

Chapter 2. Investment in sustainable infrastructure in Azerbaijan

This chapter describes sustainable infrastructure planning in Azerbaijan and presents current trends in investment in large-scale infrastructure projects. It compares Azerbaijan's infrastructure plans in the energy, transport, industry and water sectors against its international commitments under the Paris Agreement on climate change and the Sustainable Development Goals (SDGs). The chapter also explores Azerbaijan's strategic documents for long-term economic development, sectoral development and the environment, including those related to climate change mitigation and adaptation. It identifies misalignments between stated goals and observed investment flows and provides recommendations to improve strategic planning for sustainable infrastructure.

Overview

Azerbaijan is an upper-middle income country in the south Caucasus. Its economy is driven by fossil fuel extraction: petroleum products account for over 90% of Azerbaijan's exports, and the oil and gas industry makes up between 33% and 50% of Azerbaijan's GDP depending on oil prices. In recent years, Azerbaijan has significantly improved its investment climate by strengthening the institutional, regulatory and operational environment for companies to operate in the country: the country ranked 25th in the Ease of Doing Business in 2019, compared to 57th in 2018. The stated objective of the country is to diversify foreign direct investments away from coal, oil and natural gas (50% of FDI between 2003 and 2017) towards infrastructure and industry (mining, metallurgy, cement).

While Azerbaijan's infrastructure is relatively high quality compared to other Eurasian countries and upper-middle income countries as a whole, it ranks poorly in the World Bank's Logistics Performance Index (123rd out of 167 countries) due to poor "soft" trade infrastructure, such as the competence of transport operators and customs breakers and the quality of logistics services. Azerbaijan's road and rail networks are in need of modernisation and increased spending on maintenance. Cross-border connectivity projects are top priorities for the government and make up most of Azerbaijan's transport investments, but focusing more on secondary and local roads could improve domestic connectivity and bring down travel costs. The inland transport modal split has heavily shifted to road in the last decade, representing 71% of freight transport and 98% of passenger transport in 2015.

Although the government of Azerbaijan identifies economic diversification and strengthening of the 'non-oil sector' as key priorities in its development strategy *Azerbaijan 2020: A Look to the Future*, many of its investments support the continued dominance of oil and gas in the energy sector and economy more widely. For instance, current investment plans in wind projects, while significant, are dwarfed by large-scale upstream oil and gas projects and pipelines. Azerbaijan currently lacks a mid-century coherent strategy with a strong environmental focus and, crucially, a sufficiently long time horizon to evaluate the synergies and trade-offs associated with different infrastructure investments. Azerbaijan's recent institutional changes have weakened the position of transport and energy, which are key infrastructure sectors, through its merger of the Ministry of Transport with the Ministry of Communication and High Technologies in 2017 and the dissolution of the State Agency for Alternative and Renewable Energy Sources in 2019.

2.1 State of play: economy, investment and climate change in Azerbaijan

Economy and trade

Table 2.1. Key indicators on Azerbaijan's economy

Population (2018)	9 942 334
Urbanisation rate (2018)	56%
Annual population growth (2018)	0.9%
Surface area	86 600 km ²
GDP (USD, current price, 2018)	46 940 million
GDP per capita (USD, current price, 2018)	4 721
Real GDP growth (year-on-year change, 2018)	1.4%
Inflation (average consumer price, y-o-y change, 2018)	1.9%
Exports of goods and services (% of GDP, 2018)	54.3%
Imports of goods and services (% of GDP, 2018)	37.7%
FDI, net inflows (% of GDP, 2018)	3.0%
General government net lending/borrowing (% of GDP, 2019)	4.4%
Unemployment (% of total labour force, 2018)	5.2%
Remittances (% of GDP, 2018)	2.6%
Transparency, accountability and corruption in the public sector rating (1= most corrupt, 6 = least corrupt, 2017)	2.5

Source: World Bank (2019^[1]), *World Development Indicators (database)*, World Bank, <https://datacatalog.worldbank.org/dataset/world-development-indicators>; IMF (2018^[2]), *World Economic Outlook: October 2018*, International Monetary Fund https://www.imf.org/external/datamapper/GGXCNL_NGDP@WEO/OEMDC/ADVEC/WEOWORLD

Economy and demographics

Azerbaijan is an upper-middle income country in the Caucasus. Its population, the largest in the south Caucasus, has grown steadily at annual rates of about 0.9%. Unlike in neighbouring Armenia and Georgia, Azerbaijan's population did not decline following the breakup of the Soviet Union, nor has the country ever experienced non-positive annual population growth rates.

The economy of Azerbaijan, on the other hand, followed a similar trajectory to other former Soviet Union countries. It shrank to less than half of its pre-independence levels, from USD 22.7 billion in 1990 to USD 9.5 billion in 1995, and then slowly recovered throughout the late 1990s and early 2000s. Its GDP surpassed its 1990 levels in 2005 and by 2017 was 56% larger than before independence.

Azerbaijan's territory consists of two unconnected areas separated by Armenia. Larger portion of Azerbaijan's territory is the only part of the southern Caucasus with access to the Caspian Sea, while the Nakhchivan Autonomous Republic, the country's exclave, is landlocked between Armenia, Iran and Turkey. Following years of armed conflict, the Nagorno-Karabakh region of western Azerbaijan bordering Armenia declared its independence in 1991 as the Republic of Artsakh (or the Nagorno-Karabakh Republic), and in 1994 Armenia, Azerbaijan and representatives from the breakaway region signed a ceasefire agreement. To date, no UN member state has recognised the breakaway region's independence. As a result of the conflict, the border between Armenia and Azerbaijan is closed.

Azerbaijan's economy, unlike other countries in the present study except Turkmenistan, depends more heavily on industry and construction (which accounted for 52.2% of GDP in 2018) than on services (35.2%) and agriculture (5.3%). The share of agriculture in Azerbaijan's economy is the second lowest in the region after Kazakhstan (4.4%) (World Bank, 2019^[1]).

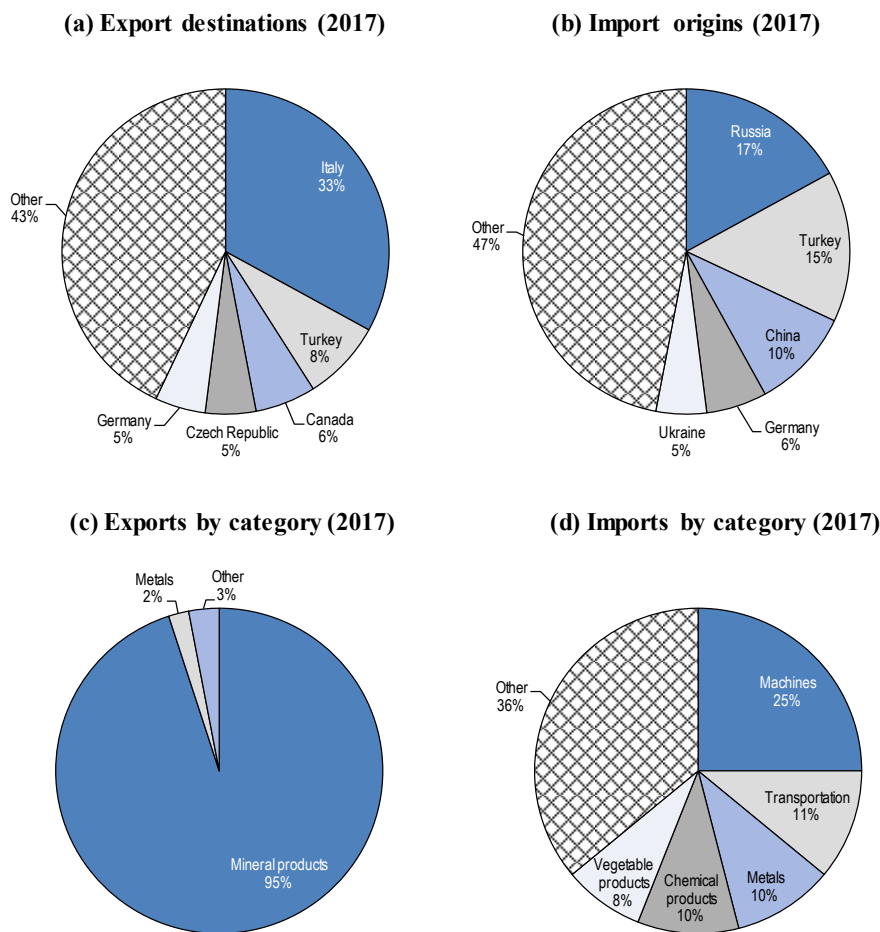
Trade

Azerbaijan is an observer, not a member, of the World Trade Organisation. It is not a member of the Eurasian Economic Union, but it is a target country of the European Union's European Neighbourhood Policy under the Eastern Partnership (EaP) policy initiative. These initiatives aim to deepen EU-Azerbaijan relations through actions focusing on economic development, governance, connectivity and people-to-people contact (European Commission, 2019^[3]). Its trade relations with the EU have been governed by a Partnership and Cooperation Agreement since 1999, and negotiations began in 2017 to establish a more comprehensive trade agreement (European Commission, 2019^[4]).

The oil and gas industry produces all but a small fraction of Azerbaijan's exports (see Figure 2.1(c), where they are classified as 'mineral products'). The country's most important export by far is crude petroleum (82% of exports), followed by petroleum gas (9.1%) and refined petroleum (2.3%). Other than limited exports of metal, the share of other exports is very small. While Azerbaijan exports mostly raw hydrocarbon resources, it imports primarily finished manufactured goods and consumer goods. Its main imports are machinery (25%) and vehicles (11%, mostly cars which account for 3.9% of imports) as well as metals (10%), chemical products (10%) and vegetables (8%) (see Figure 2.1(d)). After cars, Azerbaijan's second most important imported product is refined petroleum.

