social Impact Significance Definitions

Significance	Description
Negligible	Inconvenience, irritation or annoyance caused, but with no consequences to livelihoods, health, culture or quality of life.

Significance	Description
Minor	Impacts are short term and temporary and do not result in long term reductions in livelihoods, quality of life or community health. However, impacts may lead to greater inequalities in the study area.
Moderate	Adverse impacts that notably affect livelihood or quality of life at household and community level. Impacts can mainly be reversed but some households may suffer long-term effects. There may be high risk of diseases or injuries but community health impacts are reversible.
Major	Diverse primary and secondary impacts that will be impossible to reverse or compensate for, possibly leading to long-term impoverishment or social breakdown or loss of life, severe injuries or chronic illness requiring hospitalisation. Exposure to and incidence of diseases not commonly seen in the area previously and likely to have long-term consequences for community health.
Positive	Positive effects will benefit communities including vulnerable groups through higher skills, income generation and other social benefits.

B2.7 LIMITATIONS AND ASSUMPTIONS

The limitations to the social study relate to the difficulty in reaching key stakeholders in urban neighbourhoods. It was not possible to engage with former employees of the pre-existing concrete batch plant on the Project site (managed by the local Municipality) to verify the outcomes of the redundancy process.

Focus group discussions were helpful in providing context for socio-economic conditions however given the size of surrounding neighbourhood populations, these represented the opinions and thoughts of a small proportion of the population. Assumptions have been made that the data gathered from focus group discussions is reflective of local residents.

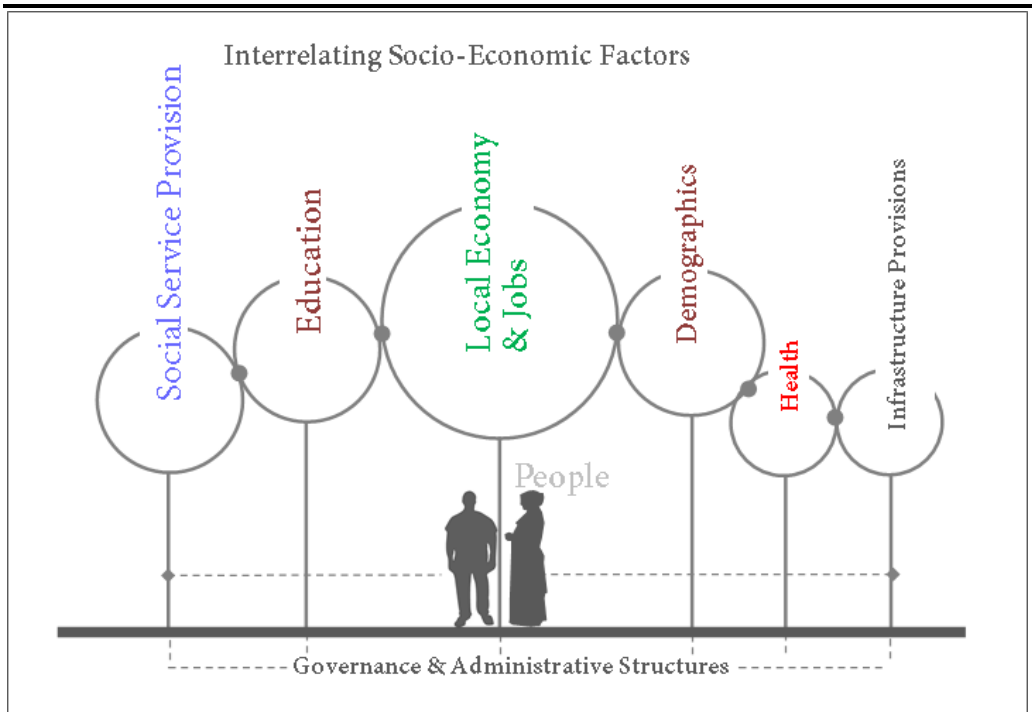
Despite these limitations, it is believed that sufficient, credible social data, backed up by statistics from the Turkish Statistical Institute, was gathered on which to base the social impact assessment.

B3 BASELINE

This baseline presents an overview of the current socio-economic conditions in the study area prior to development of the Project. It describes the Project affected people and their existing socio-economic and cultural context.

The aim of the social baseline is to provide: a) an understanding of interrelating socio-economic factors and issues that are likely to interact with the Project; and b) define which receptors may be sensitive to changes, either negative or positive, brought about by the Project. The key socio-economic factors are illustrated in the *Figure B3.1* and described further in this report.

Figure B3.1 Interrelating Socio-economic Factors



The baseline is structured into three sections including:

- *Project Affected People (Section B3.1):* this section describes who may be affected by the Project. It provides an overview of affected neighbourhoods, the local population, education attainment, community health and vulnerability.

- *Study Area Economy and Livelihoods (Section B3.2):* this section describes the livelihoods and economic activity of Project Affected People and associated vulnerabilities.

- *Study Area Governance and Infrastructure (Section B3.3):* this section describes how people are organised in the Project area, local infrastructure

and service provision. It also describes vulnerabilities associated with governance and service provision.

B3.1 PROJECT AFFECTED PEOPLE

B3.1.1 *Overview: Project Affected Neighbourhoods*

The Project is situated in Şahinbey District, one of nine districts in Gaziantep Province, on the southern margins of Gaziantep City in southeast Turkey. Gaziantep Province is part of Turkish geographic region called Southeastern Anatolia Region, which also includes 11 other provinces. Gaziantep Province also falls within the sub-region including Gaziantep, Adiyaman and Kilis Provinces.

The Project site is surrounded by several urban neighbourhoods including Akkent, Karataş, Guneş, 75 Yil, Dumlupınar, Kahvelipına, and Mavikent. Bağlarbaşi village, south of the Project site is a rural neighbourhood.

Surrounding neighborhoods have varying characteristics. Akkent and Karataş are relatively new urban developments of apartment blocks and amenities including shops and parks and a largely middle class demographic with a considerable retirement-age population. Other neighbourhoods are older and more established with a largely working class demographic and a broader age range. Kahvelipinar is an industrial centre for cloth and processing of nuts. Bağlarbaşi is a small village. All neighbourhoods have a significant Syrian refugee population.

Figure B3.2 Project Affected People

Project Affected People

Population : Gaziantep Province 1,889,466

Gaziantep City	1,556,381
Şahinbey District	845,528
Şehitkamil District	710,853

Gender Ratio:

Life Expectancy: 76.7 years

Average Household size

4.4 People/ Household

50% of households in Gaziantep have 5+

Religion

100%

Sunni 95%

Alevi 5%

Muslims

Ethnicity

Turkish (dominant)

Kurdish 10%

Syrian (increasing)

Education Attainment

Education Attainment	Gaziantep Province (%)	South Eastern Anatolia Region (%)	Turkey (%)
Primary Education Graduate (Total)	26.1	23.6	18.2
Primary Education Graduate (Male)	30.6	27.8	20.7
Primary Education Graduate (Female)	21.7	19.3	15.7
Junior High School Level Graduate (Total)	8.4	8.0	8.5
Junior High School Graduate Level (Male)	10.2	9.9	10.0
Junior High School Level Graduate (Female)	6.6	6.2	7.1
High School Level Graduate (Total)	16.7	15.8	21.9
High School Level Graduate (Male)	19.8	20.1	25.4
High School Level Graduate (Female)	13.6	11.3	18.5
Higher Eduation Graduate (Total)	9.0	8.6	12.6
Higher Education Graduate (Male)	10.4	10.6	14.5
Higher Education Graduate (Female)	7.6	6.5	11.5

Source: Turkish Statistical Institute (2014): www.turkstat.gov.tr

Illiteracy

Health Most Common Diseases

Health issues raised by focus groups: heart disease, hypertension, cholesterol (due to poor diet), diabetes, migraines, arthritis and eye infections.

Also official statistics show that leading causes of death in Gaziantep Province are circulatory system (34.9 %) and cancer (14.8 %). Other leading causes of death in Gaziantep Province include respiratory illnesses and nutrition-related illnesses.

B3.1.2 *Population* (1)

Gaziantep City, where the Project is located, is the capital of Gaziantep Province that shares a border with Şanliurfa, Adiyaman, Kılıs, Osmanıye and Kahramanmaraş Provinces, as well as an international border with Syria. Gaziantep is considered to be among the oldest continually inhabited cities of the world (2). Official population figures for the study area are summarised in *Figure B3.2*. In 2014, the population of Gaziantep Province was estimated to be 1,889,466 and by 2020, the population is expected to reach 2,130,000. The net rate of migration in 2014 was estimated to be 1.1 percent, with the in-migration of 46,348 people closely matching the out-migration figure of 44,415. These figures do not consider the in-migration of Syrian refugees in the past two years, which was estimated to be approximately 350,000 in Gaziantep Province (3). The Muhtar of Guneş indicated that his neighbourhood was populated by people from Kilis, Gaziantep, Sirnak and Hakkari Provinces, as well as Syrians.

The average household size is 4.4 people, according to Turkstat (2014), however anecdotal evidence suggests that in some neighbourhoods it may be higher. For example, the Muhtar for Dumlupınar indicated that the average household size in the neighbourhood is quite high with up to 15 people in some households; he also stated it may be even higher in Syrian households.

The population of Gaziantep City was estimated to be 1,556,381 in 2014 (4). The city has two main District Municipalities. Şahinbey District, where the Project is located, covers the southern part of Gaziantep City and has an estimated population of 845,528 while Şehitkamil District covers the northern part of the city and has an estimated population of 710,853. Şahinbey District is the most densely populated in Gaziantep Province with 766 people/km^2. Şehitkamil District has a population density of 545 people/km^2. The city also has a third District, Oğuzeli, which is smaller and with an urban population of approximately 17,800 (5).

The gender ratio in Gaziantep Province of 50.3 % males and 49.7 % females is reflective of Turkey's national population gender ratio of 50.2 % male and 49.8% female. Official statistics for religion and ethnicity were not available, however, focus group discussions indicate that the most common ethnic groups in the study area are Turkish, Kurdish, Alevi (6) and Syrians. The Muhtar of Karataş estimated that the neighbourhood population consisted of approximately 10% Alevi and 5% Kurds. Up to 25 % of the population of Dumlupınar neighbourhood is Alevi or Kurdish according to the Muhtar.

(1) Figures in this section obtained from the Turkish Statistical Institute: www.turkstat.gov.tr (2014) unless otherwise stated.
(2) http://www.bbc.co.uk/news/world-radio-and-tv-19991127 (2012)
(3) Estimate provided by the Association for Solidarity with Asylum Seekers and Migrants during social baseline data collection in July 2015
(4) Figure obtained from http://www.citypopulation.de/php/turkey-gaziantepcity.php (data viewed August, 2015)
(5) http://www.citypopulation.de/php/turkey-gaziantep.php
(6) The Alevi are a religious, sub-ethnic and cultural community in Turkey. They constitute the largest religious minority in Turkey. Alevism is considered one of the many sects of Islam, but the Alevi differ considerably from the Sunni Muslim majority in their practice and interpretation of Islam, UNHCR (http://www.refworld.org/docid/49749c9950.html)

Dumlupınar is particularly known as an 'Alevi neighbourhood'. The predominant religion is Islam and in particular, Sunni (the dominant religion of Turkish, Kurdish and Syrian populations) while Alevi is a minority religion.

