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(To be listed on the agenda of a Board meeting on 20 October 2017)

Sec.M20-17
29 September 2017

Country Partnership Strategy
Turkmenistan, 2017–2021
—Catalyzing Regional Cooperation and Integration,
and Economic Diversification

Attached is a paper on the above subject for discussion and general endorsement.

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Country Partnership Strategy

September 2017

Turkmenistan, 2017–2021 —Catalyzing Regional Cooperation and Integration, and Economic Diversification

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 15 September 2017)

Currency unit	–	Turkmen manat (TMT)
TMT1.00	=	\$0.2857
\$1.00	=	TMT3.5000

ABBREVIATIONS

ADB	–	Asian Development Bank
bcm	–	billion cubic meters
CAREC	–	Central Asia Regional Economic Cooperation
CPS	–	country partnership strategy
EBRD	–	European Bank for Reconstruction and Development
GDP	–	gross domestic product
KPS	–	knowledge products and services
MW	–	megawatt
NPSED	–	National Program for Social and Economic Development
ODA	–	official development assistance
PRC	–	People's Republic of China
SMEs	–	small and medium-sized enterprises
TAP	–	Turkmenistan–Afghanistan–Pakistan
TAPI	–	Turkmenistan–Afghanistan–Pakistan–India
TPCL	–	TAPI Pipeline Company Limited
TVET	–	technical and vocational education and training
TUTAP	–	Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan
UN	–	United Nations
UNFCCC	–	United Nations Framework Convention on Climate Change

NOTES

In this report, "\$" refers to United States dollars.

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COUNTRY AT A GLANCE

Economic	2012	2013	2014	2015	2016
GDP (\$ billion, current)	35.2	39.2	43.5	36.0	36.2
GDP per capita (\$, current)	6,797.8	7,480.3	8,191.4	6,690.4	6,622.4
GDP growth (% , in constant prices)	11.1	10.2	10.3	6.5	6.2
Agriculture	8.1	9.9	1.7	8.0	9.9
Industry	8.6	5.2	12.2	4.6	1.1
Services	14.7	16.4	10.0	8.0	9.3
Gross domestic investment (% of GDP)	48.3	46.4	44.3	47.0	47.0
Gross domestic saving (% of GDP)	47.2	39.1	38.0	32.9	25.7
Consumer price index (annual % change)	5.3	6.0	5.3	6.0	6.1
Liquidity (M2) (annual % change)	35.6	31.2	11.4	16.1	7.2
Overall fiscal surplus (deficit) (% of GDP)	6.4	1.5	0.9	(0.8)	(1.3)
Merchandise trade balance (% of GDP)	18.6	7.1	7.2	(5.6)	(15.6)
Current account balance (% of GDP)	0.0	(7.3)	(6.4)	(14.1)	(21.3)
External debt service (% of exports of goods and services)
External debt (% of GDP)	18.1	21.1	18.0	19.4	23.9

Poverty and Social	2001	Latest
Population (million)		5.46 ^a
Population growth (annual % change)		2.0
Maternal mortality ratio (per 100,000 live births)	48.2	42.0 [2015]
Infant mortality rate (below 1 year/per 1,000 live births)	21.3	23.0 [2015]
Life expectancy at birth (years)	68.6	65.7 [2015]
Adult literacy (%)	98.8	99.9 [2012]
Primary school gross enrollment (%)	92.3	99.8 [2016]
Child malnutrition (% below 5 years old)		8.2 [2013]
Population below poverty line (%)		
Population with access to safe water (%)		90.0 [2015]
Population with access to sanitation (%)		99.0 [2011]

Environment	2000	2013
Carbon dioxide emissions (kt)	37,539.1	66,893.4
Carbon dioxide emissions per capita (tons)	8.3	12.4
Forest area (million hectares)	2.2	2.2
Urban population (% of total population)	45.9 ^b	50.4 ^b

ADB Portfolio (active loans)^c	As of 31 December 2016
Total number of loans	1
Sovereign	1
Nonsovereign	0
Total loan amount (\$ million) ^d	116.3
Sovereign	116.3
Nonsovereign	0.0
Disbursements	
Disbursed amount (\$ million, 2016)	21.3
Disbursement ratio (%)	96.8

... = not available, () = negative, [] = latest year for which data are available, ADB = Asian Development Bank, GDP = gross domestic product, IMF = International Monetary Fund, kt = kiloton, M2 = broad money, UNDP = United Nations Development Programme, UNICEF = United Nations Children's Fund, WHO = World Health Organization.

^a Estimated population figure from IMF's World Economic Outlook Database.

^b ADB. 2017. *Key Indicators for Asia and the Pacific, 2017*. Manila.

^c Covers financing for the project from ordinary capital resources.

^d Net of cancellation.

Sources: ADB. 2017. *Asian Development Outlook 2017: Transcending the Middle-Income Challenge*. Manila; ADB. Loan, Technical Assistance, Grant, and Equity Approvals database; IMF. World Economic Outlook Database, April 2017. <https://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx>; World Bank. World Development Indicators; UNDP. 2016. Human Development Report 2016: Human Development Report for Everyone. New York; UNICEF. 2017. UNICEF Annual Report 2016. New York; UNICEF and World Health Organization Joint Monitoring Programme for Drinking Water, Sanitation Hygiene Database. <https://washdata.org/data> (accessed 19 July 2017).

I. COUNTRY PARTNERSHIP STRATEGY SNAPSHOT

1. **Key development challenges.** Turkmenistan is the 12th-largest natural gas producer in the world with fourth-largest natural gas reserves, and the 10th-largest oil producer in Asia and the Pacific. Its gross domestic product (GDP) grew at 12.3% per year on average during 1998–2016 and the country was classified as upper middle-income in October 2012. Natural gas, oil, and oil-related products consistently averaged close to 90% of annual exports during 2001–2015. Highly concentrated export basket and export markets have made growth susceptible to an adverse external environment, such as low global oil prices and slowdown in the country's trading partners since mid-2014. As a result, GDP growth fell from 10.3% in 2014 to 6.2% in 2016, with real non-hydrocarbon GDP growing faster than real hydrocarbon GDP. Turkmenistan's key challenge is how to shift to a growth model anchored on economic diversification. As for the non-hydrocarbon segments, the challenge is to raise productivity in agriculture, which still accounts for 43% of the labor force; ensure that more students who have completed 12 years of basic and secondary education proceed to higher education or technical and vocational education and training (TVET); and increase private sector contributions to the non-hydrocarbon economy.