Azerbaijan's main export market is the European Union (59.2% of exports), especially Italy (33%), the Czech Republic (5.4%), Germany (4.9%) and Portugal (4.7%) (see Figure 2.1(a)). Major non-EU export destinations include Turkey (8%) – with which Azerbaijan has close historical, cultural and linguistic ties, Canada (6%) and Israel (4.5%). Azerbaijan's most important export destinations within the former Soviet Union are its neighbour Georgia (3.8%) and Ukraine (2.5%), while Russia accounts for just 1.4%. The European Union as a bloc is Azerbaijan's most important source of imports (25.5%), with Germany (5.6%), Italy (3.6%), the United Kingdom (3.3%) and the Netherlands (2%) as the sources of most of Azerbaijan's EU imports. Azerbaijan's neighbours, the Russian Federation (17%) and Turkey (15%), are the most important countries for Azerbaijan's imports, followed by the People's Republic of China (9.7%) (see Figure 2.1(b)). Other than the Russian Federation, Ukraine (5.1%), Georgia (3.2%) and Kazakhstan (1.6%) are the former Soviet countries that export the most to Azerbaijan. Azerbaijan's *Strategic Road Map on the Development of Logistics Outcomes* sets goals for increasing trade volumes by 2020 with specific regions and countries compared to 2015 (see section 2.3 on Azerbaijan's key strategic documents). Azerbaijan aims to increase trade via the Black Sea with Central Asia by 40% and with Iran by 25%. It also aims to increase transit volumes for various routes: between Central Asia and Europe by 25%, between China and Europe by 3% and between the Russian Federation and Iran by 40% (President of Azerbaijan, 2016^[5]).

Figure 2.1. Trade of Azerbaijan



Source: Observatory of Economic Complexity (2017^[6]), *Azerbaijan: Exports, Imports and Trade Partners*, Observatory of Economic Complexity, <https://atlas.media.mit.edu/en/profile/country/aze/>

Investment climate

In recent years, Azerbaijan has taken significant reforms to improve its investment climate by strengthening the institutional, regulatory and operational environment for companies to operate in the country. Such reforms and programmes are part of government's efforts to develop industry and improve the image of the country worldwide (OECD, 2019^[7]). According to the World Bank's Doing Business Report (2019^[8]). The country has made significant improvements in dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, and resolving insolvency. Such reforms have led to a significant improvement in the country's overall ease of doing business, which in 2019 was ranked 25th across 190 countries compared to 57th in 2018, making it one of the top 10 performers worldwide (OECD, 2019^[7]).

A recent OECD survey in Azerbaijan also demonstrates positive business perceptions of the reforms in Azerbaijan, with over 50% of the businesses considering all reforms "good" or "very good" (OECD, 2019^[7]). The reforms that have been well-received by businesses

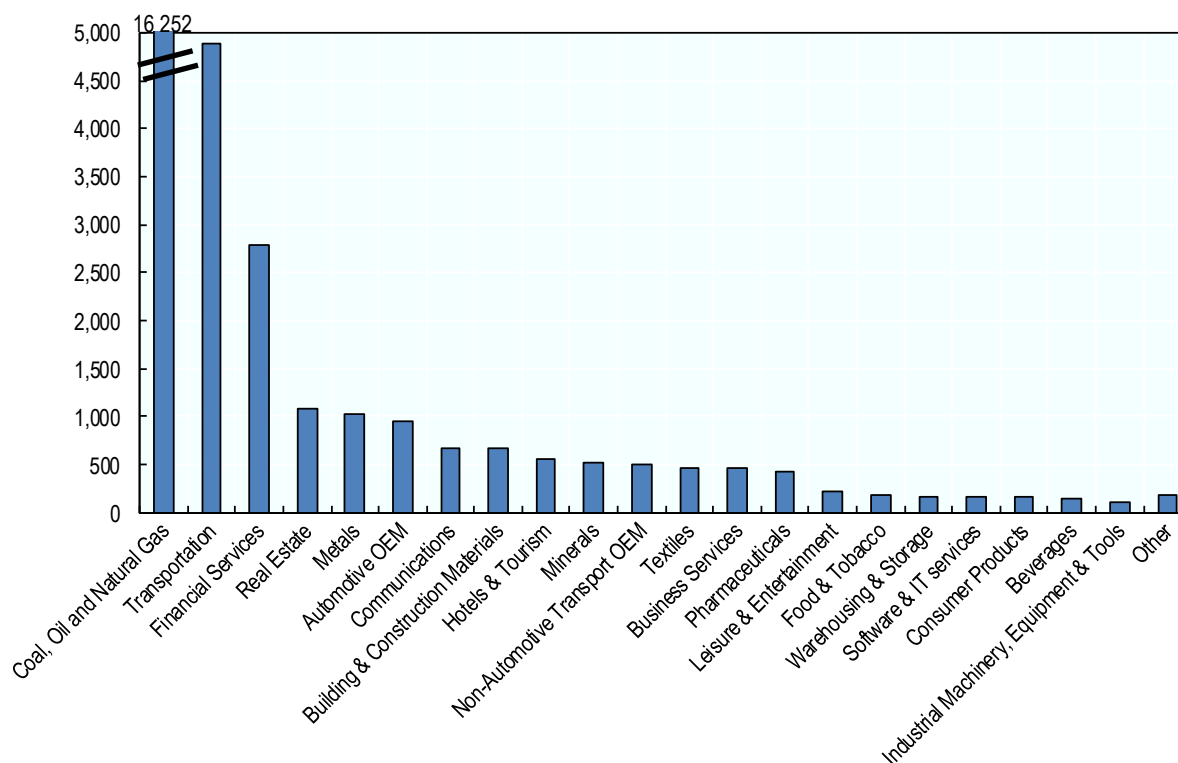
include the suspension of business inspections (with 86% of businesses responding good or very good), as well as the online licensing (82%), and visa services (77%). Other initiatives such as the simplification of the tax system and the simplification of the customs system have also been perceived as positive by businesses in Azerbaijan.

Yet, despite such reforms in improving the investment climate, Azerbaijan still needs to improve its ability to foster skills development, promote competition among firms and reduce uncertainty. Despite the improved regulatory framework, the current business environment still deters entry of new firms and the expansion of existing businesses (EBRD, 2019^[9]). According to some companies surveyed by the OECD, there is volatility in the sectors targeted by the government for growth, which creates uncertainty for businesses and hampers the effectiveness of the initiatives (OECD, 2019^[7]). Companies would welcome greater consistency and long-term commitment across the reform programme.

International data on announced greenfield FDI projects offer insights on cross-border investment by economic activity in Azerbaijan. Between 2003 and 2017, the economy attracted over USD 32.7 billion of greenfield FDI projects, 50% of which was directed towards the coal, oil and natural gas sectors (or USD 16.3 billion) (see Figure 2.2). Infrastructure-related investments, particularly in the transport sector attracted close to USD 5 billion (or 15% of total greenfield FDI), which is relatively high compared to other countries in the region. This is in line with the government's current priorities to develop new trade routes and transport corridors, including the establishment of the Alat free trade zone, the development of the international sea trade port, and the Baku-Tbilisi-Kars railway, which are expected to further attract FDI into the country (German-Azerbaijan Chamber of Commerce, 2018^[10]). Other sectors that attracted greenfield FDI are financial services (USD 2.8 billion), real estate and metals (both with around USD 1 billion). In general, the government has acknowledged the need to diversify its FDI away from coal, oil and natural gas and increase the share of non-oil FDI from 2.6% of GDP in 2017 to 4% by 2025 as stated in the Strategic Road Map on the National Economy (Center for Analysis of Economic Reforms and Communication, 2017^[11]).

Figure 2.2. Greenfield FDI in Azerbaijan by economic activity, 2003-2017

Cumulated greenfield FDI capital between January 2003 and September 2017 in USD million

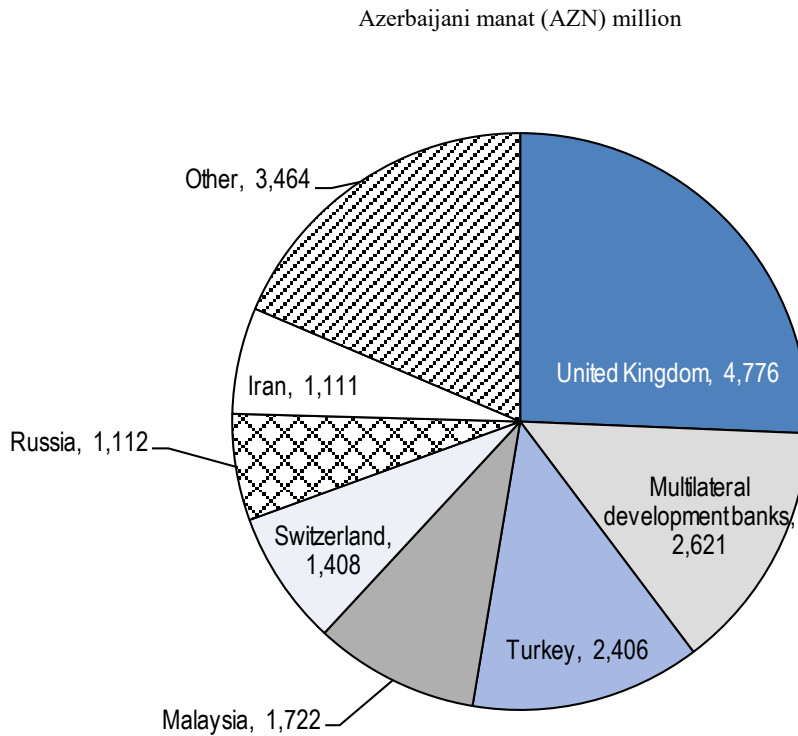


Note: Other includes Plastics, Aerospace, Consumer Electronics, Electronic Components, Chemicals, Medical Devices, Business Machines & Equipment, Paper, Printing & Packaging.