The Syrian population has grown in the past two years due to the civil war in Syria. It is estimated that approximately 350,000 Syrian refugees are now living in Gaziantep. Only 34,000 refugees are housed in the five official refugee camps outside the city. The remainder are living within the city, largely in rented accommodation. The official figures are not known because many refugees remain unregistered. However, it is estimated that approximately 200,000 refugees are living in rented accommodation in Şahinbey District (1). The Muhtars of the neighbourhoods in the study area estimated that there were approximately 1,500 Syrians living in Kahvelipinar, approximately 8,000 (of which 5,800 are registered) in Dumlupınar and approximately 7,500 (of which only 2,500 are registered) living in Günes. The figures for the other neighbourhoods in the study area are not known.

During the scoping phase of the assessment, five refugees were found to be living on the Project site sorting recyclable waste. These refugees had moved by the time baseline studies were undertaken in July 2015. It is understood that one refugee has moved to a nearby city, another moved into a refugee camp, while the location of the other three was not known. A separate report on the status of these refugees was developed for the Project (2). This report included analysis and specific measures to ensure that the Project was aligned with good international industry practice (GIIP) in its dealings with this group of refugees, but since they left the site (with no means of contacting them) the SPV has not been able to implement any of the recommended measures.

(1) Anecdotal figure provided by the Mayor of of Şahinbey District Municipality.
(2) Gaziantep IHC Refugee Report, October (2015)

Figure B3.3 Photos of the Neighbourhoods

75 Yil

Kahvelipır

Akkent

Guneş

B3.1.3 Educational Attainment

Educational attainment has improved in Turkey over the past 15 years, evident through rising literacy levels. In 2000, 12.6% of the Turkish population were registered as illiterate. Illiteracy amongst women was significantly higher (19.3%) than amongst men (6%). Illiteracy rates in Gaziantep Province were higher than the national average (7.4% for men and 25% for women in 2000). By 2014, illiteracy levels in Gaziantep Province had reduced to 7.6% for women and 1.1% for men. Although illiteracy levels in Gaziantep Province are still higher than the national average, they are lower than the South eastern Anatolia Regional average of 13.4% for women and 2.7% for men [(1)].

School graduation rates have also been improving, although women still lag behind men in terms of educational attainment. School graduation rates in Gaziantep Province are below national average, however they are higher than regional averages. The proportion of the population graduating with primary, secondary or higher education levels in 2014 is presented in *Figure B3.2*. In Gaziantep Province, only 21.2% of women are graduating with high school / high school equivalent or higher education qualifications compared with 30.2% of men.

Participants of focus group discussions believed that construction workers and other skilled workers migrating into local neighbourhoods were

(1) Turkish Statistical Institute www.turkstat.gov.tr (2014)

impacting on skills and education in a positive way, by bringing new skills and increasing competition, and motivating young people to obtain qualifications. They believed that women and girls had also benefited from the change with more girls going to school. The Gaziantep Branch of the Association for Women also stated that education among women was improving, particularly literacy rates [1]. This Association provides scholarships for women from the poorest households to attend tertiary education. The list of poorest households is obtained from the District Municipalities and recipients are provided with 100 TRY per month to support their studies.

B3.1.4 Community Health Status

Life expectancy in Turkey is 78 years, two years lower than the OECD average [2]. Life expectancy for males is 75.3 years and 80.7 years for females. Life expectancy in Gaziantep Province is slightly lower than the Turkish average at 76.7 years; life expectancy for males is 73.9 years and 79.4 years for females [3].

The main health problems in the study area as cited by focus group participants are heart disease, hypertension, cholesterol (due to poor diet), diabetes, migraines, arthritis and eye infections. Women also suffer from gynaecological problems and infections, which were attributed to poor sanitation. Focus group participants in the working class neighbourhoods such as 75 Yil reported that prices for basic commodities have increased in the last three to four years and therefore the ability to purchase adequate food is becoming more challenging. They believe this has led to a greater prevalence of health conditions associated with poor nutrition.

According to official figures [4], the most common causes of death in Gaziantep Province are problems associated with the circulatory system (34.9 %) and cancer (14.8 %). However, both leading causes of death are lower than the national averages of 40.4 % and 20.7 % respectively. Other leading causes of death in Gaziantep Province include respiratory and nutrition-related illnesses.

In Dumlupınar, focus group participants perceived that drug abuse (i.e. marijuana) amongst male and female youth was increasing. They attributed this to the lack of employment opportunities and recreational facilities.

Sexual health and family planning services are available at health facilities in Gaziantep and through local General Practitioner surgeries (see *Section B3.3* for details on health facilities). However, women in focus groups reported that advice given by doctors is limited and accordingly, they tend to learn about family planning and sexual health issues from their friends.

(1) Meeting held with the Gaziantep Branch of the Association for Women in July 2015
(2) http://www.oecdbetterlifeindex.org/countries/turkey/
(3) Turkish Statistical Institute: www.turkstat.gov.tr (2014)
(4) Turkish Statistical Institute: www.turkstat.gov.tr (2014)

Contraception is available including the contraceptive pill, condoms and injections. According to women in 75 Yil, men prefer not to use contraception and as a result, they believe women are being infected with a range of STDs. Sex workers are known to operate in the Dumlupınar area.

The physically disabled were cited as some of the most vulnerable members of the community. Wheelchair users tend to need more support and are often cared for by families. However, Muhtars reported that the municipality provides electric wheelchairs to those who require them and care staff may also be assigned to help care for those with disabilities.

B3.1.5 Vulnerability Associated with Demographics

In 2011, there were 115,537 people in Gaziantep living with at least one disability. Registered disabilities for Gaziantep Province are summarised in *Table B3.1*.

Table B3.1 Registered Disabilities in Gaziantep Province

Disability	Proportion with Disability (%)
Difficulty in seeing	1.6
Difficulty in hearing	1.1
Speech difficulties	0.9
Difficulty in walking or climbing stairs	3.7
Difficulty in holding or lifting	4.5
Learning difficulties	1.8

Source: Turkish Statistical Institute (2011), www.turkstat.gov.tr

In addition to those with disabilities, vulnerable groups include the elderly and women headed households. Karatas and Akkent neighbourhoods have a large retired population and those living in Akkent are in close proximity to the Project site.

B3.2 STUDY AREA ECONOMY AND LIVELIHOODS

Study area and Gaziantep Province economy and livelihoods are summarised in *Figure B3.4* below.

Figure B3.4 Study Area Economy and Livelihoods

Economy & Livelihoods

The main investment sectors include transportation/communication, manufacturing, education, agriculture and energy.

Sub Region Sector Statistics

Turkish Statistical Institute (2014)

Service **57%** of regional gross value

Industry **32%**

Agriculture **10.5%**

Agriculture Production
Contribution to National Production

1%

Livestock Crop Production Animal Products

Key Registered Businesses

Manufacturing
12,170 registered businesses

Wholesale & Retail
Repair of motor vehicles
30,402 registered businesses

Transport
9.9998 registered businesses

Unemployment rates are lower in Gaziantep than national levels. Largest group is 15-24 years

Demographic Group	Gaziantep, Adiyaman and Kilis Sub-Region (%)	Turkey (%)
Total Unemployment	8	9.9
Total Male	8.1	9
Total Female	7.9	11.9
Total (15 – 24 years)	16	17.9
15 – 24 years Male	16.5	16.6
15 – 24 years Female	14.5	20.4
25 years old and over (Total)	5.9	8.3
25 years old and over (Male)	6	7.6
25 years old and over (Female)	5.8	10

Source: Turkish Statistical Institute (2014), www.turkstat.gov.tr

Household Income The average monthly household income for South Eastern Anatolia Region in 2012 was 1,501 TRY (USD 516), which is lower than the national average of 2,245 TRY (USD 770) .

B3.2.1 Local Economy

Gaziantep Province is located at the crossroads of the South Eastern and Mediterranean Regions of Turkey, making it ideally situated to become a significant industrial and commercial centre. The main investment sectors include transportation/communication, manufacturing, education, agriculture and energy.

Figures on industry in 2011 were available for the Turkish sub-region containing Gaziantep, Adiyaman and Kilis Provinces (a sub-region of Southwest Anatolia Region). In the sub-region, the service sector was the most important income earner accounting for 57.5% of regional gross value, industry was the next largest income earner accounting for 32% of gross regional value while agriculture accounted for 10.5% (1). Unlike Turkey as a whole, Gaziantep Province is a net exporter, with exports per capita of USD 3,532 compared with per capita imports of USD 3,041 (2).

The value of agriculture to Gaziantep Province is illustrated in *Table B3.2*. The province only contributes around 1% of agriculture production to the national total. Straw, starch and cereals are the main crops; Gaziantep is also an important region for pistachio production.

Table B3.2 Value of Agriculture Production

Agriculture Type	Contribution to Regional Production (%)	Contribution to National Production (%)	Per Capita Value (TRY)
Value of Crop Production	10.7	1.2	616
Value of Livestock	13.2	1.2	424
Value of Animal Products	16.7	0.8	188

Source: Turkish Statistical Institute (2014), www.turkstat.gov.tr

According to 2014 data, there were 73,979 registered businesses in Gaziantep Province, representing 2.1 % of the total in Turkey. The dominant sector was wholesale and retail trade, repair of motor vehicles and motorcycles with 30,402 registered businesses. Other important sectors included manufacturing (12,170 registered businesses) and transport (9,998 registered businesses). However, in terms of national importance, the most dominant industries are water supply and waste management services (representing 3.4 % of the national total) and manufacturing (2.8 % of the national total).

The largest industry in terms of employment is manufacturing, which employed 115,237 people in the Gaziantep, Adaiyama, Kilis sub-region in 2012. Important manufacturing industries include textile production, carpets, rugs and other textile products. Other important industries for employment are the wholesale and retail trade and repair of vehicles and motorcycles (85,609 people); the construction industry (24,569 people); transport and storage industry (23,369 people); and administrative and support services industry (15,259 people). The human health and social work activities sector employed 6,659 people.

Unemployment rates are lower in Gaziantep than national levels. Unemployment figures (2014) for the Gaziantep, Adiyaman and Kilis sub-region and Turkey are presented in *Figure B3.4*.