2. **ADB strategic objectives and priorities.** The country partnership strategy (CPS), 2017–2021 will help Turkmenistan become a key catalyst for regional cooperation and integration by diversifying its markets and repositioning the country as a trade and transit hub. The CPS has three prioritized pathways with regional cooperation as a cross-cutting agenda. First, ADB will support diversifying natural gas export markets through the Turkmenistan–Afghanistan–Pakistan–India (TAPI) natural gas pipeline project. ADB will also support exports of excess power with the Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan (TUTAP) and Turkmenistan–Afghanistan–Pakistan (TAP) power interconnection initiatives. Second, ADB will help diversify the non-hydrocarbon economy by (i) sequencing transport investments in response to government efforts to reposition Turkmenistan as a trade and transit hub, by improving East-West regional connectivity along the multimodal Central Asia Regional Economic Cooperation (CAREC) corridor 2, in addition to upgrading and modernizing sections of the existing rail network; and (ii) strengthening institutions to increase private sector's role, starting with market-based financial intermediation for small and medium-sized enterprises (SMEs), where ADB support is expected to cover agro-industry and agribusiness SMEs. Skills development of labor especially in microenterprises, and SMEs will be explored. Third, ADB will undertake knowledge work to inform economic diversification and reforms. ADB will support thematic objectives on environment and climate change, and mainstreaming gender in operations. ADB will explore nonsovereign operations, where viable, with commercial cofinancing, to promote private sector investments.

3. **Alignment with the government's development and ADB's strategic agendas.** The CPS aligns with the National Program for Social and Economic Development (NPSED), 2011–2030. The NPSED aims to achieve sustainable economic growth, strengthen the regional geopolitical situation, and improve the population's living conditions. Its strategic priorities are to accelerate diversification, improve infrastructure, modernize institutions, and increase competitiveness. The CPS coincides with NPSED's second program cycle for 2018–2024.

4. **ADB value addition.** ADB engagement will leverage Turkmenistan's strategic location and maximize its potential to play a pivotal role in regional cooperation and integration. Using CAREC as a platform, ADB additionality as an honest broker, will support closer economic relations between Turkmenistan and its neighboring countries through investments and knowledge support to strengthen connectivity and trade in the region. Regional natural gas, power interconnections, and transport projects will promote national development objectives such as diversification and create externalities such as regional energy security.

II. COUNTRY DEVELOPMENT CONTEXT

5. **Rapid growth and upper middle-income classification.** The country has experienced strong economic growth, low inflation, fiscal surplus, low external debt, and significant buildup of foreign exchange reserves. The economy expanded at an annual rate of 12.3% during 1998–2016.¹ This was propelled by a highly concentrated export basket, with natural gas, oil and oil-related products, and cotton accounting for close to 90% of annual exports during 2001–2015. The World Bank classified the country as upper middle-income in October 2012. By 2016, GDP in current prices was \$36.2 billion and the 2016 gross national income (GNI) per capita (Atlas method) was \$6,670.² As per official data, GDP per capita at purchasing power parity was \$19,435. However, while growth rate of real non-hydrocarbon GDP (agriculture, trade, and other services) was about 10% in 2015 and 2016, the growth rate of real hydrocarbon GDP was flat in 2015 and declined by almost 5% in 2016. Inflation during 2007–2015 averaged 5.5% and was kept in check with price controls, subsidies, and import substitution policies.³ It is expected to remain at around 6.0% in 2017–2018.

6. **Growth dependent on natural gas, oil, and cotton exports.** Turkmenistan has the highest ratio of exports of goods and services to GDP across Central Asian economies. Exports of natural gas, oil and oil-related products, cotton, electricity, and carpets averaged 94.3% of total annual exports during 2010–2015.⁴ The country has the world's fourth-largest share of natural gas reserves at 9.4% or 17.5 trillion cubic meters after the Russian Federation, Iran, and Qatar.⁵ Annual production of natural gas averaged 59.6 billion cubic meters (bcm) in 2005–2016.⁶ When hydrocarbon demand and prices began falling from mid-2014, annual exports of natural gas, which had averaged 38.0 bcm during 2010–2015, fell from 45.3 bcm in 2014 to 40.3 bcm in 2015 (footnote 5), while the annual export value, which averaged \$10.6 billion during 2010–2015, dropped by more than a third from \$13.5 billion in 2014 to \$8.4 billion in 2015 (footnote 4). Proven oil reserves in 2015 were over 100 million tons, making Turkmenistan the 10th-largest oil producer in Asia and the Pacific. Annual exports of oil and oil-related products during 2010–2015 averaged 6.1 million tons. While the export quantity of these products rose from 6.6 million tons in 2014 to 6.9 million tons in 2015, corresponding revenues, which averaged \$4.1 billion during 2010–2015, fell from \$4.6 billion in 2014 to \$2.5 billion in 2015. Cotton exports averaged \$457 million and power exports averaged \$81 million in 2010–2015 (footnote 4).

7. **Highly concentrated export basket and export markets.** The economy has faced a concentrated buyers' market for natural gas with the Russian Federation until 2008, and then with the People's Republic of China (PRC) from December 2009, when the first of four Trans-Asia gas pipelines began operating with a target to increase annual exports to the PRC to 65 bcm by 2020.⁷ However, uncertainty in demand could increase as the PRC diversifies its natural gas supplies by producing domestically and sourcing liquefied natural gas from countries like Australia (footnote 7). Turkmenistan's diversification agenda aims to tap new markets for natural gas and power exports in South Asia.⁸ Trade with CAREC countries remains low. Four countries—the PRC, Iran,

¹ International Monetary Fund. World Economic Outlook Database October, 2016.

² The World Bank updates its country classifications every 1 July. For 2017–2018, countries classified as upper middle income had GNI per capita starting at \$3,956. World Bank. Refer to World Bank Atlas Method's approach.

³ ADB. 2016. *Asian Development Outlook 2016: Asia's Potential Growth*. Manila. pp. 114–116.

⁴ State Committee on Statistics of Turkmenistan. 2016. *Statistical Yearbook of Turkmenistan 2016*. Ashgabat.

⁵ British Petroleum p l c. *Statistical Review of World Energy 2016*. East Sussex: Pureprint Group Limited, UK.

⁶ It also has the world's second-largest gas field in Galkynysh, Mary Province, where production started in 2013.

⁷ Congressional Research Service. 2016. *China's Natural Gas: Uncertainty for Markets*. Washington, DC.