Source: OECD based on fDi Markets (2019^[12]), *fDi Markets: the in-depth crossborder investment monitor (database)*, fDi Markets, <https://www.fdimarkets.com/>

The European Union (and particularly the United Kingdom) is the most important source of foreign direct investment (FDI) in Azerbaijan, providing 30% (and 25.7%) of foreign investment in fixed capital between 2009 and 2017 (see Figure 2.3). The United Kingdom's interest in Azerbaijan centres on the country's oil and gas industry, in which BP actively participates. Collectively, multilateral development banks invested a further 14%, surpassing the investments of Azerbaijan's neighbour Turkey (12.9%). Azerbaijan's other important investors are geographically diverse: Malaysia (9.3%), Switzerland (7.6%), the Russian Federation (6%), Iran (6%), Japan (5.3%) and the United States of America (4.5%). Beyond the Russian Federation, the former Soviet Union countries are not large investors.

The majority of Azerbaijan's public debt (over 70%) is denominated in foreign currencies, and the ratio of debt to GDP is rising (from 11% in 2014 to as high as 38% in 2016). The Azerbaijani currency, the *manat*, depreciated by 60% against the US dollar in 2014 and could face further pressure to depreciate, worsening Azerbaijan's foreign-denominated debt situation. Given the volatility of currency exchange rates and the market value of Azerbaijan's primary exports, the structure and size of Azerbaijan's debt could become unsustainable if faced with adverse shocks (IMF, 2016^[13]).

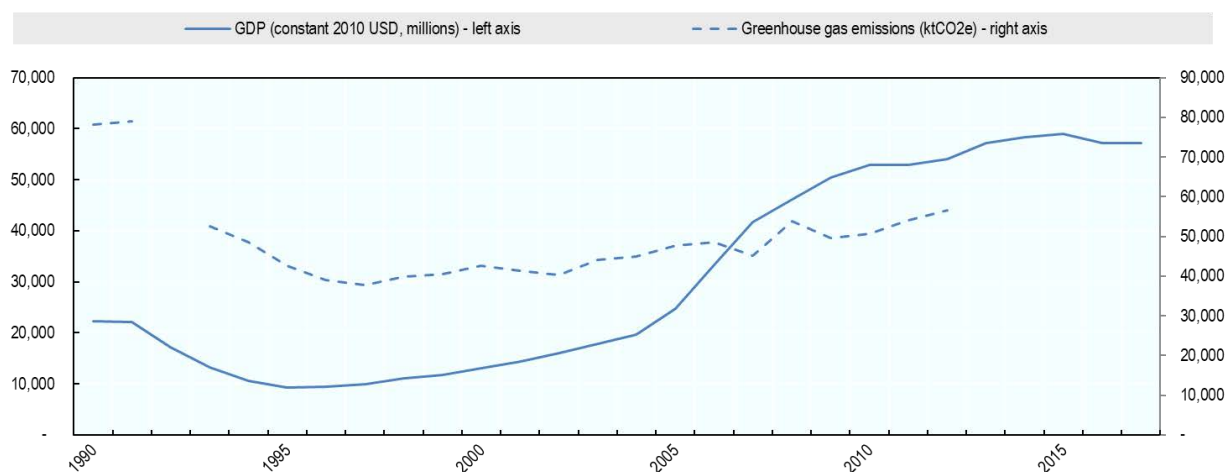
Figure 2.3. FDI in Azerbaijan by source country, 2009-2017

Source: The State Statistical Committee of the Republic of Azerbaijan (2018^[14]), *Foreign investment directed to fixed capital by foreign countries*, The State Statistical Committee of the Republic of Azerbaijan, <https://www.stat.gov.az/source/construction/en/020en.xls>

Climate change

Given the country's relatively small size, its total emissions amount to only 0.1% of total global greenhouse gas (GHG) emissions. Azerbaijan's GHG emissions and GDP both halved in the 1990s, following the breakup of the Soviet Union. Its GHG emissions fell from 78 MtCO₂e in 1990 to 38 MtCO₂e in 1997, while its GDP declined (see Figure 2.4). Over the past two decades, Azerbaijan's emissions have slowly increased but, as of 2012, they have not yet surpassed their 1990 levels. Azerbaijan's economy, on the other hand, has expanded rapidly since the late 1990s; by 2017, it was 2.5 larger than before independence. Consequently, the GHG intensity of Azerbaijan's economy decreased by more than half, from 3.5 kgCO₂e per USD (in constant 2010 dollars) in 1990 to 1 kgCO₂e per USD of GDP by 2012. While this figure is the lowest GHG intensity of the countries analysed in the present study, it is significantly higher than the OECD average (0.35 kgCO₂e per USD in 2012) (World Bank, 2019^[1]).

Azerbaijan's per capita emissions have also dropped from 10.9 tCO₂e in 1990 to 6.1 tCO₂e. While this figure is less than a third of other hydrocarbon-dependent economies like Kazakhstan and the Russian Federation and less than half the OECD average of 12.9 tCO₂ per capita, it is considerably higher than its neighbour Georgia's per capita emissions of 3.8 tCO₂e (World Bank, 2019^[1]).

Figure 2.4. GHG emissions and GDP of Azerbaijan, 1990-2017

Source: World Bank (2019^[11]), *World Development Indicators (database)*, World Bank, <https://data.worldbank.org/indicator/EN.ATM.GHGT.ZG>

Energy (including fuel combustion for transport) accounts for the majority of Azerbaijan's greenhouse gas emissions, at 75.3% in 2012. While this is a sizeable share, it is smaller than in 1990 when energy accounted for 87.2% of total emissions. Azerbaijan's energy-related emissions were 38.5% lower than in 1990, while all other sources have gradually increased emissions since independence. Agriculture accounted for 13.6% of emissions in 2012, while industrial processes made up 5.8% and waste 4.8% (Ministry of Ecology and Natural Resources Republic of Azerbaijan, 2015^[15]).

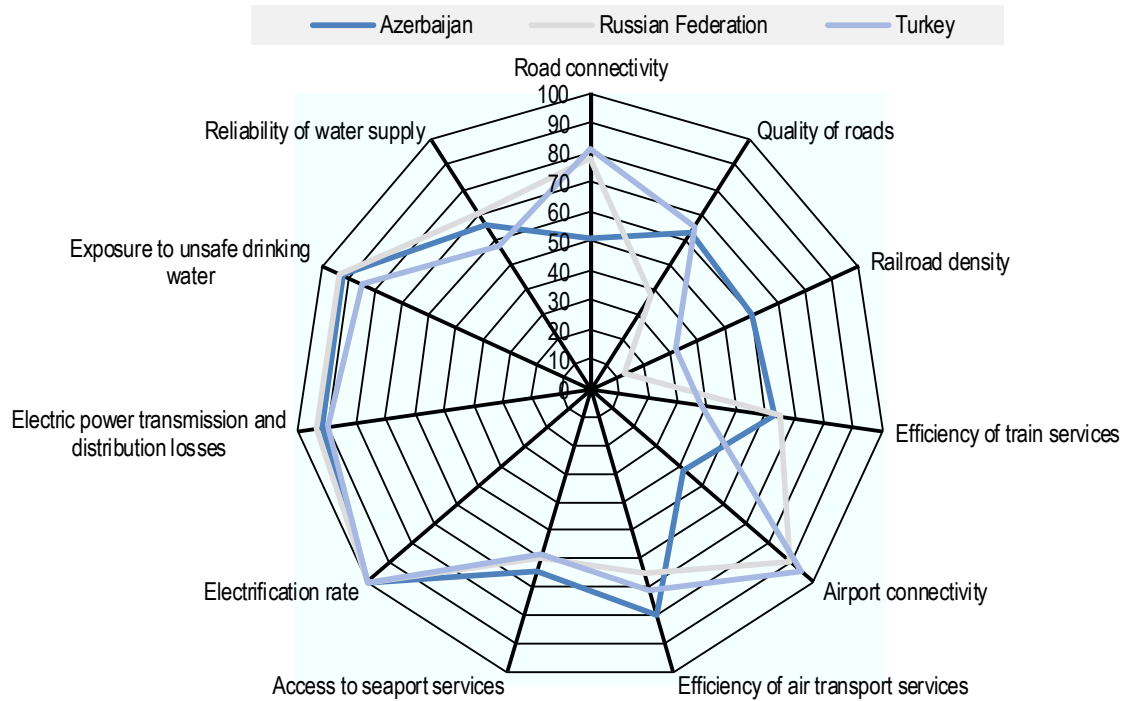
Current trends of decreasing precipitation and rising temperatures linked to climate change are already affecting Azerbaijan's agriculture industry, which employs 38% of the population. Pastureland and vital crops, such as wheat, cotton and grapes, are particularly vulnerable to these changes. The country already faces a shortage of water to meet domestic needs, and projected decreases in water resources (rivers, lakes, reservoirs and glaciers) are set to deepen the deficit. The number of days with maximum temperatures exceeding 35 degrees Celsius in Azerbaijan has increased rapidly, from 3 in the period 1961-1990 to 16 in the 2000s. The capital Baku in 2010 registered 44 days of temperatures over 35 degrees Celsius resulting in increased sunstroke incidence and hospitalisation rates. Climate impacts on economic activity and human wellbeing are projected to worsen without adequate adaptation measures (Ministry of Ecology and Natural Resources Republic of Azerbaijan, 2015^[15]).