(1) Turksih Statistical Institute (2011 National Census), www.turkstat.gov.tr
(2) Turkish Statistical Institute (2013), www.turkstat.gov.tr

B3.2.2 *Household Income and Expenditure*

The average monthly household income for South Eastern Anatolia Region in 2012 was 1,501 TRY (USD 516), which is lower than the national average of 2,245 TRY (USD 770) [(1)]. Although official figures for Gaziantep Province were not available, focus group participants stated that average household salaries in Dumlupınar and 75 Yil were approximately 1,100 TRY, while women working from home in the textile industry can expect to earn between, 100 – 500 TRY per month. Women believed that men are favoured for jobs and are more likely to earn a higher monthly salary. Men explained that someone is considered poor if there is only one person in the household earning around 1,000 TRY. Rents in the area cost between 400 – 500 TRY per month, for a home for six people, therefore accounting for half of a low-earning monthly salary. Water can cost up to 100 TRY per month and electricity 80 TRY per month for a house of four to five people.

In contrast, focus group participants in Akkent stated that the average monthly salary in the neighbourhood was around 2,000 TRY and even higher for professionals such as teachers, who can expect to earn 3,000 TRY per month. Access to finance (e.g. bank loans), is normally only available to those earning a regular salary.

In the sub-region of Gaziantep, Adiyaman and Kilis, 7.1 % of households were earning less than 50 % of median income in 2014 and so were considered to be below the poverty line. This is less than half the national average of 15 % below the poverty line [(2)]. Households with low income receive support from the Government and the Muhtar is involved in vetting and selecting these households, working closely with the Municipality Social Welfare team. Households including persons with disabilities also receive support which can be in kind (such as coal for heating and cooking and food packages) as well as through welfare payments. The Muhtar of Guneş stated that he had a list of 1,000 recipients of in kind benefits.

Focus group participants explained that unemployed men are entitled to benefits set at a maximum of 80% of the minimum wage depending on whether you have worked for the past three years and have paid taxes. Women who are divorced or widowed with children will only receive benefits if their father or siblings are not able to support them. People of retirement age are entitled to a state pension, however, the level of support depends on the earnings of any children.

The rate of inflation in the Gaziantep, Adiyaman and Kilis sub-region in 2014 was 9.12 %, higher than the national average of 8.85 %. Inflation in each sector is illustrated in *Table B3.3*.

(1) Turkish Statistical Institute (2014), www.turkstat.gov.tr
(2) Turkish Statistical Institute (2014)

Table B3.3 Rate of Inflation (2014)

Item	Gaziantep, Adiyaman and Kilis sub-region (%)	Turkey (%)
Food and non-alcoholic beverages	10.8	12.6
Alcoholic beverages and tobacco	3.9	4.1
Clothing and footwear	9.1	8.0
Housing, water, electricity, gas and other fuels	7.1	5.7
Furnishings, household equipment, routine home maintenance	8.4	8.3
Health	8.6	5.0
Transport	11.2	9.8
Communication	0.95	1.0
Recreation and culture	10.0	7.3
Education	11.9	9.0
Hotels, cafes and restaurants	11.2	13.3
Miscellaneous goods and services	7.2	7.2

Source: Turkish Statistical Institute (2014), www.turkstat.gov.tr

B3.2.3 Culture and Tourism

As one of the oldest continuously inhabited cities in the world, there are many cultural attractions that bring visitors from around Turkey and from abroad [(1)]. A relatively low proportion of tourists staying in Tourism Operation Licensed accommodation in Gaziantep are from outside Turkey (27%), compared with the national average (58%) and Istanbul average (72%). In 2014, Gaziantep had 38 cinemas, 7 theatres and 13 libraries [(2)]. The Gaziantep Zeugma Mosaic Museum is popular and of international importance and there are 11 other museums in the Province as well as the historic castle and old city quarters within Gaziantep City. Historic sites and villages along the Euphrates (including Halfeti) can be reached for a day trip from the city centre.

B3.2.4 Vulnerability Associated with the Economy and Livelihoods

Gaziantep City is an industrial centre with relatively low unemployment levels. Anecdotal evidence suggests that the majority of migrants into the city, including Syrian refugees obtain jobs. However, focus group discussions with Syrian refugees highlighted that many work informally and that children as young as nine are also working informally on the streets begging and earning up to 50 TKL per week. To obtain formal papers, Syrian refugees need to obtain an identity card, provide a passport and residence permit while employers must pay social security and health cover. To obtain the identity card and residence permit, they need a job offer. However, not all employers are willing to go through the many steps to ensure refugees obtain formal residency status. As a result, Syrian men reported that they worked for factories and in construction illegally for below the minimum wage (anecdotal

(1) Note that the effects of the war in Syria on tourism in Gaziantep has not been considered in this report
(2) Turkish Statistical Institute (2014), www.turkstat.gov.tr

figures quoted were between 30 – 50 TKL per day). Some reported that they were not paid regularly but had no recourse for action due to their illegal status. As such, Syrian refugees are considered a particularly vulnerable group with respect to employment and are exposed to risks of exploitation.

B3.3 STUDY AREA GOVERNANCE AND INFRASTRUCTURE

B3.3.1 Overview

An overview of the study area governance and infrastructure is provided in *Figure B3.5* below.

Figure B3.5 Study Area Governance and Infrastructure

Governance & Infrastructure

Since the 1970s, Gaziantep has experienced rapid population growth from around 120,000 people to 1.35 million in 2010. Now the city is spread over three distinct district municipalities.

Health

10 State Hospitals
1 University
14 Private Hospitals

Estimated that there is a shortage of between 1,200 and 1,800 beds in the province.

There are also 482 family health centres and 33 emergency stations in Gaziantep. The total number of beds in Gaziantep is 4,450 (2,109 beds in the State hospitals, 792 beds in the university hospital and 1,549 in private hospitals). Occupancy rates in State hospitals, university hospitals and private hospitals are 90%, 96% and 60%, respectively.

School

548 Primary
321 Secondary
86 High
90 Vocational & Technical secondary Facilities

School Facilities in Study Area

Neighbourhood	Nursery	Primary (level 1)	Secondary (level 2)	Joint Primary and Secondary	High School (level 3)
Akkent	1		5	2	2 (3)
Guneş		1	1	1	1 (4)
Kahvelipinar (5)			1		1
Karatas					1
Dumlupinar	1			3	2
Bağlarbaşi				1	

Source: Interviews with Muhtars

Power

The bulk of the electricity is used by local industrial facilities (60%), followed by residential users (19%), and the commercial (10%) sector.

Water

Gaziantep is a city of scarce water resources and it has the highest energy costs to treat potable water of any city, more than three times as high as Tokyo or Sydney.

Sanitation

The waste water system, established in 1999 and managed by GASKI runs extremely efficiently and benefits from a series of innovations which reduce energy costs to zero. However, it only serves one million people and another treatment plant is under development, which in conjunction with an existing biological treatment plant, will cover the total population of Gaziantep Province .

Transport

Gaziantep has 98 cars per 1,000 people, lower than the national average of 127. Other modes of transport in Gaziantep Metropolitan Municipality include buses and the light railway line that connects Burc Kavsagi neighbourhood to the city centre. A second line runs to Akkent, close to the Project Site.

Infrastructure:

Significant challenges due to rapid increase in urbanisation

B3.4 STUDY AREA GOVERNANCE

Figure B3.5 illustrates Gaziantep Province and individual district municipalities. As described in *Section B3.1* Gaziantep city is spread over three distinct district municipalities:

- Şahinbey with a population of 845,528;
- Şehitkamil (710,853); and
- Oğuzeli (17,800).

Each district municipality has its own leadership, but the city as a whole is governed by the Metropolitan Municipality of Gaziantep (Gaziantep Büyükşehir Belediyesi). According to Turkish administration law, all large urban areas (with the exception of Istanbul) have to establish metropolitan municipalities responsible for an area 20 km in diameter around the centre of the urban area. District municipalities are responsible for all municipal services that are not specifically allocated to metropolitan municipalities, but they also share some functions (1).

Of the ten largest urban areas in Turkey, Gaziantep was the fastest growing between 1990 and 2010, with a compound annual growth rate of 4.25%. Most of this growth happened in a haphazard, un-planned manner, as the last Plan drafted to guide city growth was developed in 1974, when the city population was about a tenth of the size it is today. Zonal plans were the only tools local authorities used to control the explosive city growth. A new city plan is being prepared to guide city development through 2030 (2), when the population is expected to reach three million people. Şahinbey District, where the Project is located, is covered by this master planning process.

Fast city growth has tremendous pressure on land, housing and public services infrastructure. It has also created energy efficiency shortfalls as new developments are largely un-coordinated (3).

The Municipality is the key administrative and decision making authority however Muhtars explained that they are consulted on a regular basis to discuss development issues and priorities. Muhtars are the elected heads of villages or urban neighbourhoods. They are elected every five years but are not affiliated with any political party. They are elected as individuals are responsible for sharing information with residents in the neighbourhood or village. Muhtars are also responsible for registering residents and feedback issues relating to primary education, health and security to district Municipalities. The District governorship meet with the Muhtars every 2-3 months, and this forum was used to inform Muhtars about the Project. Muhtars in the study area explained that people will come to them to raise issues and concerns such as those relating to sewage problems, electricity provision or pests. The Muhtar will take the issue up with either the District or Metropolitan Municipality, as appropriate.

Local organisation below the Muhtar is limited. In the newer apartment residences in Akkent and Karatas, some buildings have residents' groups and meeting rooms that residents will use to come together to discuss issues relating to the building. Local parks and gardens are important meeting places for residents who can gather informally to socialise and discuss

(1) District municipalities are usually responsible for garbage collection and maintenance of parks, while metropolitan municipalities handle street cleaning. The metropolitan municipality prepares masterplans for the area, while district municipalities can feed into these masterplans.
(2) http://siteresources.worldbank.org/ECAEXT/Resources/258598-1284061150155/7383639-1321554584327/8272794-1322686395943/m02_01.pdf
(3) http://siteresources.worldbank.org/ECAEXT/Resources/258598-1284061150155/7383639-1321554584327/8272794-1322686395943/m02_01.pdf

problems; mosques serve a similar function. Generally, there are no formal organisations representing neighbourhood interests at a local level.

B3.4.1 School Facilities

School provision is summarised in *Figure B3.5* based on data provided by Turkstat (2014) along with the approximate number of schools in the study area. School provision was considered to be strong and the Muhtar of Dumlupınar stated that the neighbourhood was known for its good high schools, attracting people to the neighbourhood.

High schools cover the final four years of secondary education and those with the best reputations attract students from all over Gaziantep and beyond. New high schools are emerging in the newer neighbourhoods of Karatas and Akkent, including Glulşen Batar Anatolian High School, Bağlarbaşı Anatolian High School in addition to the newly built Türkiye Odalar Ve Borsalar Birliği (TOBB) High School.

The Project is located directly adjacent to the TOBB High School, which is a newly constructed technical science school that opened in September 2015. During the baseline studies in July 2015, the School was sharing premises with Bağlarbaşı Anatolian High School. The School was visited again in November 2015 and was fully operational in its new premises adjacent to the Project site. The school has commenced with 300 students, 40 – 50 teachers and 15 administrative staff. In 2016, the school will expand to 600 students and a dormitory will open for 200 boarders in Spring 2016. Around 50% of students are expected to come from around Gaziantep Province and the remainder from other parts of Turkey.