⁸ As of mid-2016, the main pipelines are the Central Asia–Center gas pipeline (or the northern route) supplying the Russian Federation, with a capacity of 45 bcm/year, although annual exports levels dropped since 2009; three Trans-Asia gas pipelines to the PRC that started operations in 2009, 2010, and 2014, with a fourth pipeline scheduled to

the Russian Federation, and Turkey—accounted for 73% of its annual exports and 55% of annual imports in 2010–2015. This has made the economy susceptible to exogenous shocks.

8. **Industry and construction dominate production structure.** The share of industry and construction increased from 41.1% of GDP in current prices in 2000 to 60.7% in 2014 although it reduced to 56.9% in 2015.⁹ A major share of industry comes from the fuel and energy complex (natural gas, oil, gas chemicals, and power), the rest from food industry, light industry (textiles, sewing, tanning), machinery, metal works, and building materials. Construction averaged 15.6% of GDP during 2008–2015 thanks to the high rate of government-led gross fixed capital formation financed from hydrocarbon revenues. Services rose from 36.4% of GDP in 2000 to 43.6% in 2005, but then dropped to 33.8% in 2015 (footnote 10). Trade, transport, and communications make up half of total services and in 2016 grew by over 10%. Agriculture dropped from 22.5% of GDP in 2000 to 8.3% in 2014, but rose to 9.3% in 2015. In 2016, it grew by 10% in 2016, as production of strategic crops such as cotton and wheat met targets.

9. **Public investments highest in the region.** Gross fixed capital formation averaged 33.5% in 2002–2014 the highest among Central Asian economies. Of this, the private sector's share averaged 15.2%. Current account surpluses were registered consistently, averaging over 8% of GDP during 2000–2008 and over 1% during 2011–2012, due to high demand and prices for Turkmenistan's commodity exports. However, after the significant drop in oil prices from mid-2014 the current account deficit rose to 14.1% of GDP in 2015 and to 21.3% in 2016 as the government continued to implement a large public investment program, which in turn resulted in large deficits given limited domestic savings.¹⁰ The government earlier set up the Foreign Exchange Reserves Fund, and then a Stabilization Fund in 2008 through surpluses of the centralized budget. A State Development Bank was set-up in 2011 to implement public investment programs.¹¹

10. **Banks dominate the finance sector.** In 2015, the number of clients served by 10 commercial banks grew by 21% to almost 2 million, but 88.5% of deposits come from state property funds and state-owned enterprises. While bank credit as a share of GDP reached 55% in 2016, the share of private sector credit was at 20% of GDP in 2016. In November 2012, the government initiated a three-phase privatization program targeting small, medium, and large enterprises. Progress is noted in 39 out of 89 companies scheduled for privatization.¹² The SME segment is estimated to have contributed 21% to GDP and accounted for 30% of employment during 2011–2015, with about a 10% share of the total bank credit in 2015. The hydrocarbon industry is the main attraction for foreign direct investments.¹³ Investment climate reforms in non-hydrocarbon segments have been slow, and industries are in the early stages of transition.

11. **Continued economic vulnerability from mid-2014.** Low global hydrocarbon prices from mid-2014 (despite long-term natural gas contracts), an economic slowdown in trading partners, and currency pressures from devaluation by neighboring energy-exporting countries put pressure

start operations by 2020; two smaller pipelines to Iran (capacity of 24 bcm/year) that are not being used to full capacity; and an in-country East–West Interconnector pipeline, which opened in 2015.

⁹ ADB. 2017. *Key Indicators for Asia and the Pacific*, 2017. Manila.

¹⁰ Apart from the imports of services related to foreign direct investments, the large import content of domestic spending is one of the factors adding to current account deficits.

¹¹ ADB (Central and West Asia Department). 2016. *Sector Assessment (Summary): Private and Financial Sectors*. 7 July 2017 (Internal).

¹² EBRD. Transition Country Report 2016–17 for Turkmenistan. <http://2016.tr-ebrd.com/countries/>

¹³ United Nations (UN) Conference on Trade and Development. 2016. *World Investment Report*, 2016. Geneva. Despite a drop in foreign direct investments in landlocked economies in 2015, Turkmenistan saw annual inflows rise from \$3.6 billion in 2010 to \$4.3 billion in 2015, making it the largest recipient. Its foreign direct investment stock rose from \$13.4 billion in 2010 to \$32.1 billion in 2015.

on the Turkmen economy. Appreciation in 2014 of the United States dollar—against which the country's fixed exchange rate regime is pegged, while backed with significant currency reserves—increased the real effective exchange rate. The government devalued the Turkmen manat (TMT) from the mid-2008 rate of \$1.00 = TMT2.85 to TMT3.50 in January 2015 and tightened capital controls. External debt, all of which is public, was at 24% of GDP in 2016 with the risk of debt-distress low. General government revenue averaged 19.2% of GDP during 2000–2016. 70% of expenditures are annually allocated for socially oriented projects.

12. Essential issues of inclusiveness in the context of rapid growth. The Gini coefficient averaged 28.8 during 2006–2014, and the annual growth rate of the household income per capita for the bottom 40% of the population during 2009–2014 was at 4% showing an increasing trend in the share of national income received by this income group.¹⁴ The government officially guarantees employment to all citizens, although modeled estimates in 2014, had the unemployment rate at 10.5% (10.4% for men and 10.7% for women) with higher rates for youth unemployment.¹⁵ The difference between the male and female labor force participation rate during 2004–2014 averaged 29%, and official data from 2016 estimated the share of women in the labor force at 42.4%.¹⁶ Wages are mandated to increase by 10% annually, low social tariffs are levied for utilities and basic services, and the scope of the social protection system is comprehensive.¹⁷ However, health indicators like life expectancy, maternal and child mortality rates lag compared to other upper middle-income economies.¹⁸ High growth has yet to structurally transform the employment structure. Agriculture employed 43.3% of the labor force in 2016, comparable to that in 2000, when it was 47.6%.¹⁹ While universal rates of completion and gender parity indexes have been achieved for primary, basic secondary, and general secondary education levels, there is a high attrition rate in those who progress to either higher education or TVET. With the under-15 years population to increase by 30% in two decades, job creation and skills development are crucial.²⁰

13. Repositioning Turkmenistan as a transit and trade hub. The government has taken steps to improve regional transport connectivity while maintaining its permanent neutrality doctrine. A multilateral agreement signed by the heads of state of Iran, Kazakhstan, and Turkmenistan in 2007 led to the construction of the ADB-financed North–South railway line to increase regional trade. In November 2016, Turkmenistan organized the first United Nations Global Sustainable Transport Conference and acceded to multiple transport agreements.²¹ About 50.4% of the population is urban. While it has the third largest proportion of urban population in Central Asia, Turkmenistan also has the second-lowest density per square kilometer at 10.4.²²

¹⁴ UN Development Programme. 2016. *Regional Human Development Report—Progress at Risk: Inequalities and Human Development in Eastern Europe, Turkey and Central Asia*. Istanbul.