2.2 Azerbaijan's infrastructure needs and current plans

Azerbaijan's infrastructure is relatively high quality in comparison to Eurasian countries and upper-middle income countries as a whole. Its infrastructure matches or exceeds the performance of the Russian Federation and Turkey's infrastructure on most indicators, with the notable exceptions of airport and road connectivity (see Figure 2.5). However, Azerbaijan's capital stock per capita is one of the lowest in the former Soviet Union, and much scope remains for increased infrastructure investment, particularly in modernising rail and improving irrigation as well as water supply and sanitation. Infrastructure service delivery varies considerably by region, with rural areas neglected in favour of the capital city region (World Bank, 2015^[16]). Despite its relatively good infrastructure, Azerbaijan

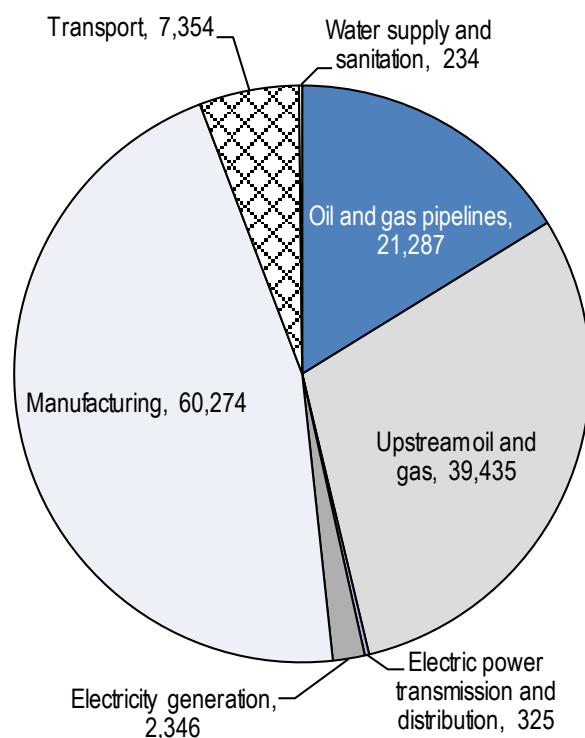
ranks poorly in the World Bank's Logistics Performance Index (123rd out of 167 countries) due primarily to its 'soft' trade infrastructure, such as the competence and quality of its logistics services (World Bank, 2018^[17]).

Figure 2.5. Quality of infrastructure in Azerbaijan



Source: World Economic Forum (2017^[18]), *The Global Competitiveness Report 2017-2018*, World Economic Forum, <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

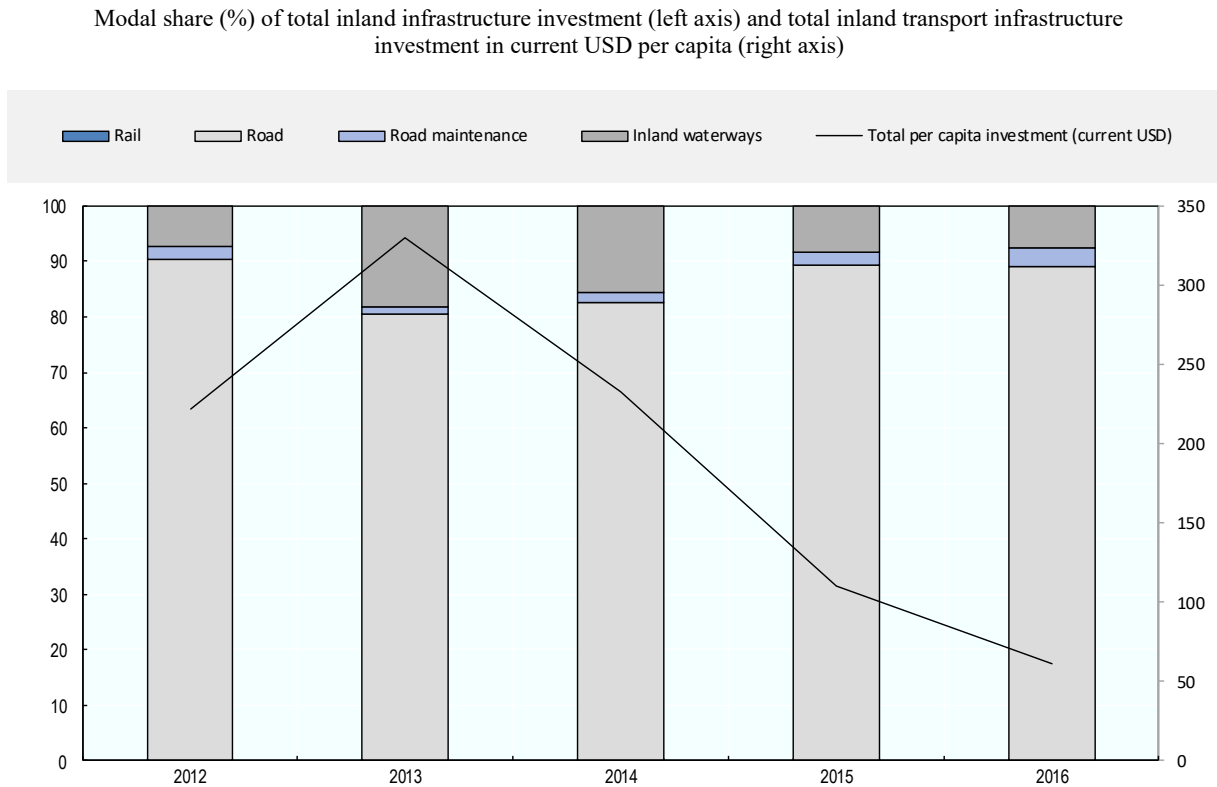
Out of the USD 131.4 billion of planned and under construction investment projects tracked, energy related projects account for the majority of investments, or USD 63.4 billion (48%) of total investments, followed by manufacturing projects (USD 60.2 billion or 46%) and transport (USD 7.5 billion or 6%) (see Figure 2.6). Water projects only account for 0.2%, or USD 234 million of total investments and they primarily relate to water supply and sanitation projects. Within energy investments, upstream oil and gas projects account for the majority of investments (over 62% or USD 39.4 billion of total energy projects), followed by large oil and gas pipeline projects (USD 21.2 billion or 34%) and electricity generation (USD 2.3 billion or 4%). Electric power transmission and distribution investments are limited to USD 325 million, and aim at upgrading the distribution network in secondary cities and rural areas (ADB, n.d.^[19]).

Figure 2.6. Investment projects in Azerbaijan, by sector

Source: OECD analysis based on accessed databases as of June 2019

Transport

Transport costs are high in Azerbaijan, and domestic connectivity outside of the capital, Baku, presents a major barrier for rural residents' economic prospects. Azerbaijan's road and rail networks are in need of modernisation and increased spending on maintenance in order to take advantage of the country's position by the Caspian Sea and being in proximity to major markets such as Iran, the Russian Federation and Turkey (World Bank, 2015^[16]). However, in recent years Azerbaijan's per capita spending on transport infrastructure has declined (see Figure 2.7). Road infrastructure investments dominate government spending on transport infrastructure, while inland waterway transport infrastructure remains of significant but secondary importance. Only 0.2% of inland infrastructure spending benefits the country's rail network (ITF, 2019^[20]).

Figure 2.7. Inland transport infrastructure investment in Azerbaijan (2012-2016)

Source: ITF (2019^[20]), *Transport performance indicators*, International Transport Forum, <https://doi.org/10.1787/trsprt-data-en>

Azerbaijan's inland transport modal split for freight has shifted towards road over time. In 2005, road only accounted for 44% of the country's freight, measured in tonne-kilometres, but by 2015 it had risen to 71% (15.5 billion tkm), while rail's share dropped from 56% to 29% (6.2 billion tkm). For passengers, road's dominance is even starker: in 2015, 98% of passenger transport (23.8 billion passenger-km, up from 15.3 billion pkm in 2009) occurred by road, compared to only 2% (0.5 billion pkm, down from 1.0 billion pkm in 2009) by rail (UNECE, 2018^[21]).