Under the current Şahinbey District masterplan, two additional schools will be constructed close to the Project. A second High School with a capacity of between 1,000 to 1,200 students will be built in the neighbourhood while a primary school will be built on the same site as TOBB High School.

B3.4.2 Health Provision

Gaziantep Province health provision is summarised in *Figure B3.5*. State hospitals include two oral and dental centres and nine community health centres that are affiliated with the Ministry of Health. Two of the State hospitals, the university hospital and one oral and dental centre are located in Şahinbey District. The Gaziantep Provincial Directorate of Health explained that State hospitals are mainly being used by Syrian refugees with the majority of the rest of the population using private hospitals, due to the limited capacity in State hospitals and the increase in use by Syrian refugees.

The Provincial Directorate of Health estimated that there is a shortage of between 1,200 and 1,800 beds in the province [(1)] with hospitals running close

(1) Data obtained from the Gaziantep Provincial Directorate of Health, April 2015

to full capacity. In 2013, the total number of beds per 100,000 people was 241, lower than the national average of 264 beds but higher than the regional average of 202 beds [(1)].

The majority of focus group discussion participants expressed dissatisfaction with existing healthcare services and women particularly stated that they were often too frightened of doctors to make any complaints. The main causes of dissatisfaction include:

- limited consultation / doctor: patient time;
- limited explanations given for medications prescribed;
- overcrowding (which many attributed to the presence of Syrian refugees); and
- disrespectful / unpleasant medical and support staff.

Syrian refugees also expressed dissatisfaction with healthcare provision and the disrespectful / unpleasant behaviour of medical and support staff. Their biggest concern was translation and translators in hospitals ask for around 50 TKL for their services. These are not official translators; the official translators provided in hospitals as a free service are reportedly hard to find or identify and so refugees therefore often need to use the unofficial translators.

Refugees cannot use health services unless they have been registered and not all Muhtars are willing to help refugees; they do, however, have access to emergency care. Both men and women refugee focus groups stated that they go directly to hospitals rather than local health centres because they struggle to get appointments and language is a barrier. Therefore, Syrian refugees will use a hospital as their first option for healthcare when many of their health concerns could be addressed by local health centres if access was made easier.

Refugees also state that they struggle to access free medication. This is a recent problem, since a change of law in October 2015 means that pharmacies now have to be reimbursed by the Turkish Social Security Department (SGK) for the provision of free medicine to refugees rather than directly from the Disaster and Emergency Management Authority (AFAD). AFAD had a reputation for reimbursing pharmacies quickly however pharmacies are worried about the length of time it will take to be reimbursed by SGK and many are not willing to provide free medicines, even though refugees have the right to receive them.

Within the study area, a preference for private health facilities was expressed over government establishments as the level of service was perceived to be better. However, the Trade Union for Employees of Health and Social Service (Gaziantep Branch) stated that private healthcare membership is low and only amounts to approximately ten percent of the Gaziantep population. The Union estimated that the number of people per physician was approximately 3,500. Actual figures for 2013 are presented in *Table B3.4*, illustrating that the

(1) Turkish Statistical Institute (2013), www.turkstat.gov.tr

number per physician is higher than the national average, but there are fewer than estimated by the Union.

Table B3.4 Number of People per Member of Medical Staff

Type of Medical Staff	Gaziantep Province	Turkey
Specialist Physicians	1,320	1,038
Practitioner Physicians	2,108	1,988
Medical Residents	5,409	3,597
General Physicians	706	573
Dentists	6,338	3,439
Pharmacists	3,533	2,838
Health Officers	770	570
Nurses	645	549
Midwives	2,005	1,435

Source: Turkish Statistical Institute, 2013, www.turkstat.gov.tr

B3.4.3 Transport

Rapidly increasing urbanization and even faster growth of motor vehicle ownership and use in Gaziantep has brought opportunities and benefits in areas such as education, health care, social services and employment. These benefits will also bring significant challenges as the city grows to a projected three million people by 2030.

Other modes of transport in Gaziantep Metropolitan Municipality include buses and the light railway line that connects Burc Kavsagi neighbourhood to the city centre. A second line runs to Akkent, close to the Project site.

Figure B3.6 The Gaziantep Rail line

The Ministry of Transport is also planning a large railway project, with 15 stations and four lines running, from Gaziantep to Konya to transport 100,000 passengers daily [(1)]. Since 2009, 254 km of railroad has already been constructed linking up with foreign railways such as those in Iran and Syria.

(1) http://www.invest.gov.tr/en-US/infocenter/publications/Documents/INFRASTRUCTURE.INDUSTRY.pdf, p74

B3.4.4 *Public Roads around the Project site*

The Project site is located approximately 3.5 km west of the Gaziantep-Kilis Motorway (D-850). This road connects to the Gaziantep Ring Road (O-54) that is located immediately to the south of the Project site. The D-850 road will also provide a connection from the healthcare campus to the airport located approximately 15 km to the southeast.

It is possible to access the Project site directly from the city centre by a major road that bisects Şahinbey District. In addition, a new ring road serving the south-west of the city located 1.5 km north of the Project site was under construction at the time of the social baseline studies and stakeholder engagement activities in July and November 2015. Further detail on traffic and road connections is provided in *Volume II, Annex F*.

B3.4.5 *Potable Water, Wastewater and Sanitation*

Gaziantep Water and Sewerage Administration (GASKI) is the utility company responsible for water treatment and distribution and wastewater collection and treatment services in the Gaziantep metropolitan area. Gaziantep is a city of scarce water resources and has the highest energy costs to treat potable water of any city, more than three times as high as Tokyo or Sydney (1). This is largely due to the location of the reservoirs where water is drawn and the need for numerous pumping stations to get water to the treatment station.

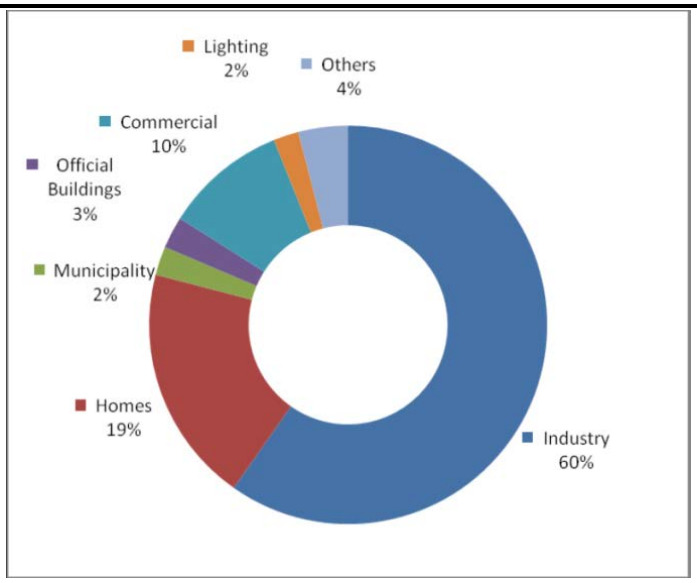
The waste water system, established in 1999 and managed by GASKI runs extremely efficiently and benefits from a series of innovations which reduce energy costs to zero. However, it only serves one million people and another treatment plant is under development, very close to the existing one, which in conjunction with an existing biological treatment plant, will cover the total population of Gaziantep Province (2). Further details on waste and sanitation are provided in *Volume II, Annex E*.

B3.4.6 *Power*

Figure B3.7 highlights the electricity break-down by end-users in Gaziantep in 2010. The bulk of the electricity is used by local industrial facilities (60%), followed by residential users (19%), and the commercial sector (10%). Electricity consumption in various activities covered under the public sector accounts for the remaining 10%.

(1) http://www.reuters.com/article/2015/04/06/turkcell-idUSnBw065376a+100+BSW20150406
(2) http://siteresources.worldbank.org/ECAEXT/Resources/258598-1284061150155/7383639-1321554584327/8272794-1322686395943/m02_01.pdf, p15

Figure B3.7 Share of Electricity Consumption in Gaziantep, 2010



Source: http://siteresources.worldbank.org/ECAEXT/Resources/258598-1284061150155/7383639-1321554584327/8272794-1322686395943/m02_01.pdf

B3.4.7 Telecommunications

Turkcell (Turkey's leading communications and technology company) has been working with the Gaziantep Municipality to effectively manage information and technology systems. Gaziantep Province currently has 950 km of fibre optic cable and 100,000 households and companies have access to broadband services. Power management is also improving through installation of 900 smart power meters in Gazientep's four industrial zones providing real time measurement of energy usage and detection of unauthorised usage [(1)].

B3.4.8 Vulnerability Associated with Governance and Infrastructure

In terms of study area governance, local governance does not make any group particularly vulnerable however the high costs of utilities such as power and water add pressure on low income households. Women explained their difficulties in both reaching medical facilities and in the services provided. Syrian refugees are also vulnerable in terms of access to medical services. The Project will need to consider how best to engage with women and other stakeholders on the quality of service provision both in terms of medical provision and approachability of medical and other Project staff.

(1) http://www.reuters.com/article/2015/04/06/turkcell-idUSnBw065376a+100+BSW20150406

B4 IMPACTS

B4.1 INTRODUCTION

This section describes the socio-economic impacts of the Project that have been assessed as potentially significant. For each impact, the relevant baseline context and expected influence of the Project is described, along with the mitigation and/or enhancement measures that have been committed to by the SPV.

In keeping with the Mitigation Hierarchy (1), the priority for the mitigation prescribed, is to first apply measures to the source of the impact (i.e., to avoid or reduce the magnitude of the impacts from the associated Project activity), and then to address the resultant effect to the resource/receptor via abatement or compensatory measures or offsets (i.e. to reduce the significance of the effect once all reasonably practicable mitigations have been applied to reduce the impact magnitude). Mitigation, enhancement and monitoring measures associated with each socio-economic impact are summarised in *Volume I, Chapter 6*.

The management plans described in *Volume I, Chapter 6* are currently in various stages of development. As such, this assessment has not separated out those measures that are already embedded in the Project's design and those that are 'additional'; all measures described are commitments by the Project and are identified as required in order to mitigation impacts to an ALARP (2) level.

B4.2 POTENTIAL IMPACTS DURING CONSTRUCTION

B4.2.1 *Loss of Jobs*

The Project site was previously the location for the Municipality-owned Alparslan Kurt – Deniz Kurt Inşaat concrete crushing plant. This facility was closed in January 2015 and has not been re-established. This resulted in the loss of 40 jobs at the plant. In discussion with a former employee, it was understood that 30 workers were offered a redundancy package while the other 10 remained employed by the contracting company operating the plant and moved to alternative facilities. Specific details on the redundancy package and the subsequent employment of those made redundant could not be independently verified.