¹⁵ World Bank. 2017. *World Development Indicators*. Washington DC.

¹⁶ UN Committee on the Elimination of Discrimination Against Women. 2016. *Consideration of Reports Submitted by States Parties under Article 18 of the Convention: Fifth Periodic Report of States Parties Due in 2016—Turkmenistan*.

¹⁷ The legislation of the national social security system covers policies on sickness, maternity, old age, employment injury, invalidity, family allowances, and unemployment.

¹⁸ The anchors are the State Health Program; National Strategy and Action Plan on Maternal, Newborn, Child and Adolescent Health in Turkmenistan for 2015–2019; and Ministerial Decree No. 166 On the Improvement of Perinatal Care (6 June 2014), which introduced the model for regionalization of obstetrics and maternity services.

¹⁹ ADB. 2016. *Asian Development Outlook 2016: Asia's Potential Growth*. Manila; State Committee on Statistics of Turkmenistan. 2014. *Statistical Yearbook of Turkmenistan 2014*. Ashgabat.

²⁰ ADB (Central and West Asia Department). 2016. *Education Sector Consultation Mission for the Country Partnership Strategy for Turkmenistan*. Back-to-Office Report. 1 July 2016. (Internal).

²¹ These include the International Convention on the Harmonization of Frontier Controls of Goods; and intergovernmental agreements on the Asian Highway Network, Trans-Asian Railway Network, and dry ports.

²² Center for Economic Research. 2013. *Urbanization in Central Asia: Challenges, Issues and Prospects*. Tashkent.

14. **Land management, water resources, and vulnerability to natural disasters.** Only 4% of the total available land area is arable due to the expanse of the Karakum desert, with more than 90% of the country's total actual renewable surface water resources from upstream riparian countries.²³ The high proportion of surface irrigation and high cropping intensity contribute to soil salinity.²⁴ There are estimates that about 70% of arable land are in different levels of salinity, with more than a third requiring annual leaching. ADB's national water security framework assesses the country's institutions as engaged, higher than the regional average.²⁵ Turkmenistan is highly vulnerable to recurrent winds, landslides, earthquakes, and droughts.²⁶ River flow and water availability are expected to decline because of increased evapotranspiration, declining precipitation, and retreating glacial sources upstream.

III. COUNTRY STRATEGY FRAMEWORK

A. Lessons from Previous Strategy

15. ADB prepared an economic report and interim operational strategy in May 2002, and four country operations business plans for 2014–2015, 2015–2016, 2016–2017, and 2018.²⁷ ADB also prepared a country operations final review that covered 2002–2016.²⁸ The final review highlighted limited government demand for financing with one completed project in rail transport. ADB's engagement since 2003 focused on the country's key growth driver, natural gas; and the government's long-term priority to increase regional connectivity for its natural gas exports to South Asia through the TAPI natural gas pipeline and TUTAP power interconnection initiative. Lessons identified highlight the importance of a sustained ADB engagement, especially in upper middle-income countries on government-prioritized areas, even if it does not translate into project financing in the near term. ADB can directly add value to country efforts through its full range of modalities, including knowledge support and technical assistance. But responding to upper middle-income country needs can result in frequent programming changes.

16. The Independent Evaluation Department validated the findings, lessons and recommendations of the final review.²⁹ It rated the overall ADB program in Turkmenistan during 2002–2016 as *successful (on the borderline)* and recommended the following: provide knowledge-intensive support for government's economic diversification priorities, strengthen human capital through private sector development, and identify risks with strategies to manage them.

B. National Development Strategy

17. The national goal as articulated in the NPSED is to shift to a growth model based on innovation and sustainable development. The objectives are sustained development of all segments of the economy, continued deepening of integration with the international community, improvements in citizens' well-being, increased investments in human capital, quality

²³ International Institute for Applied Systems Analysis. 2017. *Water Futures and Solutions: Asia 2050*. Luxembourg.

²⁴ ADB (Central and West Asia Department). 2016. *Sector Assessment (Summary): Preliminary Assessment of Agriculture, Natural Resources and Rural Development*. Sector Report. 4 August 2016. (Internal).

²⁵ ADB. 2016. *Asian Water Development Outlook 2016: Strengthening Water Security in Asia and the Pacific*. Manila.

²⁶ University of Notre Dame Global Adaptation Initiative Country Index. (accessed on 13 September 2017).

²⁷ ADB. 2002. *Economic Report and Interim Operational Strategy for Turkmenistan*. Manila; ADB. 2013. *Country Operations Business Plan: Turkmenistan, 2014–2015*. Manila; ADB. 2014. *Country Operations Business Plan: Turkmenistan, 2015–2016*. Manila; ADB. 2015. *Country Operations Business Plan: Turkmenistan, 2016–2017*. Manila; and ADB. 2017. *Country Operations Business Plan: Turkmenistan, 2018*. Manila.

²⁸ ADB. 2016. *Country Operations Final Review for Turkmenistan (2002–2016)*. Manila.

²⁹ ADB. Independent Evaluation Department. 2017. *Turkmenistan. Country Operations Final Review Validation Report (2002–2016)*. Manila.

enhancements of housing and utilities, and careful use and conservation of natural resources for future generations.³⁰ Key imperatives are to accelerate economic diversification, improve infrastructure, and increase competitiveness. Modernizing the energy, transport, information technology, and agriculture-related industries is a priority. Based on empirical experience from the diversification of other resource-rich economies, official projections anticipate an increase in the share of services to 37%–47% by 2030. Identified drivers within the service industry are transport, trade, education, health care, tourism, and banking. Areas suitable for public–private partnerships are agro-industry, pharmaceuticals, housing, utilities, and tourism.³¹

18. The government's strategy on gender is anchored on its National Action Plan on Gender Equality, 2015–2020. The plan was approved in January 2015 and was developed by the National Institute for Democracy and Human Rights with support from the UN Population Fund.³² Its objectives are to increase women's competitiveness in labor markets, improve maternal and child health outcomes, create gender-responsive legislation, eliminate gender stereotypes, address all forms of gender-based violence, and increase the number of women in top management posts. The state guarantees equal compensation for women and men for work of equal value, as well as an equal approach to assessing the value of work. As for gender disparity in wages of employees in large and medium-sized enterprises, government data from 2016 show that women's salaries were on average 87.9% of men's salaries. The informal sector accounts for 7.5% of workers, of which a third are women. Following article 18 of the Convention on the Elimination of All Forms of Discrimination Against Women, the government submits to the UN Committee on the Elimination of Discrimination Against Women periodic reports on its progress.³³