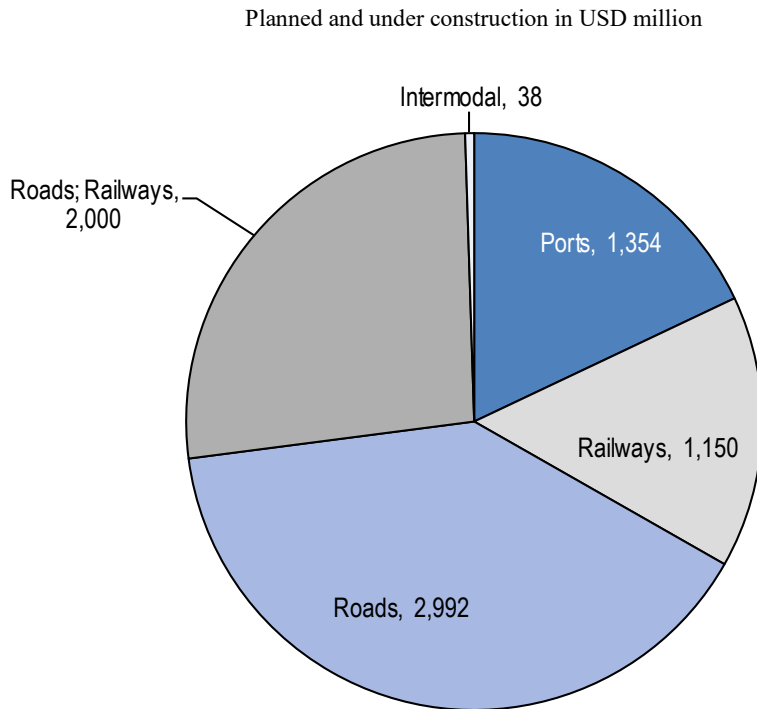
In the road sector, the government's main development strategy, *Azerbaijan – 2020: View to the Future*, prioritises the development of two corridors: one running east-west from the capital Baku to Georgia and another north-south corridor from the Russian Federation to Iran (Government of Azerbaijan, 2012^[22]). The World Bank, however, has recommended focusing on secondary and local roads to improve domestic connectivity and bring down travel and trade costs (World Bank, 2015^[16]).

Azerbaijan's Caspian Sea port complex in Baku is the country's most important transport infrastructure asset, and the government has prioritised it for further development through modernisation and capacity increase investments mandated by *Azerbaijan – 2020* (Government of Azerbaijan, 2012^[22]). As Azerbaijan may exhaust its oil and gas reserves within the next 30 years at current production rates, the Baku's new, modern port in the Alat district is seen as a key component of the country's strategy to transition from an oil producer to a regional transport and commercial hub (Shepard, 2016^[23]).

Azerbaijan's state-owned rail company, Azerbaijan Railways, owns and operates the country's rail network. Azerbaijan has international links with Georgia, Iran (only from the Nakhchivan exclave), the Russian Federation and Turkey (via the Kars-Tbilisi-Baku railway). Due to the ongoing conflict with Armenia over Nagorno-Karabakh (the self-proclaimed Republic of Artsakh), no rail links exist with Armenia and, as a consequence, rail traffic between the majority of Azerbaijan and its exclave must bypass Armenia via Iran or Georgia and Turkey. *Azerbaijan – 2020* lists rail links between the capital and Böyük Kəsik (on the Georgian border) and Yalama (on the Russian border) as priority projects (Government of Azerbaijan, 2012_[22]).

Given its strategic position by the Caspian Sea and near large markets such as Turkey, Iran, Europe and Russia, Azerbaijan partakes in several international connectivity initiatives. Azerbaijan is a key component of the EU initiative TRACECA (Transport Corridor Europe-Caucasus-Asia), with its key Black Sea port (Baku) and well-established rail and road links to the Black Sea and onwards via Georgia and Turkey (TRACECA, 1998_[24]). CAREC Corridor 2 also passes through Azerbaijan, linking Central Asia to the Caucasus via the port of Baku and onwards to Turkey and Europe through Georgia and its Black Sea ports (ADB, 2017_[25]). Other initiatives include the Middle Corridor Trans-Caspian International Transport Route (2019_[26]) (along with Georgia and Kazakhstan) and the South-West Transport Corridor (along with Georgia and Iran) (Financial Tribune, 2017_[27]).

Azerbaijan's planned and current transport infrastructure projects account for around USD 7.5 billion, and consist primarily of roads (40% or nearly USD 3 billion), and projects that target both roads and railway development (27% or USD 2 billion) (see Figure 2.8). The rest of investments are shared between ports and railways, each holding similar shares of 18% and 15% respectively, followed by very small investments in an international logistics centre of USD 38 million (or around 1%). Investment projects in the roads sector are mainly focused on expanding or rehabilitating highways, which are important in order to further strengthen Azerbaijan's geographical position as an important link between the Black and Caspian seas and between Russia and Iran.

Figure 2.8. Transport projects in Azerbaijan, by sub-sector

Note: The category ‘Roads; Railways’ includes projects with both rail and road components, while ‘Intermodal’ refers primarily to logistics centres.

Source: OECD analysis based on accessed databases as of June 2019.

Cross-border connectivity projects make up the majority of Azerbaijan’s transport investments (Table 2.2). This includes large-scale road and railway projects as well as ports that aim to increase Azerbaijan’s connectivity with neighbouring countries as well as other international markets. Among the most important is the Afghanistan-Turkmenistan-Azerbaijan-Georgia-Turkey transport corridor, a USD 2 billion project that aims to enhance economic integration of participating countries through more intra-regional trade (AzerNews, 2018^[28]). A number of projects are also part of the International North-South Transportation Corridor initiative, such as a 7 200 km freight route connecting India, Iran, Azerbaijan and Russia via ship, rail and road, which aims to increase connectivity and reduce transport costs (RailFreight.com, 2019^[29]). Another example is the Astara-Astara Railway, a USD 1 billion project which is expected to become the second rail connection between Iran and Azerbaijan. At the same time, the USD 651 million Railway Sector Development Programme aims to rehabilitate the Sumgayit-Yalama rail line connecting Azerbaijan to Russia, which is also considered a key link in the North-South Railway Corridor of the CAREC corridors (ADB, n.d.^[30]).

Table 2.2. Hotspot projects in the transport sector in Azerbaijan

(a) Under construction					
Name	Sub-sector	Description	Project value (USD million)	Funding source	Type of investment
Astara-Astara Railway (Qazvin-Rasht-Astara)	Railway	The project includes the development of a 82.5 meter long bridge over the Astarachay River, and is expected to become the second rail connection between Iran and Azerbaijan. The project is part of the International North-South Transportation Corridor initiative, which aims to increase connectivity and reduce transport costs. Construction started in 2016.	1 000	JSC Russian Railways and Azerbaijan Railways as project implementers.	Greenfield
Baku International Sea Trade Port Alyat (Phase 1)	Port	The project entails the construction of a new port in the southern part of Azerbaijan's capital and it is an extension of the Baku port. Upon completion, the port will have a capacity of 25 million tonnes and 1 million TEU. It is expected to be a major link between Europe, Turkey, Iran, India, and Russia. Construction started in 2016.	760	Government of Azerbaijan with Baku International Sea Trade and Port CJSC as project implementers and operators.	Greenfield
Railway Sector Development Programme	Railway	The project involves the rehabilitation of the track and structure of the Sumgayit -Yalama rail line. This rail line is considered as a key link in the North-South Railway Corridor within the CAREC network.	651	ADB, Government of Azerbaijan, French Development Agency	Brownfield
(b) Planned					
Name	Sub-sector	Description	Project value (USD million)	Funding source	Type of investment
Afghanistan-Turkmenistan-Azerbaijan-Georgia-Turkey Corridor	Road; Railway	The project will connect Torgundi (Afghanistan) with the port of Turkmenbashi (Turkmenistan) and, via the Caspian Sea, to Baku. From there, further connections will link Baku to Tbilisi, Poti and Batumi (Georgia) and further on to Ankara and Istanbul (Turkey).	2 000	Governments of Afghanistan (20%), Turkmenistan (20%), Azerbaijan (20%), Georgia (20%), Turkey (20%)	Greenfield
Hajigabul-Georgian Border Motorway Expansion Project	Road	The project involves the expansion into a four-lane road of 184 km of dual-lane highway between Hajigabul and the Georgian Border in Azerbaijan. The project is jointly financed by BNP Paribas and the World Bank. The project was approved in 2010 and completion is expected by the end of 2019.	600	BNP Paribas, World Bank	Brownfield

Note: Refer to the Preamble for the present report's definition of 'hotspot' and other information on how the projects above were selected and prioritised.

Source: CSIS (2019^[31]); UNESCAP (2017^[32])

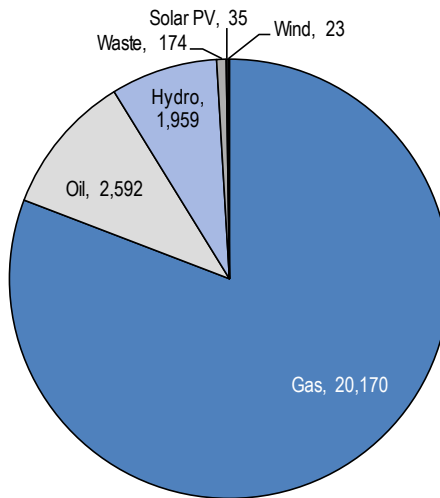
Energy

Overall, Azerbaijan's energy sector benefits from better quality infrastructure than other strategic sectors, but the country's electricity transmission and distribution systems underperform compared to its neighbours. While neighbouring Georgia's electricity grids led to losses of 7.3% of electricity output, the Azerbaijani transmission and distribution networks have a loss rate of 9.7% (IEA, 2019^[33]). Like other former Soviet Union countries, Azerbaijan has achieved universal electricity access.

The energy sector is of fundamental importance to the Azerbaijani economy. Petroleum products account for over 90% of Azerbaijan's exports, and the oil and gas industry makes up a large but variable share of the economy. Oil and gas accounted for 33% of Azerbaijan's GDP in 2016 when oil prices were low (USD 46.4 per barrel of Brent crude) and 50% in 2011 when oil prices were higher (USD 112 per barrel) (Deloitte, 2017^[34]). To export its oil and gas to Turkey and onwards to Europe, Azerbaijan has several pipelines that cross its neighbour, Georgia: the Baku-Tbilisi-Ceyhan (BTC) pipeline, Baku-Tbilisi-Erzurum (BTE) pipeline and the Trans-Anatolian Natural Gas Pipeline (TANAP) (Emerging Markets Forum, 2019^[35]).