(1) In order of preference: (1) Avoid at source; Reduce at source; (2) Abate on site; (3) Abate at receptor; (4) Repair or remedy; (5) Compensate in kind; Compensate through other means.
(2) As Low As Reasonably Practicable

The magnitude of this impact is considered to be small because of the number of people affected; resulting in a small, localised effect on employment. Information obtained has suggested that this workforce was highly skilled in this field and those receiving redundancy packages were successful in finding alternative employment [(1)]. As such, their vulnerability is assessed as low, resulting in an impact of **negligible** significance.

At the end of construction, contracts with companies and their workers will terminate. Construction contracts are relatively short-term in nature and the employment period for individual workers may not all extend throughout the construction period. On completion of the construction works, contractors will need to find alternative employment. For those already working in the industry, this will be standard practice and as such their level of vulnerability is assessed as low as they have a high ability to adapt. For unskilled workers, who may be working for construction contractors for the first time, the situation may be more difficult. They will have been accustomed to receiving a regular and steady income during the (approximately three year) construction period and the loss of income will increase the economic vulnerability of their households if alternative income streams are not found. The multiplier benefits associated with the construction employment (creating additional direct, indirect and induced jobs) will also cease at the end of construction.

There is currently significant urban development underway and in planning around Gaziantep, particularly in Şahinbey District. As such, there is an increased demand for individuals who have construction experience in this sector and the skills acquired during construction of the Project will enhance their chances of obtaining new jobs. In addition, the Project will have clear contracts with all workers and ensure that they are informed about their contract period so that they can prepare appropriately for termination of their employment. Workers will also have the opportunity to receive certification during their employment, which will assist in future job prospects.

The vulnerability of these workers is therefore considered to be low, but the number of people impacted is sizeable (up to 3,008 workers during peak construction) and therefore a medium magnitude is assigned, resulting in a residual impact of **minor** significance.

B4.2.2 *Direct Employment Opportunities and Skills Enhancement*

The SPV has estimated that the construction phase of the Project will provide direct jobs for up to 3,008 workers during peak construction. The total number of jobs will be between 3,500 – 4,000 inclusive of indirect employment in administrative, cleaning and catering. From month 10 to month 32 it is estimated that there will be over 1,000 construction workers on site. The majority of these positions will be available for unskilled and semi-skilled

(1) Note that this information has not been verified and may require additional engagement to identify former employees and the outcomes of this process.

workers. Those who secure jobs will have access to a regular income during their employment and the opportunity to develop new skills and work experience. The SPV will implement a Human Resources Policy in accordance with EBRD PR2 and will include requirements and targets around the hiring of local workers. The SPV has committed to recruiting at least 50% of the workforce from within Gaziantep province and this commitment will be captured in the Project's Local Content Policy (see below). Local communities will be kept informed of upcoming recruitment for the project and this will be captured in the Project's Stakeholder Engagement Plan (SEP). In addition, the Project is committed to the principles of equal employment opportunities and anti-discrimination (opposing all types of discrimination regardless of race, religion or belief, gender, disability, age, nationality, sexual orientation or ethnicity). The Project will set specific targets for ensuring equal opportunities (1). This will result in a **positive** impact.

B4.2.3 Local and National Economy

During construction, the Project will need to procure goods and services. These will include catering and other services. The SPV will look to procure locally, setting specific targets in its Local Content Policy and monitoring its local procurement. The presence of a large construction workforce will further increase the demand for local goods and services and so the Project is expected to have a **positive** impact on local businesses and the local economy in Gaziantep. Additional jobs may be created by companies securing contracts; this will potentially improve the opportunities for those households in Gaziantep benefiting from jobs with these companies. The IFC (2015) reports from a number of sources that the employment multiplier (number of direct, indirect and induced jobs for each direct job created) for infrastructure projects often exceeds two (2).

Additionally, revenue will be generated from taxes on income and for goods and services procured in Turkey (VAT), and duty on imported products. This will result in a **positive** impact on the national economy.

B4.2.4 Traffic Related Impacts

During the first four months to one year of construction, up to 510 vehicles are expected to be on site each day including 200 HGVs, 70 trucks, 90 cement mixers and 150 cars. This will reduce in year two once earthworks are complete and concrete mixers are no longer required; down to 220. Accordingly, there is the potential for traffic accidents to occur which could lead to injury or fatalities to other road users and pedestrians. The magnitude of this impact is considered to be large, when considering the potential severity of such events. The SPV will implement a Construction Traffic

(1) The Human Resources Policy will be applicable to all workers and contract workers including Syrian refugees who obtain employment through the Project and will be provided with equal employment rights and salary.
(2) Pfeifenberger, et al. (2010); Labovitz School (2010); IFC (2012); CH2MHILL (2009); Estache et al.; Atkinson et al (2009); Bekhet, H.A. (2011) cited in IFC:
http://www.ifc.org/wps/wcm/connect/83affa004f7ce00bb812fe0098cb14b9/chapter6.pdf?MOD=AJPERES

Management Plan during construction that will clearly detail the requirements of all contractors, their vehicles and drivers and will work with the relevant authorities to coordinate traffic management. This will ensure that appropriate protocols are followed to minimise the risk of traffic impacts during construction (see *Volume II, Annex F*).

In addition, the Project will include an awareness-raising campaign as part of its stakeholder engagement activities to inform key stakeholders (such as school children and their families) about potential traffic impacts and traffic safety. The grievance mechanism for the Project is also in place to capture any concerns or complaints about Project-related traffic. Additionally, the SPV will implement an Emergency Preparedness and Response Plan (EPRP) that will include measures and procedures to manage any traffic and transport related emergencies. Specific measures are outlined in *Volume II, Annex F*.

With these mitigation measures in place, the magnitude of this impact is considered to be small. Akkent and Karataş neighbourhoods have a high number of retired residents; many young families with children also live in the area. The TOBB High School is adjacent to the Project site and commenced operation in September 2015 with 200 boarders on site from Spring 2016. The vulnerability of these local residents to such impacts is considered to be medium, which results in a residual impact of **minor** significance.

B4.2.5 Risk of Accidents Due to Trespassing On Site

The TOBB High School adjacent to the Project site will have 600 students with a dormitory for 200 boarders. The school expressed concern about the risk of students (or other members of the public) trespassing on to the site, resulting in an injury or fatality. The SPV will fence the Project site and deploy security staff through a private security company called ISS Proser Koruma Ve Güvenlik. The SPV will ensure that the fence runs along the full extent of the school site boundary, since the existing school fence is low and easy for students to jump over on to the construction site. Due to the proximity of the high school, the age of the students and the fact that some are also present at school overnight (and may find it exciting to explore the site), combined with the severity of any potential injury, the SPV will ensure that the site is fenced and patrolled by security to prohibit access. The SPV will also meet directly with students and teachers of TOBB High School to discuss health and safety issues associated with the construction phase. With these measures in place and access prohibited, the magnitude of this impact is designated as negligible. Vulnerability is considered to be medium due to the age of the students (under 18) and the perception of this risk by members of the school community, resulting in a residual impact of **negligible** significance.

B4.2.6 Disturbance Due to Dust and Noise

Impacts associated with dust and noise are described in *Volume II, Annex C and Annex D*. Management plans and other measures to manage and mitigate impacts are also described in *Volume 1, Chapter 7*.

Emissions of dust will arise from the Project during construction, primarily as a result of earth moving activities, exposure of bare ground, stockpiling of material, the passage of vehicles over open ground and the on-site concrete batching plant. The duration of the impact will continue for the duration of the construction phase, lasting approximately three years and exposure to dust generating activities and associated dust emissions are likely to occur intermittently over the duration of the Project construction.

Dust emissions have the potential to result in impacts of a **major** significance for the sensitive receptors found within 200 m of the source (including TOBB High School and the closest apartment buildings), without the application of mitigation. All other receptors are considered to be at distances between 200 m and 500 m and greater away from the source and therefore have the potential to experience impacts of **minor** significance, again without the application of mitigation. However, it is expected that dust suppression mitigation measures (including on-site PM_{10} monitoring) will be embedded into the Project Design and employed at the site during construction, to ensure impacts during construction are reduced to **minor** significance at worst.

Construction activities are predicted to cause significant noise impacts at night. If night time construction is undertaken a Noise Management Plan is required to mitigate these impacts. TOBB High School will experience noise impacts of **major** significance. A range of mitigation measures have been outlined to reduce the impact of noise to **minor** significance. These include orienting machinery away from receptors and where feasible, locating stationary equipment in an acoustically treated enclosure. Further details are provided in *Annex D.*

B4.2.7 Conflicts with Security Providers

Security personnel provided by ISS Proser Koruma Ve Güvenlik will be required throughout the duration of the construction period to ensure the security of staff and equipment at the Project site and the worker camp, which will be located just the south of Project site. The use of disproportionate force by security personnel in the event of any incident or the inappropriate behaviour of security personnel towards local residents and / or students attending TOBB High School may lead to grievances or injury if there is any physical confrontation. There is no real history of violence or negative interactions between security and local populations in Gaziantep; and security is well regulated in Turkey through Law No. 5188 on Private Security Services. However, the inappropriate use of force to secure the site in the event of any incident could compromise the safety and security of local communities or workers. The SPV will also implement a Security Plan to manage security services.

The Project will align with the requirements of ERBD PR 2 (1), EIB Environmental and Social Standard 9 (2) and agree to a standard of practice and behaviour for the security personnel, guided by the principal of proportionality and GIIP (such as the Voluntary Principles on Security and Human Rights (3), the UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (4) and the UN Code of Conduct for Law Enforcement Officials (5)), in terms of hiring, rules of conduct, training, equipping and monitoring of such personnel. The Project will make reasonable inquiries to satisfy itself that those providing security services are not implicated in past abuses, will ensure they are trained adequately in the use of force (and where applicable, firearms) and appropriate conduct towards workers and the local community, and require them to act within the applicable law. The Project will not sanction any use of force except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

The Project will also continue to maintain its grievance mechanism so that any concerns about the security arrangements and actions of security personnel can be expressed by affected communities and/or workers, as described in the SEP.

Given the legal framework management measures in place, the magnitude of this impact is expected to be negligible. The vulnerability of local residents is considered to be medium, considering the proportion of refugees, more elderly residents, young families and local schools. This results in a residual impact of **negligible** significance.

B4.2.8 Interactions with Workers during Construction

The Project is not expected to result in any significant opportunistic, indirect influx to the study area however up to 50% of the construction workforce may be employed from outside Gaziantep province. Many of these will be housed in the designated workers' camp immediately south of the Project site and the presence of construction workers will likely lead to interactions with local residents. This will include those who are living in the camp on site who are likely to be non-local workers and predominantly male, away from their families and with limited ties to the surrounding community.

In focus group meetings in Akkent local residents reported the crime rate in the neighbourhood as high, which they attribute largely to the presence of construction workers residing in construction camps. There is also the potential for harassment of residents, particularly women if construction workers do not behave appropriately.