C. Role of Development Partners

19. Net official development assistance (ODA) to Turkmenistan averaged 0.3% of GNI in 2002–2015.³⁴ Annual ODA averaged \$35.7 million: 71.3% from bilateral donors and the rest from multilateral partners. ADB, Islamic Development Bank, and the European Bank for Reconstruction and Development (EBRD) were the top three multilateral partners during 2011–2015, while Turkey and the United States, the top two bilateral development partners. The European Commission supports public financial management reforms and TVET, while the International Monetary Fund assists in macroeconomic management. The EBRD has provided credit lines to banks and has invested €250 million in the private sector. The World Bank has a reimbursable advisory services program covering investment climate reforms, privatization, and diversification studies. The United Nations (UN) coordinates the development partners' quarterly meetings.

D. ADB's Strategic and Thematic Objectives and Public and Private Sector Operational Priorities

20. The strategic objective of the CPS is to help Turkmenistan become a key catalyst for regional cooperation and integration by diversifying its markets and repositioning the country as

³⁰ ADB. 2011. *The National Strategy for Social and Economic Development of Turkmenistan during the years 2011–2030*. Unofficial Translation. 2011. (Internal).

³¹ Institute of Strategic Planning and Economic Development. 2017. *Favorable conditions for Inclusive Growth in Turkmenistan* under ADB regional study Goods jobs for inclusive growth in Central and West Asia. (Unpublished).

³² UN Population Fund in Turkmenistan. 2017. Framework for Monitoring and Evaluation of the National Action Plan on Gender Equality Discussed. News release. 12 April.

³³ The government prepared a combined initial and second periodic report on November 2004, a combined third and fourth periodic report on March 2011 (reviewed on October 2012), and a fifth periodic report on December 2016.

³⁴ AidFlows. <http://www.aidflows.org>. AidFlows tracks how much ODA has been provided and received across the world. It is a partnership between ADB, the Development Assistance Committee of the Organisation for Economic Co-operation and Development, the World Bank, and the Inter-American Development Bank.

a trade and transit hub. Investment operations supporting this strategic objective will directly contribute to inclusive economic growth by creating new business and employment opportunities, including through enhancing cross-border trade; supporting women's economic empowerment; creating greater access to finance for SMEs; and promoting skills development for labor. The inclusive and sustainable growth assessment (accessible from Appendix 3) highlights ways to overcome challenges, based on alignment with national priorities, ADB's comparative advantage, and ongoing ADB work.³⁵

21. The CPS will support the diversification of the economy through three pathways to enable growth that is less susceptible to exogenous shocks. First, the CPS will support hydrocarbon market diversification and energy trade promotion that will have positive spillover effects on the subregion and enable closer regional cooperation. Second, in the non-hydrocarbon segments, ADB will (i) support economic diversification through transport infrastructure investments to improve market connectivity; and (ii) strengthen institutions to increase the private sector's role, starting with support for market-based financial intermediation for SMEs. Third, to meet the needs of policy makers in this upper middle-income country, ADB will support knowledge work on diversification and economic reforms. Regional cooperation and integration, particularly within the CAREC region, which Turkmenistan joined in 2010, will be a cross-cutting priority.

1. Promote Energy Trade and Diversify Markets for Natural Gas and Power Exports

22. **Diversify markets for hydrocarbon exports.** The government's diversification priorities through 2030 aim to tap new markets for its natural gas and electricity exports and expand the capacity of the energy sector. The proposed TAPI natural gas pipeline project will enable diversification of gas export markets into Afghanistan, Pakistan, and India. Besides financial benefits from gas sale revenues to Afghanistan, Pakistan and India; the project will also generate local employment opportunities during construction and operation of the pipeline and gas field within Turkmenistan. It will improve the energy supply mix with increased access to a cleaner energy resource for Afghanistan, Pakistan and India.

23. ADB will continue to develop the proposed TAPI natural gas pipeline, designed for an annual export capacity of 33 bcm of natural gas for a 30-year period. During the CPS period, ADB is expected to provide advice on financial due diligence, fund-raising strategy, and related activities to achieve financial close, after which construction of the pipeline will start. ADB is in ongoing negotiations with TAPI Pipeline Company Limited (TPCL) for a fee-based financial advisory services agreement. ADB may also consider financing shareholder equity in TPCL held by government-linked shareholders, loans to TPCL, or credit enhancement of loans from commercial sources to TPCL.

24. ADB has acted as the TAPI secretariat since 2003 and provided five technical assistance (TA) grants totaling \$3.95 million since December 2002, with the latest approved in September 2011. The grants financed pre-feasibility studies, risk analysis and mitigation, underground storage, legal advice, market analysis, and security studies. In addition to technical working group meetings, ADB chaired 24 ministerial-level steering committee meetings. ADB enabled key agreements such as intergovernmental agreements, the gas pipeline framework agreement, operational agreement, and three gas purchase and sales agreements.

³⁵ Inclusive and Sustainable Growth Assessment (accessible from the list of linked documents in Appendix 3).

25. Next, ADB was selected as a transaction advisor in November 2013 to offer a fee-based advisory service and inject commercial principles and a project financing approach, by the four TAPI gas companies.³⁶ ADB's responsibilities were to create the project company, which it achieved through establishing TPCL in November 2014; and then select a commercial consortium leader that leads it to secure financing, which was completed with appointment of State Concern Turkmengaz in August 2015. ADB mediated negotiations among the TPCL shareholders, enabling them to finalize and sign a Shareholders Agreement in December 2015 that spelled out the management and operation of TPCL. ADB then enabled the signing of an investment agreement on 7 April 2016, with TPCL shareholders committing more than \$200 million for detailed engineering, route surveys, and environmental and social safeguards studies. For its services, ADB earned a success fee and monthly retainer fees for the first time.

26. Besides support to TAPI, ADB will support two regional power interconnection initiatives during the CPS period. The ongoing TUTAP and TAP initiatives have identical objectives to increase exports of excess power generated by natural gas-based power plants in Turkmenistan. TUTAP aims to export power from Turkmenistan, Uzbekistan, and Tajikistan to supply the Afghan grid, with surplus power to be exported to Pakistan. It is a series of investments being implemented through a phased approach since 2003. This will allow interconnection between the electricity grids of Central Asia and South Asia. ADB currently supports a 500-kilovolt, 1,000-megawatt (MW) interconnection between Turkmenistan and Afghanistan on the Afghan side, with commissioning expected by 2020. Annual power exports are initially estimated at 500 MW. ADB will also explore power infrastructure investments in Turkmenistan.