Azerbaijan's electricity generation relies on its hydrocarbon resources. Natural gas-fired power plants generate 81% of the country's electricity; while petroleum-fired power plants contribute a further 10% (see Figure 2.9). Historically, Azerbaijan relied more heavily on oil-fired power plants than on cleaner burning natural gas-fired plants. The former accounted for 66% of generated electricity in 1995 compared to just 16.9% for natural gas, but by the 2000s natural gas-fired electricity generation had surpassed oil-fired power. Hydroelectric dams are also an important part of Azerbaijan's electricity mix, although their share has varied considerably in the past decade. Hydro accounted for 8% (2.0 TWh) of the country's electricity in 2016, which is considerably less than in 2010 (18%, 3.4 TWh) but a slight increase from 2015 (6.6%, 1.6 TWh). Azerbaijan also began generating electricity from waste incineration in the 2010s; by 2016 waste accounted for 1% of power generation. Other renewables also account for small but increasing fractions of Azerbaijan's electricity mix: Wind and solar photovoltaics (PV) generated 23 MWh (0.09%) and 35 MWh (0.14%) respectively in 2016 compared to 1 MWh (0.005%) in 2010 for wind and 5 MWh (0.02%) in 2015 for solar PV (IEA, 2018^[36]).

Figure 2.9. Electricity generation by fuel (GWh, 2016)



Source: International Energy Agency (2018^[36]), *IEA World Energy Balances 2018*, International Energy Agency, <https://webstore.iea.org/world-energy-balances-2018>

Azerbaijan, as a result of its hydrocarbon reserves, is a net energy exporter and does not face the same energy security concerns as its neighbour Georgia. It exported 37.3 Mt and 36.5 Mt of oil in 2015 and 2016 respectively making it the third largest oil exporter in the

former Soviet Union after the Russian Federation and Kazakhstan. It is also a net exporter of natural gas (6.8 Mtoe in 2015, 6.5 in 2016) and electricity (0.01 Mtoe in 2015, 0.08 Mtoe in 2016) (IEA, 2018^[36]).

Although the government of Azerbaijan identifies economic diversification and strengthening of the ‘non-oil sector’ as key priorities in its development strategy *Azerbaijan-2020*, many of its energy-related goals support the continued dominance of oil and gas in the energy sector and economy more widely. *Azerbaijan-2020* singles out Phase 2 of the Shah Deniz gas field and its connection to the Trans-Anatolian natural gas pipeline (TANAP) as priorities (Government of Azerbaijan, 2012^[22]).

The government has set a number of targets related to renewable energy use and energy efficiency. The *National Strategy of Azerbaijan on the Use of Alternative and Renewable Energy Sources (2015-2020)* aims to increase the share of renewables in electricity generation to 20% and in total energy consumption to 9.7% by 2020 (EaPGREEN, 2016^[37]). The *Strategic Roadmap on Development of Utilities* sets the following goals for diversifying the country’s installed capacity for electricity generation: 350 MW of wind, 50 MW of solar and 20 MW of bioenergy by 2020 (President of Azerbaijan, 2016^[38]). Recognising the inefficiency of existing transmission and distribution networks, the *Roadmap* also aims to reduce electricity losses to 7% in Baku and 8% elsewhere in the country as well as to limit natural gas losses to 8% throughout the country (Det Norske Veritas, 2018^[39]).

In terms of investment projects in electricity generation under construction and planned, Azerbaijan’s main focus is on wind-farm projects, which account for almost 100% of investments for a total capacity of around 824 MW. In fact, wind power generation is one of the biggest potential sources for renewable energy generation, with a potential capacity of 4 500 MW (Aliyeva, 2018^[40]). Yet, despite this potential, investments in wind power projects are small compared to continued investment in the oil and gas industry. There is a strong focus on large-scale upstream oil and gas projects as well as oil and gas pipelines among Azerbaijan’s energy projects (see Table 2.3). Several of these projects are part of the Southern Gas Corridor, which consists of several infrastructure projects aimed at increasing the energy security of Turkey and the European Union by bringing gas from the Caspian region to Europe (AIIB, 2016^[41]).

One of the most significant projects under construction, which is also expected to have environmental implications, is the Shaz-Deniz Full Field Development Project, which is one of the largest gas development projects in the world estimated to cost around USD 28 billion with financing from a consortium of oil companies. It will allow export of gas from Azerbaijan to Europe and Turkey through more than 3 500 kilometres of pipelines across Azerbaijan, Georgia, Turkey, Greece, Bulgaria, Albania and under the Adriatic Sea to Italy. Another important planned project is the Trans Anatolian Natural Gas Pipeline (TANAP) Project, a 1 850 km pipeline that will allow Azerbaijan to almost triple its exports of natural gas from 8.1 bcm per annum to about 24 bcm per annum, therefore strengthening the country’s integration with regional and European energy markets (AIIB, 2016^[41]).

Table 2.3. Hotspot projects in the energy sector in Azerbaijan

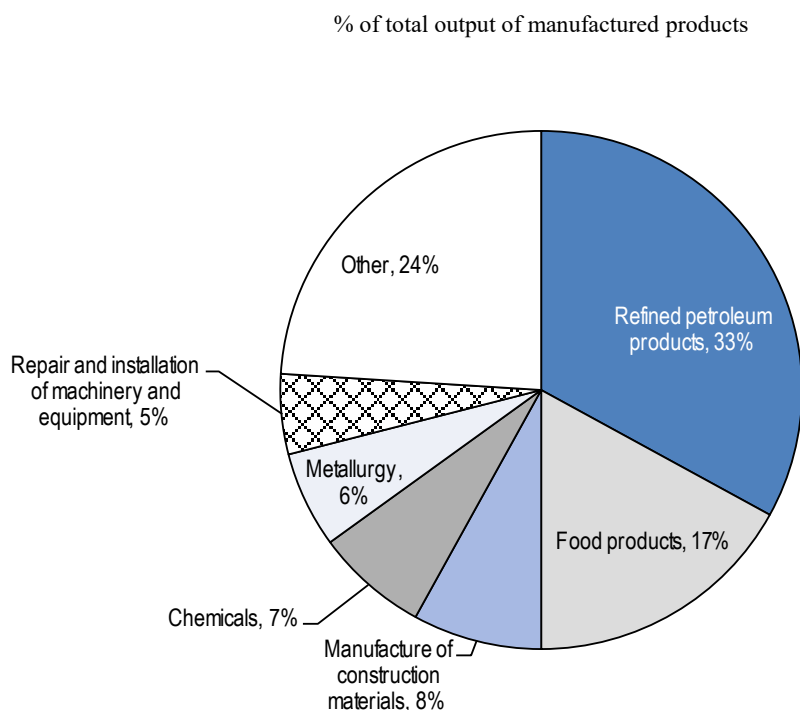
(a) Under construction					
Name	Sub-sector	Description	Project value (USD million)	Funding source	Type of investment
Shah-Deniz Full Field Development (FFD)	Upstream oil and gas	The project involves the full development of Shah-Deniz gas field by adding 16 billion cubic metres per year (bcma) of gas production (stage 2) to the existing 8 bcma (stage 1). As one of the largest gas developments in the world, its expansion will substantially increase the security and diversity of European gas imports. It will allow for export of gas from Azerbaijan to Europe and Turkey. The project has been under construction since 2015.	28 000	BP Global, TPAO, SOCAR, PETRONAS, Lukoil, NICO	Greenfield
Azerbaijan-Georgia-Romania-Interconnection (AGRI) LNG project	Oil and gas pipeline	The project involves the construction of a LNG pipeline to supply LNG from Azerbaijan over the Black Sea to Romania and a regasification terminal at the Romanian port of Constanta. The project's projected capacity varies between 2 and 8 bcma.	4 500	SOCAR, GOGC, MVM Group	Greenfield
Trans Adriatic Pipeline	Oil and gas pipeline	The project involves the construction of a 878km-long pipeline that will transport natural gas from Shah Deniz II field in Azerbaijan to Southern Italy, and further to Western Europe. The initial annual capacity of the project will be 10 billion cubic metres. The project is the final section of the Southern Gas Corridor transporting natural gas from the Caspian Sea to Europe.	4 287	Snam Rete Gas, BP Global, SOCAR, Fluxys, Enagas, AXPO Group	Greenfield
Trans-Caspian Gas Pipeline	Oil and gas pipeline	The project involves the construction of a 300km-long pipeline that will transport gas from Turkmenistan to Russia via Kazakhstan. The total capacity will be 10 bcma.	3 000	Government of Azerbaijan	Greenfield
Power Distribution Enhancement Investment Program - Tranche 1	Electric power transmission and distribution	The project involves the upgrading of power distribution networks in secondary cities and rural areas to provide more reliable electricity to households. Overall, the project is expected to benefit 1.4 million consumers and stimulate the overall economy.	325	ADB	Brownfield
(b) Planned					
Trans Anatolian Natural Gas Pipeline (TANAP) Project	Oil and gas pipelines	The project plans to build a 1 850km-long natural gas pipeline from Shah Deniz 2 field in Azerbaijan to Turkey. The total capacity will be 16 bcma, whereby 6bcm/annum will be consumed by Turkey while the remaining will be sold to markets in South Eastern Europe. The project is part of the Southern Gas Corridor Program and was approved in 2016. .	8 600	EBRD; World Bank; AIIB; EIB; Turkey; British Petroleum; Private Commercial Sources; Azerbaijan	Brownfield
Alat Gas-fired IPP Project	Natural gas	The planned project entails the construction of a 750 MW natural gas-fired electric power plant in Azerbaijan. The project encountered significant delays. The Alat Gas-fired IPP project is the country's first independent power producer (IPP).	1 100	Korea Electric Power Corp	Greenfield
Wind Farm Project in the Caspian Sea	Wind	The planned project entails the construction of a 200 MW wind farm in the Caspian Sea financed by China's Export Import Bank. The project is expected to fully contribute to the renewable energy capacity of Azerbaijan.	510	China Export Import Bank	Greenfield
Pirallahi Island Wind Farm Project	Wind	The project entails the construction of a 200 MW wind power station to provide stable electricity to Pirallahi and Chilov islands	430	N/A	Greenfield
Pirekushkul Wind Farm	Wind	The project comprises the construction of a wind farm located in Absheron, Azerbaijan. The total capacity is estimated at 100 MW.	226	N/A	Greenfield