(1) ERBD Performance Requirement 2: Labour and Working Conditions (2014)
(2) EIB Environmental and Social Standard 9: Occupational and Public Health, Safety and Security (2013)
(3) http://www.voluntaryprinciples.org/
(4) http://www.ohchr.org/EN/ProfessionalInterest/Pages/UseOfForceAndFirearms.aspx
(5) http://www.ohchr.org/EN/ProfessionalInterest/Pages/LawEnforcementOfficials.aspx

During a meeting with the TOBB High School in November, concern was expressed about construction workers using school facilities such as the prayer room and school canteen.

The SPV will develop a strict Workforce Code of Conduct for construction workers, governing their behaviour and interactions with local communities. In addition, the SPV will also develop a Camp Management Plan for those living on site. It will include provisions for induction and training, a disciplinary procedure and workers will be made aware of the grievance mechanism for local stakeholders, explaining that stakeholders have the right to register a grievance through a formal procedure. It is recommended that the camp is closed to non-workers to limit interactions with local residents. The camp will be self-contained, providing a complete living environment with lodging, catering and essential domestic and recreational facilities. These measures will align with IFC PS 2, EBRD PR2 and EIB Environmental and Social Standards 8 (1) and 9.

With effective implementation of these measures, the magnitude of any impact from harassment or crime is considered to be small. The vulnerability of local residents is considered to be medium because of the number of retired and young people living in the neighbourhood, the concern raised about this issue and the baseline level of existing crime reported. This results in a residual impact of **minor** significance.

B4.2.9 Occupational Health and Safety Risks

Construction workers on the Project will be exposed to risks and hazards typical of civil construction facilities, such as vehicles and driving, working at height, manual handling, and contact with hazardous material, noise and vibration, amongst others. In the absence of appropriate standards, the health and safety of workers would not be adequately protected. Impacts could be of major significance with the potential for injury or fatalities.

The Project is required to comply with national labour, social security and occupational health and safety laws as well as the principles and standards of the ILO convention, EBRD PR 2, and EIB Environmental and Social Standards 8 and 9 and IFC PS 2. The SPV will have a robust Occupational Health and Safety Management Plan in place for the construction phase of the Project. It will include measures to minimise the risk of accidents, illness and injury; specific training and Personal Protective Equipment requirements, document and report all incidents; and ensure appropriate emergency preparedness and response planning. A formal grievance procedure will be in place for workers and there will be occupational health and safety monitoring programmes to verify the effectiveness of prevention and control strategies.

In addition, the SPV will ensure that its agreements with contractors make explicit reference to the need to abide by Turkish Law and Core 8 ILO

(1) EIB Environmental and Social Standard 8: Labour Standards (2013)

Standards of ILO conventions in relation to labour and welfare standards, and freedom of association, with specific reference made to child and forced labour. Primary contractors and first tier suppliers will be required to comply with these commitments. Emphasis will also be placed on measures to ensure that workers are free of any discrimination, regardless of race, religion or belief, gender, disability, age, nationality, sexual orientation or ethnicity. Any work by persons under the age of 18 (the minimum working age is 15 in Turkey) shall be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work. They will not be employed in hazardous work.

These measures will also be applied to Syrian refugees legally eligible for employment who have residency status. The SPV will not employ any Syrian refugee without the relevant identity card and residency permit unless they are willing to support a formal application. They will not pay Syrian refugees eligible for employment less than the wages being paid to other staff for the same job.

With these measures in place, the magnitude of this impact is assessed as small. The vulnerability of workers is assessed as low to medium (with contract workers identified as potentially more vulnerable than permanent workers). This results in a residual impact of **minor** significance.

B4.2.10 Worker Accommodation Camp

The Project will construct a workers' camp just south of the Project site (see *Figure 2.5* in *Chapter 2, Volume I*) on vacant land east of the tram depot. The workers' camp will have capacity for up to 644 construction workers which will have dormitories for 32 engineers, 108 technicians and 504 workers. Workers' living conditions will comply with Turkish law and the performance requirements of EBRD (PR 2) and IFC (PS 2) as well as the joint EBRD / IFC Workers' Accommodation: Processes and Standards Guidance Note (2009) to ensure on-site living conditions provide adequate sanitary and waste management and the provision of potable water. Inadequate camp management may result in poor health and safety hazards as well as negative interactions with local residents. As previously detailed, the SPV will implement a Camp Management Plan which will include the Workforce Code of Conduct, reference to the Project's Occupational Health and Safety Management Plan and provisions for induction and training. With these measures in place, the impact magnitude is assessed as negligible and the vulnerability of workers is assessed as low. This results in a residual impact of **negligible** significance.

B4.3 POTENTIAL IMPACTS DURING OPERATION

B4.3.1 Health Impacts

The Gaziantep IHC Project is being designed to be a state of the art medical facility which will mean improved health care services, offering the latest technology, for those living in Gaziantep Province and nearby surroundings. It is part of the Turkish Health Transformation Program (HTP) which aims to see shortened hospital stays, a reduced number of patient transfers, a decrease in the number of hospital infections and improved patient safety and satisfaction. The HTP is already bringing about improvements in healthcare delivery with major healthcare indicators such as infant mortality and maternal mortality having improved over recent years (see *Volume I, Section 2.1.1*). The introduction of Universal Health Insurance and the Green Card Scheme (in 2008) providing cover for the poorest in society has also improved health provision in Turkey.

Project stakeholders have expressed dissatisfaction with existing healthcare services, with overcrowding, a lack of respect and limited explanation/ consultation cited, amongst others. The substantial increase in the number of Syrian refugees in Gaziantep has had a significant impact on local healthcare; the Provincial Directorate of Health estimate that there is a shortage of between 1,200 and 1,800 beds in the province (1). The refugee presence is unlikely to change in the next five to ten years which underlines the importance of the HTP and the Gaziantep IHC.

Improved access to healthcare services in Gaziantep is the primary significant **positive** impact of the Project.

B4.3.2 Employment and the Local Economy

During operation of the Gaziantep IHC Project, there is expected to be a workforce of around 3,600 healthcare professionals and 2,500 operational and maintenance staff. It is not currently clear how many of these posts will be new positions and how many workers will transfer from existing hospitals in the region (2).

The MoH will be responsible for assigning doctors, nurses and other clinical staff to the campus, but the SPV has committed to employing at least 50% of all operational and maintenance staff from within the Gaziantep Province. Those who secure jobs will have access to a regular income during their employment.

Job descriptions will be written for each category of worker, outlining the required educational qualifications, skills, knowledge and experience. Local communities will be kept informed of upcoming recruitment for the project and this will be captured in the Project's Stakeholder Engagement Plan (SEP).

(1) Data obtained from the Gaziantep Provincial Directorate of Health, April 2015
(2) The number of hospitals that will be closed following establishment of the Gaziantep IHC is not known.

The target for hiring local workers will be detailed in the Project's Human Resources Policy, which will be developed by the SPV in accordance with EBRD PR2 and the Core 4 ILO Labour Standards. These will be adhered to by the Project and by primary contractors and first tier suppliers. The Human Resources Policy will clearly outline SPV commitments to the principles of equal employment opportunities and anti-discrimination (opposing all types of discrimination regardless of race, religion or belief, gender, disability, age, nationality, sexual orientation or ethnicity). The SPV will set specific targets for ensuring equal opportunities (1). As Syrian refugees are considered a vulnerable group with respect to employment, the SPV will ensure that they only recruit refugees who have an official residency permit and identity card. They will not be paid less than other staff for doing the same job and will not be recruited informally.

It is likely that the Project will be able to find suitably skilled workers within Gaziantep Province. The area is undergoing significant development and local communities are used to workers migrating into the area. During stakeholder consultation it was stated that the in-migration of workers was having a positive impact on educational and skills attainment, with local people being motivated to obtain qualifications for potential employment. There was also an anecdotal suggestion during a focus group discussion in Dumlupınar that girls were also benefiting, with more now attending school, although this has not been verified.

In addition to direct employment within the IHC, there will likely be a boost in trade for local businesses (such as shops and restaurants) due to the increased footfall onto the campus each day. The IFC (2015) reports from a number of sources that the employment multiplier (number of direct, indirect and induced jobs for each direct job created) for infrastructure projects often exceeds two (2).

Direct, indirect and induced jobs created by the Project, as well as the boost to the local economy is a significant **positive** impact of the Project.

B4.3.3 Patient Rights

It is critical that the IHC sufficiently protects the rights of the patients that are treated at the campus and aligns with the '*Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework*' (3). Patient rights and safety will be the joint responsibility of the MoH and the SPV. The MoH will be responsible for medical services, whilst the SPV will be responsible for auxiliary services and day-to-day activities

(1) The human resources policy will be applied to all workers and contract workers including Syrian refugees who obtain employment through the Project and will be provided with equal employment rights and salary.
(2) Pfeifenberger, et al. (2010); Labovitz School (2010); IFC (2012); CH2MHILL (2009); Estache et al.; Atkinson et al (2009); Bekhet, H.A. (2011) cited in IFC:
http://www.ifc.org/wps/wcm/connect/83affa004f7ce00bb812fe0098cb14b9/chapter6.pdf?MOD=AJPERES
(3) http://business-humanrights.org/en/un-secretary-generals-special-representative-on-business-human-rights/un-protect-respect-and-remedy-framework-and-guiding-principles

(including protection of patient information). Policies and procedures will be written and implemented regarding the rights of patients and their families [1]. The SPV will implement a Patients' Grievance Mechanism which focuses on the services it is responsible for, such as data management and auxiliary services. They will adhere to the Patients' Rights Charter, established in Turkey in 1998 [2] and will, as a minimum, include the following:

- respect for personal dignity and privacy during examinations, treatments and procedures;
- informed consent;
- information regarding cost of services;
- access to medical records; and
- information about their health care needs.

Policies and procedures will be in place that describe how patients' health information is protected and how breaches of confidentiality are dealt with. The development of these policies and procedures will be the joint responsibility of the MoH and SPV. The rights of prisoners in the high security forensic hospital will be specifically detailed. Any incidents of breaches and actions taken will be recorded.

Women and Syrian refugees have raised concerns about their treatment in healthcare facilities and access to information. Syrian refugees have also been exploited through translation services, being forced to pay when this service should be provided free of charge. Patients and their families will be informed about their rights in a form and language they can understand and will be advised of the process for raising any grievances. Information will also be provided in Arabic for Syrian refugees. Additionally, all staff will be trained with regards to the rights of patients and their families.

With these controls and procedures in place, the magnitude of any impact related to patient rights is considered to be negligible. The vulnerability of receptors is assessed as medium, which results in a residual impact of **negligible** significance.

B4.3.4 *Traffic Related Accidents and Injury*

There will be an increase in traffic as a result of the IHC and this was a particular concern to stakeholders, both regards to access and accidents. The TOBB High School was also concerned about IHC visitors parking in and around the school premises.

It was estimated that there will be 52,920 daily users with the peak hour occurring between 08.00 – 09.00. During the peak hour, there will be a maximum two-way flow of 5,077 cars contributing to local traffic loads.