27. ADB started the TAP project following an agreement in December 2015 between the three heads of government. It is in response to about 3,500 MW of excess power expected to be available in Turkmenistan for exports from 2020. A southern Afghanistan corridor like the planned TAPI route is to be used for TAP. As the lead development partner for TAP, ADB will start with TA to support system stability studies, reliability and grid interconnection, legal and regulatory issues, project assessment, and energy trade negotiations; and provide financing.

2. Modernize Infrastructure and Institutions to Support Economic Diversification

28. **Improve transport connectivity.** Given that Turkmenistan is landlocked and the government is striving to reposition the country as a transit and trade hub, ADB support through the CPS will develop the transport infrastructure to better integrate it into regional transport systems and to increase trade with neighboring countries and links with international markets. ADB support in the transport sector is expected to build on the completed North–South Railway project, where ADB financing was successfully used to design, supply, install, and commission power supply, signaling, and telecommunication systems; and to procure track maintenance machinery. ADB support in the railway sub-sector is anticipated to include procurement of equipment and materials to upgrade and modernize portions of the country's existing rail network to increase its overall efficiency, reliability and safety.³⁷

29. The CAREC transport and trade facilitation strategy includes improving East–West connectivity on the Turkmenbashi–Ashgabat–Turkmenabat route along the multimodal CAREC

³⁶ State Concern Turkmengaz, Afghan Gas Enterprise, Inter State Gas Systems (Private) Limited of Pakistan, and Gas Authority of India Limited.

³⁷ ADB (Central and West Asia Department). 2016. *Sector Assessment (Summary): Transport, Information and Communications Technologies*. 3 July 2016. (Internal).

corridor 2 and building a logistics center in Turkmenbashy. ADB approved small-scale TA in March 2016 to establish sanitary and phytosanitary measures for food safety, improve accreditation capabilities of food safety laboratories, and strengthen the country's capacity to implement food safety and animal and plant health measures.³⁸

30. **Modernize institutions.** The government aims to diversify the economy by increasing the private sector's role. Creating a financial system that enables competitive growth led by the private sector is a related goal. ADB support is expected to increase SMEs (including agro-industry, agribusiness) access to financing by providing a stable long-term working and fixed investment capital funding. While credit growth in the country through banks have expanded, the share of credit to SMEs has remained low at about 10% due to limited information of entrepreneurs on banking products, lack of collateral, or reliable financial statements.

31. Besides access to finance, ADB will provide concurrent support to participating financial institutions that assume full credit risk and determine credit worthiness of qualified private SME sub-borrowers. Planned areas of support are enhancing credit underwriting and risk management practices of participating financial institutions, internal audit, transition to cash-flow based lending, and deploying an environmental and social management system that screens, categorizes, and manages related impacts of each selected sub-project of a qualified SME sub-borrower. ADB support is also expected to enable the Central Bank gradually transition to a market-based interest rate to benchmark loan pricing in future.

32. The CPS also identifies the need for reforms and investments in skills development of labor to benefit micro-enterprises, and SMEs. Turkmenistan is in the early stages of its economy's structural transformation and an objective of the government is to reallocate labor from agriculture to other segments of the economy, which is necessary to increase productivity. Agribusiness, light manufacturing, construction, and service industries have been increasingly driving growth, and ADB will support this process. Continued engagement through policy dialogue and knowledge products will be attempted in this area to pave the way for project operations in consultation with government and development partners.

3. Knowledge Support on Diversification and Economic Reforms

33. ADB will undertake joint knowledge work with the government on priority topics, particularly on economic diversification and economic reforms. Potential topics on diversification and reforms include economic corridors, cluster development, cost-effective technology transfers that are suitable to the country context, multimodal transport solutions, public-private partnerships, and export sophistication. ADB's Turkmenistan Resident Mission, led by its country director, will serve as the custodian of all ADB-supported knowledge work.

34. Empirical experience on diversification in resource-rich economies shows that it requires a medium- to long-term time horizon and a threefold approach. First, potential growth drivers based on existing resources and human capital endowments need to be prioritized. Second, a conducive enabling environment with complementary steps such as sector-specific policies, connectivity with markets, export promotion, and access to finance need to be in place. Third, periodic monitoring is required to ensure the sustained engagement of policy makers.³⁹ ADB will

³⁸ ADB. Turkmenistan: Modernization of Sanitary and Phytosanitary Measures for Food Safety. <https://www.adb.org/projects/49343-001/main>.

³⁹ UN Framework Convention on Climate Change (UNFCCC). 2016. *The Concept of Economic Diversification in the Context of Response Measures*. Bonn.

provide research and analytical advice in these areas. The knowledge work during the CPS period, broadly stated in the country knowledge plan in Appendix 2, will also support the Sustainable Development Goals adopted by Turkmenistan in March 2016, and climate change mitigation and adaptation action plans of the government.

35. **Climate Change and the Environment.** ADB support to environmentally sustainable growth will commence through knowledge work during the initial years of the CPS period. Turkmenistan's nationally determined contributions identify energy efficiency, the sustainable use of natural gas, and alternative energy sources as ways to contribute to global climate mitigation targets.⁴⁰ Separate national action plans on mitigation and adaptation are being finalized. These will provide ADB the basis for engagement during the CPS period. ADB will consider the impact of climate change on infrastructure projects it supports. Turkmenistan is susceptible to high winds, landslides, earthquakes, and droughts; and ADB will be ready to offer support in such eventualities and strengthen resilience. ADB will also initiate dialogue with the United Nations Development Programme and Gesellschaft für Internationale Zusammenarbeit, or GIZ, that are involved in activities to enhance water efficiency and application of integrated water resources management, to explore areas for collaboration.

36. **Mainstreaming support for gender.** ADB will base its gender-related activities on the country's ongoing national action plan on gender equality (Para 18), existing gender and development machinery in government, and collaborate with other development partners including the UN agencies and national organizations. A project by project approach will be undertaken to incorporate gender issues at the operational level starting with energy, transport and finance sectors. As an example, in the SME financing project, there are plans to include gender-related components that target and support women-led businesses and SMEs with 50% women in senior management. Further, ADB will include gender issues as part of its policy and strategic dialogue with the government to strengthen engagement with Turkmenistan on gender issues during the implementation of the CPS.