Note: Refer to the Preamble for the present report’s definition of ‘hotspot’ and other information on how the projects above were selected and prioritised. GOGC = Georgian Oil and Gas Corporation; NICO = Naftiran Intertrade Company; PETRONAS = *Petroleum Nasional Berhad* (Malaysian oil and gas company); SOCAR = State Oil Company of Azerbaijan Republic, TPAO = *Türkiye Petrolleri Anonim Ortaklığı* (Turkish Petroleum) *Source:* ADB (2019^[42]), AGRI (n.d.^[43]), AIIB (2019^[44]); BP Azerbaijan (n.d.^[45]), CSIS (2019^[31]), Dealogic (2019^[46]), the Export-Import Bank of China (2019^[47]), IJGlobal (2019^[48]), Renewables Now (n.d.^[49]), Thomson One (2019^[50]), Trans Adriatic Pipeline AG (n.d.^[51]), Trans-Caspian Pipeline (n.d.^[52]) as of June 2019.

Industry and mining

Azerbaijan’s manufacturing sector is highly connected to the country’s oil and gas industry, with refinement of petroleum products and the production of chemicals, primarily petrochemicals, accounting for 33% and 7% of manufactured industrial output respectively (see Figure 2.10). Other than hydrocarbon-related products, the only other part of the manufacturing sector with a significant role in Azerbaijan’s exports is metallurgy, primarily aluminium, iron and copper products. In the case of Azerbaijan’s aluminium industry, however, the country exports more raw aluminium than finished aluminium goods (e.g. aluminium plating) (Observatory of Economic Complexity, 2017^[6]).

Figure 2.10. Manufactured product categories by value, 2017



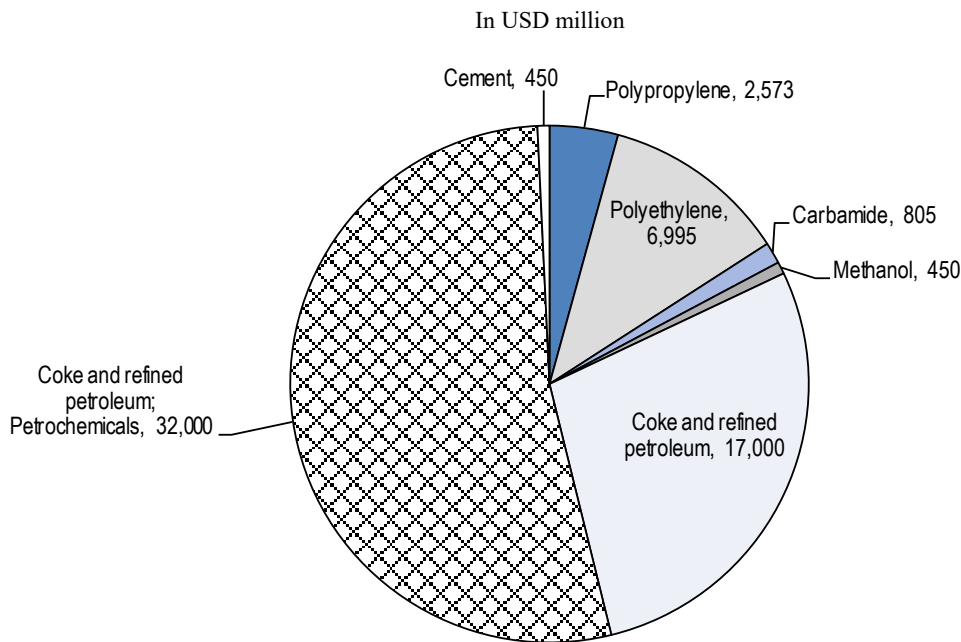
Source: The State Statistical Committee of the Republic of Azerbaijan (2018^[53]), *Industry of Azerbaijan: Manufacture of the most important types of industrial products in natural value*, The State Statistical Committee of the Republic of Azerbaijan, <https://www.stat.gov.az/source/industry/?lang=en>

The *Strategic Road Map on Development of Heavy Industry and Machinery* identifies the following industries as priorities for development to reduce dependence on oil and gas: mining, metallurgy, construction materials (cement), oil and gas processing and electrical equipment production. By 2020, Azerbaijan aims to construct a new iron ore extraction and processing plant and to reduce its reliance on imported parts for agricultural equipment by

65% and for gas equipment by 45% (President of Azerbaijan, 2016^[54]). *Azerbaijan-2020* lists a number of diverse industries for development in addition to those in the *Strategic Road Map*: aluminium production, the space industry and food industries (Government of Azerbaijan, 2012^[22]).

Azerbaijan's investments in the manufacturing sector show a strong focus on coke and refined petroleum and chemicals projects. According to Figure 2.11, hydrocarbon-related projects for the production of fuels (coke and refined petroleum) or petrochemicals account for the vast majority of Azerbaijan's investment in industry. Over 53% (USD 32 billion) of investments are directed towards the production of both fuels and petrochemicals, while a further 28% of investments focus exclusively on fuels (coke and refined petroleum). Projects for the production of petrochemicals such as polyethylene (12%) and polypropylene (4%) also make up a significant portion of investments. Such projects are expected to support the development of the petrochemical and chemical industry including through modern technologies, allowing Azerbaijan to be one of the largest producers in the region. For example, the Sumgait Polypropylene Plant is a USD 995 million project located close to the capital Baku and is expected to produce around 184 000 tonnes of polypropylene per year, 70% of which will be exported to Europe, Turkey and other neighbouring countries (see Table 2.4).

Figure 2.11. Industry projects in Azerbaijan, by sub-sector



Source: OECD analysis based on accessed databases as of June 2019

Table 2.4. Hotspot industry projects in Azerbaijan

Name	Sub-sector	Description	Project value (USD million)	Funding source	Type of investment
SOCAR Gas Processing and Petrochemicals Plant	Coke and refined petroleum; Chemicals	The project involves the construction of a gas processing and petrochemicals plant 60km south of Baku. The total capacity of the plant will be approximately 10 billion cubic m of natural gas per annum. The project is under construction since 2016.	15 000	SOCAR	Greenfield
Ethylene-Polyethylene Plant of the Azerikimya State	Chemicals	The project involves the development of 19 petrochemical plants with modern technologies. The plants will allow Azerbaijan to be the largest different petrochemical product producer in the region. The project is under construction since 2008.	6 000	Azerikimya State Concern Private Investment	Greenfield
Sumgait Polypropylene Plant	Chemicals	The project involves the construction of a polypropylene plant located 30km north of Baku. The expected capacity is 184 000 tonnes per year, 30% of which will be for the local market and the rest to be exported to Europe, Turkey and CIS. The project is under construction since 2013.	995	SOCAR; Gilan Holding; Pasha Holding; Azersun Holding.	Greenfield
(b) Planned					
Name	Sub-sector	Description	Project value (USD million)	Funding source	Type of investment
Baku Oil & Gas Processing Complex	Coke and refined petroleum	Project planned since 2014	17 000	SOCAR	N/A
Garadag Refinery and Petrochemical Complex	Coke and refined petroleum; Chemicals	Project planned since 2012	17 000	SOCAR	Greenfield

Note: Refer to the Preamble for the present report's definition of 'hotspot' and other information on how the projects above were selected and prioritised. SOCAR = State Oil Company of Azerbaijan Republic.

Source: SOCAR GPC (2019_[55]), Chemicals Technology (2019_[56]), Thomson One (2019_[50]), IJGlobal (2019_[48]).

Water

Azerbaijan presents limited investments in the water sector. Currently, there is only one project financed by the World Bank related to the Second National Water Supply and Sanitation Project, accounting for a total of USD 234 million. The project aims at providing reliable water supply and sanitation services in selected regional centres of the country (World Bank, n.d._[57]). In general, Azerbaijan's water supply and sanitation infrastructure is of relatively good quality. It has the second highest share of population with access to clean water (92%) in the region, just behind Kazakhstan (93%), and the second most reliable water supply, after Georgia (World Economic Forum, 2017_[18]). At the same time, only around half of Azerbaijan's potentially arable land is equipped for irrigation and half of the irrigated agricultural land lacks adequate drainage (ADB, 2019_[58]). To further improve Azerbaijan's water infrastructure, the *Strategic Roadmap on Development of*

Utilities aims to reduce commercial losses of water from 20% to at least 14% and distribution losses from 31% to 25% by 2020. It also aims to increase the level of waste water collection from 46% to 65% (President of Azerbaijan, 2016^[38]).