(1) These policies and procedures will provide details of vulnerable groups and their specific protections, as needed.
(2) World Health Organisation, Turkey Country Cooperation Strategy: http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_tur_en.pdf

The SPV will develop a Health Campus Internal Traffic Management Plan for the IHC in consultation with local authorities in order to manage traffic within the Project site. Ongoing stakeholder engagement will also assess how project-related traffic is affecting traffic more broadly within Gaziantep. The results of these studies will feed into the Health Campus Internal Traffic Management Plan and adjustments made as necessary. This Plan and any changes will be disclosed as part of stakeholder engagement activities with local communities.

With the information available to date and these measures in place, the traffic impact assessment (see *Volume II, Annex F*) assessed the magnitude of this impact as large however the traffic impact to health and safety is considered to be small. The vulnerability of local residents to such impacts is considered to be medium, which results in a residual impact of **minor** significance based on a worst case scenario.

B4.3.5 Security Management

During operation, the Gaziantep IHC will maintain a safe and secure environment for patients, families, staff, visitors and the local community. It contains a high security forensic hospital, which will be kept secure and monitored at all times. Without appropriate security, there is the risk of major significant impacts; this was of concern to local stakeholders. In particular, TOBB High School was worried about the high security forensic hospital and the impact it will have on their reputation as its presence may be a concern for some parents.

The Project Design will incorporate important security measures for the high security forensic hospital (see *Volume I, Section 2.8*) and its management will be the joint responsibility of the MoJ and the MoH. The security measures will incorporate the use of military police (gendarme) however arrangements have not yet been confirmed. A mechanism for coordination between the SPV, MoJ and MoH is yet to be established.

The SPV, together with the MoJ and MoH, will develop a Security Policy and Plan for the IHC, which will detail the company's position and measures to address the use of force, training, equipping and monitoring security guards as well as investigating reports of unlawful behaviour and preventing recurrence. Security will be provided in a manner that does not jeopardize the community's safety and security, or the SPV's relationship with the community. It will comply with national legislative requirements (1) and with the requirements of IFC Performance Standard 4 and EIB Standard on Occupational and Public Health, Safety and Security (2), which are consistent with good international practice.

(1) Including Turkish Law No. 5188 on Private Security Services

(2) The EIB Standard on Occupational and Public Health, Safety and Security includes an element on Security Management and calls for compliance with the Voluntary Principles on Security and Human Rights, the UN Basic Principles on the Use

All security personnel from private companies will be trained and will operate in accordance with the 'International Code of Conduct for Private Security Providers' (1). The SPV will 'make reasonable enquiries to ensure that those providing security are not implicated in past abuses; will train them adequately in the use of force (and where applicable, firearms) and appropriate conduct toward workers and Affected Communities; and require them to act within the applicable law' (2).

The SPV will provide appropriate information on the Project's security arrangements to local stakeholders and involve them in discussions about these arrangements; the details of which will be captured in the SEP. Specific measures for communicating with TOBB High School on security concerns have also been established in the SEP including providing a direct line of communication between the School Principal and Project management and establishing a forum to include Project management and the Parent-Teacher Association of the school. The grievance mechanism for the Project will capture all grievances raised in relation to security and safety issues. These will be addressed promptly and actions will be taken.

With these measures in place, the magnitude of impacts related to security are considered to be negligible. The vulnerability of receptors is assessed as medium due to the concerns raised about this aspect, which results in a residual impact of **negligible** significance.

B4.3.6 Exposure to Infections/Diseases

In the absence of appropriate management, there is an eminent risk of exposure to general infections, blood-borne pathogens (3), and other potential infectious materials within the health campus, leading to extremely adverse impacts on human and environmental health. This is a primary risk for patients, health care providers and personnel during care and treatment, as well as during collection, handling, treatment and disposal of health care waste.

Infection prevention and control activities involve individuals in multiple departments and services, e.g. clinical departments, facility maintenance, food services, house-keeping, laboratory, pharmacy and sterilization services. The following measures will be incorporated in the Project design to appropriately manage the risk of transferring infectious diseases:

- There will be an Infection Control Programme for the IHC and a designated mechanism for its coordination; this will involve

of Force and Firearms by Law Enforcement Officials, the UN Code of Conduct for Law Enforcement Officials and the International Code of Conduct on Private Security Providers

(1) http://www.icoca.ch/en/the_icoc

(2) http://www.ifc.org/wps/wcm/connect/dc3f4b80498007dca17ff3336b93d75f/Updated_GN4-2012.pdf?MOD=AJPERES

(3) Pathogenic microorganisms that are present in human blood and can cause disease in humans, including human immunodeficiency virus (HIV), hepatitis B virus (HIB), and hepatitis C virus (HCV).

communicating with all parts of the organisation to ensure that the programme is continuous and proactive. The Infection Control Programme will be based on current scientific knowledge, practice guidelines, and national laws/regulations. It will also include systematic and proactive surveillance activities to determine usual (endemic) rates of infection and outbreaks of infectious diseases.

- All staff and visitors will be provided with information on infection control policies and procedures. Infection control procedures will be incorporated into the induction training delivered to all new staff. Annual training will also be provided for targeted staff groups.

- An Infection Control Committee will be established.

- The policies and plans for Infection Control will be regularly audited and amended, as needed, following the findings of these audits.
- Robust waste management and hazardous material management plans will be developed in advance of operation and implemented, with active enforcement.

- Appropriate waste disposal practices will be implemented (see *Volume II, Annex E*) and those involved in waste management will have appropriate PPE, have adequate washing facilities and be immunized (e.g. vaccination for hepatitis B virus, tetanus immunisation).

- An exposure control plan will be formulated for blood-borne pathogens.

- Universal/Standard Precautions [(1)] will be established to treat all blood and other potentially infectious materials. These will include:

  - the provision, at no cost to the employee, of appropriate personal protective equipment (such as gloves, masks and gowns);
  - immunizations for staff members as necessary; and
  - adequate facilities for hand washing.

- There will be appropriate facilities in place and procedures implemented and actively enforced for handling dirty linen and contaminated clothing, and preparing and handling food.

- Appropriate cleaning will be undertaken of the heath campus.

- Good practice procedures will be implemented for handling needles/sharps, based on the recommendations of OSHA (U.S. Department of Labor Occupational Health and Safety Administration) [(2)].

(1) http://www.osha.gov/SLTC/etools/hospital/hazards/univprec/univ.html
(2) As referenced in the World Bank EHS Guidelines for Healthcare Facilities http://www.ifc.org/wps/wcm/connect/bc554d80488658b6b6e6f66a6515bb18/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&id=1323161961169

With these measures in place, the magnitude of impacts related to exposure to infections/diseases are considered to be small. The vulnerability of receptors is assessed as medium, which results in a residual impact of **minor** significance.

B4.3.7 Exposure to Hazardous Materials, Waste and Radiation

During operation of the IHC it will be important that appropriate systems are in place to manage risks faced by workers who may be exposed to hazardous materials, waste and radiation.

Hazardous materials may include glutaraldehyde (toxic chemical used to sterilize heat sensitive medical equipment), ethylene oxide gas (a sterilant for medical equipment), formaldehyde, mercury (exposure from broken thermometers), chemotherapy and antineoplastic chemicals, solvents, and photographic chemicals, among others (1).

Another potential risk to healthcare workers is toxic exposure to Waste Anaesthetic Gas (WAG), the gases typically used as inhalation anaesthetics (2). Occupational radiation exposure may also result from equipment emitting X-rays and gamma rays (e.g. CT scanners), radiotherapy machines, and equipment for nuclear medicine activities (3). Such exposure can lead to potential discomfort, injury or serious illness to workers.

The Project's design will ensure that equipment installed in the IHC appropriately manages WAGs; this may be through the use of scavenging units or vacuum lines that vent and disperse the WAGs outside the facility.

In addition, the MoH and SPV will have a comprehensive plan to control radiation exposure, as outlined in the World Bank Group EHS Guidelines for Health Care Facilities. International safety standards and guidelines regarding radiation will be followed and exposure controlled to internationally recommended limits (4). This plan will be developed in consultation with the affected workforce and be refined and revised as soon as practicable on the basis of assessments of actual radiation exposure conditions. Radiation control measures will be designed and implemented accordingly.

All details regarding the protection of workers' health and safety will be detailed in the Occupational Health and Safety Plan for the Project, aligning with the BS OHSAS 18001 framework. This plan will be under the responsibility of the assigned OHS Manager for the IHC. All workers will be trained in these procedures and the SPV will maintain a log of accidents and

(1) http://www.ifc.org/wps/wcm/connect/bc554d80488658b6b6e6f66a6515bb18/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&id=1323161961169
(2) These may include nitrous oxide, halothane (fluothane), enflurane (ethrane) or isoflurane (forane), amongst others.
(3) http://www.ifc.org/wps/wcm/connect/bc554d80488658b6b6e6f66a6515bb18/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&id=1323161961169
(4) For example: IAEA standards http://www-pub.iaea.org/MTCD/publications/PDF/Pub1192_Web.pdf and ACGIH (2005) and International Commission for Non-Ionizing Radiation (ICNIRP).

incidents. The OHS Plan and log will be regularly reviewed and any corrective measures incorporated in a continuous process to improve OHS conditions and management.

The SPV will require primary suppliers to align with the EBRD PR2 to avoid health and safety risks to supply chain workers.

With the effective implementation of these measures and regular audits, the magnitude of impacts related to exposure to hazardous materials, wastes and radiation is considered to be small. The vulnerability of receptors is assessed as medium, which results in a residual impact of **negligible** significance.

B4.3.8 Emergency Events: Fire

The risk of fire in health care facilities is significant due to the storage, handling, and presence of chemicals, pressurized gases, boards, plastics, and other flammable substrates. In the absence of appropriate management, this would be an impact of major significance. However, as described in *Volume I, Section 2.6.8*, the IHC has been designed in accordance with the Turkish Regulation on the Protection of Buildings from Fire (Official Gazette Date/No: 19.12.2007/26735); the technical specification from the MoH also contained specific requirements related to fire protection which have all been incorporated into the Project's design. In addition, the SPV will:

- Ensure that fire safety is incorporated into the organisation-wide protocols and department manuals.
- Establish a Life and Fire Safety Master Plan which will align with IFC EHS Guidelines [(1)] (Section 3.3) and include a Corrective Action Plan if remediation measures are required. The plan will specify:
  - the frequency of inspecting, testing, and maintaining fire protection and safety systems;
  - the procedures for safely evacuating the facility in the event of a fire or smoke;
  - the process for testing (exercising all or a portion of the plan), at least twice per year;
  - the necessary training of staff to effectively protect and remove patients when an emergency occurs; and
  - the participation of staff members in at least one fire safety test per year.

(1) http://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES

- Develop and implement a policy and plan to limit smoking. These will apply to all patients, families, staff and visitors; and eliminate smoking in the IHC or limit smoking to designated non–patient care areas that are ventilated to the outside.