37. **Private sector operations.** ADB will explore the potential of nonsovereign operations, where viable, together with commercial cofinancing, to promote private sector investment in Turkmenistan. Downstream opportunities for private sector engagement may arise in connection with the TAPI project, for example, blended financing for TPCL or credit enhancement of commercial loans for the construction of the pipeline, besides other possibilities in the oil and gas sector. ADB will support improvement in the business environment and the financial sector for possible future private sector operations in the non-hydrocarbon sectors.

IV. STRATEGY IMPLEMENTATION

A. Indicative Resource Parameters

38. Turkmenistan has been an ADB Group C country since September 2002 and is eligible for lending from regular ordinary capital resources. ADB is prepared to respond to requests and adapt project pipelines in tandem with emerging priorities. During 2017–2021, sovereign resources available for commitment are estimated at a total of \$450 million. In addition, Turkmenistan can access ADB's sovereign regional cooperation and integration set-aside resources as well as ADB's nonsovereign lending, subject to the projects meeting the regional cooperation and integration eligibility criteria and availability of bankable projects for nonsovereign

⁴⁰ UNFCCC. 2015. Intended Nationally Determined Contribution of Turkmenistan in accordance with Decision 1/CP.20 UNFCCC.

operations. ADB will also endeavor to leverage its financing with official and commercial cofinancing. ADB's planned lending program will focus on investments in finance, transport, and energy sectors. The final amount of ADB assistance will be subject to resource availability and project readiness. The country cost-sharing ceiling for loans and TA will be up to 99% of the total project costs for the duration of the CPS. In practice, ADB's actual financing share is likely to be below the ceiling.

B. Implementation Priorities

39. The North–South railway project faced implementation difficulties because the government counterpart agencies lacked familiarity with ADB procedures and international contractual standards. Learning from this experience, ADB will conduct procurement capacity assessments that will be backed with training of project staff on ADB procedures and international competitive bidding contracts following ADB guidelines. ADB's strategy and implementation approach will be calibrated to Turkmenistan's reforms in terms of depth and speed.

C. Monitoring of Results

40. The CPS results framework in Appendix 1 aligns with the government's national development strategy. It focuses on strategic results anticipated to be achieved during the CPS period and attempts to capture cross-cutting synergies across the planned areas of ADB engagement. Results will be tracked annually during the programming missions by ADB country team and sector specialists, in collaboration with executing and implementing agencies.

D. Risks

41. One issue that is anticipated through the implementation period of the CPS is the uncertainty about the demand for ADB's financial resources and advisory services. Given this situation, ADB will take a calibrated approach to its Turkmenistan country program through sustained dialogue with government. Related to this, staffing and resource requirements in the resident mission will also be likely increased to support the government as the ADB program expands over time. Ensuring financial transparency with adequate reporting, and procuring international competitive bidding contracts following ADB procurement guidelines, are two risk areas identified at the operational level. Under the guidance of the European Commission, the country is implementing public financial management reforms that are anticipated to be completed during the CPS period.⁴¹ ADB will focus on improving governance and institutional outcomes at the sector level in its areas of engagement.⁴² ADB will establish separate project management systems, including for financial records and asset management, within the executing agencies. ADB will organize training and capacity building events on international competitive bidding processes for executing and implementing agencies.

⁴¹ The European Commission approved on March 2015 the Further Enhancement of Public Financial Management Phase III TA project, which is scheduled for completion by November 2018. The project has a resource envelope of €4.36 million. The reform areas are macroeconomic forecasting, accounting and financial reporting, automation of the budgetary process through a government information management information system, upgrade of treasury single account systems, and program budgeting.

⁴² ADB. 2006. *Second Governance and Anticorruption Action Plan (GACAP II)*. Manila.

COUNTRY PARTNERSHIP STRATEGY RESULTS FRAMEWORK

Country Development Impact Indicators with which the CPS is Aligned 1. Natural gas export capacity to South Asia increases from zero to 33 bcm per year by 2023 2. Power exports increase from an average of 2.73 billion kWh in 2010–2015 to 4 billion kWh by 2021 3. Share of private sector contribution to non-hydrocarbon GDP increases from 60% in 2015 to more than 70% by 2021 4. Annual growth rate of freight and passenger transportation volume averages 3%–4% during 2017–2021				
CPS Objectives and Related Impacts	CPS Priority Areas	Key Outcomes that ADB Contributes to	Outcome Indicators	CPS Resources
Promote energy trade and diversify markets for natural gas and power exports	Diversification of markets for power exports	Increased electric interconnections with neighboring countries Increased power exports through TUTAP and TAP interconnections between Turkmenistan and Afghanistan	TUTAP power purchase and sales agreement for 2015–2028 implemented with an initial supply of 300 MW, which could potentially increase to 1,000 MW (2016 baseline: 0 power agreements) Energy trade negotiation between Turkmenistan, Afghanistan, and Pakistan facilitated for the TAP interconnection project (2016 baseline: negotiations with 0 countries) Action plan to export part of excess power of 3,500 MW by 2021 through TAP finalized	Technical assistance grants; project financing needs to be identified
	Diversification of markets for natural gas exports	Strengthened capacity of TAPI Pipeline Company Limited to make final investment decision for the TAPI project Supported fund-raising process with detailed financial due diligence requirements	Financial close for the TAPI project achieved by 2023, including finalizing the funding structure, providing inputs on the environmental and social safeguards process, and incorporating requirements	Mandate for fee-based financial advisory services
Modernize infrastructure and institutions to support economic diversification	Transport connectivity, and country repositioned as a transit and trade hub, including to the CAREC region	Developed efficient, safe, and reliable railway and road transport networks Improved road safety quality and availability of road crash data, increased road audits, and enhanced quality of first responder services	Volume of total national transit tonnage doubled by 2030 (2015 baseline: about 5 million tons) Number of fatalities on CAREC road corridors decreased by at least 20% by 2021 (2013 baseline: 914 road crash fatalities) Railways and road performance tracking systems modernized	Project financing to be identified
	Diversification of non-hydrocarbon economy through support for private sector development	Strengthened testing competencies of Central Bank for gradual introduction of market-based pricing	Market-based financial intermediation introduced in 2–3 PFIs that on-lend to eligible sub-borrowers, including micro, small, and medium-sized enterprises with up to 250 staff	Project financing to be identified