2.3 Strengths and weaknesses of existing institutional set-up for sustainable infrastructure planning

Strategic planning and links between long-term goals, infrastructure plans and environmental considerations

Azerbaijan adopted a long-term development strategy in 2012, *Azerbaijan 2020: A Look to the Future*, which describes the government's vision for strengthened economic growth, diversification away from fossil fuels and the development of key sectors, including information and communications technologies (ICT) and logistics (see Table 2.5 and Table 2.6). The government complemented this document in 2016 with its *Strategic Road Map on the National Economy* and a series of twelve sectoral road maps for key economic sectors with quantitative targets for 2020, 2025 and some unspecified for post-2025.

Azerbaijan needs a longer-term development strategy, preferably to the mid-century, to plan its transition towards other economic activities. While *Azerbaijan 2020* and the *Strategic Road Map* both discuss environmental challenges, they do not articulate a clear action plan on greenhouse gas emissions or the long-term sustainability of the country's transport and energy systems. Azerbaijan would benefit from a coherent document with a strong environmental focus and, crucially, a sufficiently long time horizon to evaluate the synergies and trade-offs associated with different infrastructure investments.

Azerbaijan also lacks formal strategies, instead it has set strategic directions for certain key sectors. One of the *Strategic Road Map*'s primary objectives is to strengthen the non-oil sectors of the economy through increases in foreign direct investment (FDI) flows, support for export-oriented non-oil industries and increased employment in services (particularly tourism) and commodities manufacturing (e.g. industry and food production). The *Strategic Road Map* also calls for the government to reduce its budgetary dependence on transfers from SOFAZ, Azerbaijan's energy-related sovereign wealth fund, from about 50% in 2016 to 15% by 2025. However, despite these goals of economic diversification, the oil and gas sector still looms large in the country's development vision, most notably with the expansion of production at the Shah Deniz gas field.

Among the sectoral road maps that accompanied Azerbaijan's *Strategic Road Map on the National Economy* were strategies relating to upstream oil and gas, the *Strategic Road Map on Oil and Gas Development*, and the end use of energy (both from hydrocarbons and other sources), the *Strategic Roadmap on Development of Utilities*. However, Azerbaijan does not have a strategy for the energy sector as a whole and currently lacks legislation on energy efficiency standards. The government is in the process of drafting both documents (EU Neighbours, 2018^[59]).

In the transport sector, both *Azerbaijan-2020* and the *Strategic Road Map on the Development of Logistics Outcomes* set goals relating to the development of transport, primarily in terms of international connectivity and trade facilitation. Neither document presents a holistic development plan for the transport sector including improved secondary and rural roads to improve domestic connectivity, which has been identified as a barrier to regional economic development (World Bank, 2015^[16]).

Institutional set-up and decision making processes

Recent institutional changes have weakened the position of key infrastructure sectors. In 2017, Azerbaijan's Ministry of Transport was merged into the Ministry of Communication and High Technologies to form the Ministry of Transport, Communications and High Technologies. Based on human resource allocations, the new ministry remains dominated by the previous Ministry of Communications and High Technologies: according to the new ministry's website, the two transport-related departments have only 23 employees, while the four ICT-related departments employ 40. Moreover, the minister and all of his deputies previously worked at the Ministry of Communication and High Technologies (Ministry of Transport, Communications and High Technologies of the Republic of Azerbaijan, n.d.^[60]).

In 2019, Azerbaijan abolished the State Agency for Alternative and Renewable Energy Sources, which had previously developed the *National Strategy of Azerbaijan on the Use of Alternative and Renewable Energy Sources (2015-2020)* (President of Azerbaijan, 2019^[61]). It is unclear which government bodies are now responsible for delivering on the agency's portfolio and how or if a similar unit dedicated to renewables will be integrated in Azerbaijan's new institutional set up.

Azerbaijan is a party to the Convention on Environmental Impact Assessment (EIA) in a Transboundary Context (the Espoo Convention), and in 2018 Azerbaijan adopted a Law on Environmental Impact Assessment. However, the parties to the Convention have signalled that Azerbaijan's existing legislation and current lack of secondary legislation relating to EIA do not comply with the articles of the Convention (UNECE, 2019^[62]).

Unlike neighbouring Georgia, Azerbaijan is not a signatory of the Protocol on Strategic Environmental Assessment (SEA). However, Azerbaijan in conjunction with the EaP-GREEN programme carried out a pilot SEA of the *National Strategy on the Use of Alternative and Renewable Energy Source (2015-2020)* (EaP GREEN, 2016^[37]). EaP GREEN has also supported training programmes and workshops in Azerbaijan as well as the publication of Azeri-language documents on SEA's benefits to encourage the tool's adoption and use (UNECE, n.d.^[63]).

List of relevant strategic documents

Table 2.5. Main strategic documents in force

	Status	Time Horizon	Sectoral Coverage	Main objectives
First Nationally Determined Contribution (NDC)	Submitted in 2017	2017-2030	Economy-wide	<ul style="list-style-type: none"> • Target: to achieve a 35% reduction in total greenhouse gas emissions compared to 1990 levels by 2030 • Main sectors for emission reduction: Energy sector (ensure the development of legislative acts and regulatory documents for the energy sector, replace existing technology with modern, environmentally friendly technology, reconstruct energy distribution networks for example to reduce gas distribution losses by 1% by 2020), Transport sector (promote the use of electric vehicles for public transportation, ensure the electrification of railway lines), Waste management sector (develop a modern solid waste management system)

Azerbaijan – 2020: A Look to the Future	Adopted in 2012	2011-2020	Governance, transport, energy, water, industry	<ul style="list-style-type: none"> • Achieve a per capita GDP of USD 13 000 by 2020 • Reach highest positions in group of countries with high human development in accordance with the human development classification of the UN Development Programme • Ensure an increase in the construction and use of renewable and alternative energy sources • Modernise 6 international airports • Provide villages and cities with water purifying installations and ensure regular water quality monitoring to improve the water supply service • Modernise the petrochemical industry • Ensure the diversification of the economy, moving away from the oil and gas sector
Strategic Roadmap on the National Economy	Adopted in 2016	2016-2025	Governance, energy, industry, transport	<ul style="list-style-type: none"> • Further strengthen the judicial system • Improve the business environment • Ensure the adoption of the most appropriate and competitive tax and tariff rates • Develop regional scale transport-logistics corridors • Minimize the energy used to produce each unit of GDP by increasing the share of renewable energy sources
Strategic Roadmap for Development of Logistics and Trade in the Republic of Azerbaijan	Adopted in 2016	2016-2025	Governance, energy, industry, transport	<ul style="list-style-type: none"> • Transform Azerbaijan into a regional logistics hub • Conduct feasibility studies for increasing the number of free trade zones • Increase the volume of trade and promote higher value added trade to help diversify the economy • Elevate the role of the private sector within the economy
National Strategy of Azerbaijan on the Use of Alternative and Renewable Energy Sources (2015-2020)	Adopted in 2015	2015-2020	Governance, Energy	<ul style="list-style-type: none"> • Increase the share of renewable energy within the energy sector • Organise centralised management structures in the renewable energy sector • Establish a normative legal framework for the use within the alternative and renewable energy sector • Improve the tariff policy for renewable energy
Strategic Roadmap on Oil and Gas Development	Adopted in 2016	2016-2025	Energy, Industry	<ul style="list-style-type: none"> • Ensure national energy security, for example through the protection of offshore energy infrastructure • Diversify gas transportation options • Develop relationships with Caspian states and European states in the oil and gas sector
Strategic Roadmap on Development of Utilities	Adopted in 2016	2016-2025	Energy, Water	<ul style="list-style-type: none"> • Increase investment in alternative and renewable energy sources • Increase the country's generation capacity by 1 000 MW in the next 5-10 years, 420 MW being generated by renewable energy sources (wind: 350

				MW, solar: 50 MW, bioenergy: 20 MW)
				<ul style="list-style-type: none"> • Revision of tariffs in the energy market
Strategic Roadmap on Development of Heavy Industry and Machinery	Adopted in 2016	2016-2025	Industry	<ul style="list-style-type: none"> • Implement energy saving technology which also meets environmental standards • Increase heavy industry production output

Table 2.6. Other relevant documents

	Status	Time Horizon	Sectoral Coverage
Strategic Roadmap for Development of Specialised Tourism Industry in the Republic of Azerbaijan	Adopted in 2016	2016-2025	Multi-sector
Action Plan on the Improvement of the Ecological Situation for 2010-2014	Adopted in 2010	2010-2014	Multi-sector
National Programme on Environmentally Sustainable Social and Economic Development for the period 2003–2010	Adopted in 2003	2003-2010	Multi-sector
State Programme for the Socioeconomic Development of the Regions of Azerbaijan for the period 2009–2013	Adopted in 2009	2009-2013	Multi-sector, primarily energy and water
State Programme on Reforestation and Afforestation for the period 2003–2008	Adopted in 2003	2003-2008	Multi-sector
State Programme on Summer/Winter Pastures, Effective Use of Meadows and Desertification Prevention for the period 2004–2010	Adopted in 2004	2004-2010	Multi-sector
State Programme for the Development of Fuel Energy Complex for the period 2005–2015	Adopted in 2005	2005-2015	Energy
Hydrometeorology Development Programme for the period 2004–2010	Adopted in 2004	2004-2010	Water
State Strategy on Hazardous Waste Management for the period 2004–2010	Adopted in 2004	2004-2010	Waste Management

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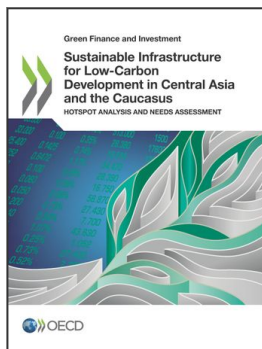
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