- Develop and implement an Emergency Preparedness and Response Plan (EPRP) and Policy so that the SPV is prepared to respond to accidental and emergency situations (including fire) – see *Volume I, Section 2.6.8.*

Undertake a third party life and fire safety audit to ensure that the Project has been designed, constructed and operated in compliance with local building code, local fire department regulations, local legal/insurance requirements and in accordance with internationally accepted life and fire safety (L&FS) standard, such as the Life Safety Code [(1)].

With the implementation of these measures, the magnitude of any impact related to fire is considered to be small. The vulnerability of receptors is assessed as medium, which results in a residual impact of **minor** significance.

(1) US NFPA: http://www.nfpa.org/catalog/product.asp?category%5Fname=&pid=10106&target%5Fpid=10106&src%5Fpid=&link%5Ftype=search

B5 SUMMARY OF MITIGATION, ENHANCEMENT AND MANAGEMENT MEASURES

B5.1 INTRODUCTION

This section of the impact assessment provides a summary of the mitigation, enhancement and management measures related to each of the impacts assessed as potentially significant. These measures are also captured in the summary ESMP (see *Volume 1, Chapter 7)*. The summary ESMP Table also outlines performance measures and assigns responsibilities.

B5.2 LOSS OF JOBS

The following management plans and associated mitigation measures will be implemented to manage impacts related to a loss of jobs:

- Human Resources Policy: Clear contracting of workers and details about their contract period so that they can prepare appropriately for termination of their employment. Contracts will clearly detail workers' rights. Workers will also have the opportunity to receive certification during their employment, which will assist in future job prospects.

- Grievance Mechanism: This will be implemented for all workers who will be made aware of the mechanism.

B5.3 TRAFFIC RELATED IMPACTS

The following management plans and associated mitigation measures will be implemented to manage impacts related to traffic.

- Traffic Management Plan for construction and Health Campus Internal Traffic Management Plan for operation: These will include measures dealing with traffic calming, vehicle safety, driver and passenger behaviour, hours of operation, rest periods and accident reporting and investigations etc. Measures will also be in place to ensure that Project drivers are qualified, trained to drive safely and have the required licenses. There will be requirements regarding speed limits and road usage for all company vehicles and contractor vehicles using access roads; also, a vehicle maintenance programme to ensure that vehicles are consistently roadworthy.

- Emergency Preparedness and Response Plan: This will include measures and procedures to manage any traffic accidents. It will also incorporate an incident investigation procedure in the event that any transport related

incident occurs, which will require root cause analysis of any traffic incidents.

- Stakeholder Engagement Plan: This plan will incorporate the details of an awareness-raising campaign, that has a specific focus on the TOBB High School (students, teachers and the Parent-Teacher association) and local residents. It will commence prior to the commencement of construction activities and continue throughout the construction phase of work. During this campaign, site safety and security, road safety, potential impacts and risks and Project-related road usage will be discussed and the grievance mechanism explained. This campaign should continue into the operational phase of the Project.

B5.4 HEALTH AND SAFETY IMPACTS ASSOCIATED WITH TRESPASSING

The following management plans and associated mitigation measures will be implemented to manage impacts related to trespassing.

- Construction Management Plan: This will include requirements for the management and maintenance of the perimeter fence, including along the entire length of the school site boundary to prevent entry onto the site.

- Security Policy and Plan: This will include provisions for security personnel patrolling the perimeter fence to avoid trespassers.

- Hold sessions with students and teachers of TOBB High School to discuss health and safety issues associated with the construction of the Project.

B5.5 INTERACTIONS WITH WORKERS

The following management plans and associated mitigation measures will be implemented to manage impacts related to interactions with workers.

- Workforce Code of Conduct: This will prescribe expected behaviour and govern interactions with local communities. It will include a disciplinary procedure and workers will be made aware of the grievance mechanism for local stakeholders, explaining that stakeholders have the right to register a grievance through a formal procedure.

- Camp Management Plan: This plan will include provisions for induction and training and include the workforce Code of Conduct for the Project. The camp will be closed to non-residents and be fully self-contained, providing lodging, catering and recreational facilities.

- Grievance Mechanism: Local communities will be made aware of the Project's grievance mechanism as part of ongoing stakeholder engagement, as detailed in the SEP.

B5.6 WORKER ACCOMMODATION

The Camp Management Plan will align with the 'Workers' Accommodation: Processes and Standards - A Guidance Note by IFC and the EBRD' (1), ensuring adherence to international standards for a clean and safe environment including adequate sanitary and waste management and the provision of potable water; minimum space for each worker, laundry, cooking facilities; and the provision of first aid, medical facilities, heating and ventilation.

B5.7 LABOUR AND WORKING CONDITIONS

The following management plans and associated mitigation measures will be implemented to manage labour and working conditions.

Occupational Health and Safety (OHS) Management Plan: This plan will be in accordance with OHSAS 18001 (2) and be based on the identification and management of key hazards to which workers are exposed, and with the objective of ensuring that employees do not come to any harm. A quantitative risk assessment (QRA) and hazard identification (HAZID) will be undertaken and the Plan will outline measures to prevent accidents, injury, illness and disease. It will include provisions for documenting and reporting on occupational accidents, illness / disease and incidents.

- Emergency Preparedness and Response Plan: This plan outline measures and procedures to manage any traffic and transport related emergencies. It will also include measures to address accident and injury (see *Section B5.9).*

- Human Resources Policy: This Policy will detail the training requirements for all workers. In addition, it will include provisions for contracting of workers. Contracts will clearly detail workers' rights. Workers will also have the opportunity to receive certification during their employment, which will assist in future job prospects.

B5.8 EMPLOYMENT OPPORTUNITIES

Local residents will be kept informed of employment opportunities during construction and operation via public announcements through radio and newspapers and through notices with local Muhtars. Additional information will be provided to healthcare and social centre noticeboards and in training centres in local neighbourhoods (which provide courses for women) to reach

(1) http://www.ifc.org/wps/wcm/connect/9839db00488557d1bdfcff6a6515bb18/workers_accomodation.pdf?MOD=AJPERES

(2) BSI, 2007: OHSAS 18001:2007: Occupational Health and Safety Management Systems – Requirements.

out to women who use these services. Information shall also be given to SGDD to raise awareness of opportunities for Syrian refugees.

B5.9 INTERNATIONAL STANDARDS OF QUALITY AND PATIENT SAFETY DURING OPERATION

The following management plans and associated mitigation/enhancement measures will be implemented to ensure international standards of quality and patient safety.

- Annual organisational self-assessment audits: the key principles of these assessments are outlined in IFC's 'A Self-Assessment Guide for Health Care Organizations' (1), which focuses on five key areas:
  - Governance and Leadership;
  - Ethics and Patient Rights;
  - Quality Measurement and Improvement;
  - Patient Safety; and
  - Facility Safety and Emergency Management.
- Stakeholder Engagement Plan (SEP): The SPV will discuss with the MoH the option of applying international hospital management benchmarks such as Joint Commission International (JCI) Accreditation to ensure best international practice. An Action Plan will then be developed to achieve this objective.

B5.10 FACILITY SAFETY AND EMERGENCY MANAGEMENT DURING OPERATION

The following management plans and associated mitigation/enhancement measures will be implemented to manage facility safety and emergency management:

- Emergency Preparedness and Response Plan (EPRP) (2) - This plan will cover accidental and emergency situations, including major traffic related incidents, fire, floods and earthquakes, amongst others. It will also detail:
  - Planning Coordination: there will be procedures for informing the public/local school and emergency response agencies; documenting first aid and medical treatment; taking emergency response actions; reviewing and updating the plans to reflect changes and ensuring that employees are informed of such changes;

(1) http://www.ifc.org/wps/wcm/connect/509355004970c21ca215f2336b93d75f/IFCSelfAssessGuide.pdf?MOD=AJPERES
(2) The Emergency Preparedness and Response Plan will be reviewed at least annually and updated as needed.

- Emergency Equipment: procedures will be prepared for using, inspecting, testing and maintaining the emergency response equipment; and

- Training: employees and contractors will be trained in emergency response procedures.

B5.11 PATIENTS' RIGHTS

The following management plans and associated mitigation/enhancement measures will be implemented to manage patient rights:

- Patients' Right Charter: The Project will adhere to the Patients' Rights Charter, established in Turkey in 1998.

- Stakeholder Engagement Plan (SEP): This plan will outline measures for engaging positively with users of the IHC (see *Annex I*). It will also include specific measures to improve access to services by Syrian refugees, including information boards in Arabic with information on patient rights and the hotline number of the Danish Refugee Council.

B6 SUMMARY OF RESIDUAL IMPACTS

Residual impacts, following the implementation of prescribed mitigation and enhancement measures are summarised below.

Table B6.1 Summary of Residual Impacts

Impact	Residual Significance Rating
Construction Impacts	
Loss of jobs associated with existing concrete batching plant	Negligible
Loss of jobs at the end of construction	Minor
Direct employment opportunities and skills enhancement	Positive
Local and national economy	Positive
Traffic related impacts	Minor
Risk of accidents due to trespassing on site	Negligible
Conflict with security providers	Negligible
Interactions with workers	Minor
Occupational health and safety risks	Minor
Worker accommodation camp	Negligible
Operation Impacts	
Health impacts	Positive
Employment and local economy	Positive
Patient rights	Negligible
Traffic related accidents and injury	Minor
Security management	Negligible
Exposure to infections/diseases	Minor
Exposure to hazardous materials, waste and radiation	Negligible
Emergency events: fire	Minor

B7 CUMULATIVE IMPACTS

B7.1 INTRODUCTION

Considerable construction activity is already ongoing in Akkent neighbourhood due to the development of residential apartment blocks, business premises and road construction. The land is privately owned and no details of any planned, or reasonably defined developments, are currently available.

B7.2 INTERACTIONS WITH WORKERS DURING CONSTRUCTION

Local residents are already sensitive to the presence of construction workers in Akkent neighbourhood, with perceived levels of crime associated with their presence. Sensitivity will increase with the introduction of an additional construction workforce into the area and there is a risk of negative interactions experienced by local residents.

It is not possible to quantify the extent or number of construction workers already residing or working within Akkent neighbourhood nor is it possible to provide detail on where they are being, or will be, housed.

Due to the levels of uncertainty about the existing or future construction workforce in Akkent, the extent of any cumulative impact related to workers is not possible to assess at this time. However, it is determined that the measures being put in place to manage the Project's workforce (including the Workforce Code of Conduct, Camp Management Plan, and Grievance Mechanism) are appropriate measures to respond to these potentially cumulative impacts.

B7.3 CUMULATIVE IMPACTS ASSOCIATED TRAFFIC DURING CONSTRUCTION

As with the interactions with construction workers, the timing of the other construction developments in Akkent is not clear at this stage and it is not possible to undertake a cumulative impact assessment. Once these developments commence, they will also generate traffic in addition to the health campus traffic. The extent of impact to local residents will need to be considered and monitored as the Project progresses.