CPS Objectives and Related Impacts	CPS Priority Areas	Key Outcomes that ADB Contributes to	Outcome Indicators	CPS Resources
		Improved lending process, underwriting skills, and environmental and social management systems, including gender-related components incorporated by PFIs Improved access to finance for micro, small, and medium-sized enterprises engaging in export expansion and domestic manufacturing	(2016 baseline: 0 market-based financial intermediation) Volume of SME loans from PFIs increased to TMT2.1 billion by 2021 (2015 baseline: TMT1.6 billion)	
Knowledge support on diversification and economic reforms	Knowledge work to support government reform priorities	Joint ADB and government knowledge program, strategically aligned with government's diversification and economic reform priorities, formulated and implemented	Five recommendations from ADB-supported knowledge work, commissioned during 2017–2021, referenced or reflected in the government's national or sector development plans or project documents (2017 baseline: 0) Five high-quality joint reports focused on Turkmenistan prepared during 2017–2021 in a timely manner, in collaboration with the Institute of Strategic Planning and Economic Development and led by national specialists (2017 baseline: 1 joint report)	Technical assistance grant amount to be identified

ADB = Asian Development Bank, bcm = billion cubic meters, CAREC = Central Asia Regional Economic Cooperation, CPS = country partnership strategy, kWh = kilowatt-hour, GDP = gross domestic product, MW = megawatt, PFI = participating financing institution, SMEs = small and medium-sized enterprises, TAP = Turkmenistan–Afghanistan–Pakistan, TAPI = Turkmenistan–Afghanistan–Pakistan–India, TUTAP = Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan.

Source: Asian Development Bank.

COUNTRY KNOWLEDGE PLAN

A. Knowledge Needs

1. Since its independence, Turkmenistan has taken important steps to reform its economy, and exporting natural gas, oil and oil-related products, and cotton to help generate strong economic growth. As a result, gross domestic product per capita has roughly tripled in the past 10 years, putting Turkmenistan on the upper middle-income level in 2012, based on the World Bank's classification. To ensure long-term inclusive and environmentally sustainable economic growth, the government plans to deepen reforms that strengthen its policy and institutional frameworks, develop the private sector and its financial system, and invest in human capital. The government further aims to strengthen public financial management and governance, and to align the business climate with international good practice.

2. Achieving greater economic diversification is a crucial long-term objective for the economy. Given the country's strategic location, strengthening regional cooperation initiatives is important to expand and diversify markets and connectivity. Local knowledge and capabilities will need to be enhanced, especially in areas related to infrastructure development and trade facilitation.

3. Turkmenistan needs high-quality knowledge products and services (KPSs) to strengthen its economy and deepen the reform process in line with the government's plans and the sectors identified for knowledge assistance from the Asian Development Bank (ADB). The need for knowledge is particularly pronounced in the development of (i) infrastructure—especially in the energy and transport sectors; (ii) the finance sector; and (iii) the private sector.

4. **Infrastructure development.** To promote infrastructure development, Turkmenistan not only needs updated and environment-friendly technologies that support environmentally sustainable growth, but also new methods for improving project management capacity and efficiency as well as for enhancing project selection, planning, and implementation.

(i) **Energy.** In the energy sector, KPSs are needed to (a) support government efforts to provide regional energy security, and (b) introduce technologies that save energy and reduce power losses. Knowledge solutions are needed to promote power trade and strengthen energy connectivity through the Turkmenistan–Afghanistan–Pakistan–India (TAPI) Natural Gas Pipeline Project, the Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan (TUTAP) power initiative, and the Turkmenistan–Afghanistan–Pakistan (TAP) power initiatives, all of which are linking Turkmenistan with its regional partners.

(ii) **Transport.** Turkmenistan will benefit from knowledge work on the introduction of efficient multimodal transportation and logistics centers along transit corridors. Other knowledge solutions include expanding available data on the flow of goods and individuals through the domestic railway and road systems. Analytical work for modernizing the aviation industry and constructing airports in Atamyrat and Garabogaz cities are priorities. In railways, knowledge support is needed to roll out a program of system electrification with modern signaling and communications systems.

5. **Finance sector development.** Turkmenistan needs KPSs to strengthen its financial infrastructure in line with the government's National Program of Social and Economic Development, 2011–2030, which aims to develop the banking system as part of the national strategy for economic reform. There are plans to corporatize and eventually privatize the state banks that dominate the sector. Knowledge solutions are needed to help further strengthen

financial institutions; introduce new legislation, including on the role of the private sector; and adopt an efficient electronic banking system.

6. **Private sector development.** The government views private sector development as one of the key engines for successful economic diversification, by means of its production and export activities. Turkmenistan needs a wide range of knowledge solutions, such as focused KPSs promoting the development of import-substituting and export-promoting private businesses.

7. **Other areas.** Turkmenistan needs knowledge solutions in other major areas, such as in strengthening macroeconomic policy formulation, including financial surveillance and exchange rate management; and in promoting trade facilitation initiatives and policies. The country will also benefit from KPSs offering policy recommendations to promote inclusive growth and enhance job creation. In agriculture, there is a need to understand current practices in water management at farms to introduce new approaches and technologies for water saving and allocation in line with crop water requirements, and to adopt an integrated approach to water use. Such analytical work could provide the basis of ADB's investment support for the sector when requested by the government.

B. Scope of ADB's Planned Knowledge Operations

8. ADB's planned knowledge operations will be anchored on the Sustainable Development Goals adopted by Turkmenistan in March 2016 and on climate change mitigation and adaptation action plans. The anticipated knowledge work will align closely with the identified pathways of the country partnership strategy, 2017–2021. These pathways have energy and transport as priority areas for operations, with key regional initiatives implemented under the CAREC Program. To date, ADB has delivered only a few country-specific KPSs because most knowledge solutions contributing to Turkmenistan's economic development were regional in nature and related to activities implemented under the CAREC Program.

9. **Infrastructure development.** ADB plans to assist Turkmenistan with several KPSs to promote infrastructure development, focusing on energy and transport.

(i) **Energy.** ADB will provide knowledge and advisory services to support energy security initiatives and related regional projects (i.e., TAPI, TUTAP, and TAP); and conduct studies to introduce technologies that will help reduce energy losses and the volume of the associated burned gas. It will also deliver technical notes with up-to-date methodology for project selection, planning, and implementation. As part of CAREC, ADB may also facilitate the preparation of a study on regional power trade and connectivity, and organize knowledge events such as regional seminars aimed at enhancing information exchange between its members. Other knowledge solutions to be delivered under the CAREC Program in the energy sector include workshops, training programs, and study tours to complement ongoing and planned activities.

(ii) **Transport.** In rail transport, ADB will assist Turkmenistan in delivering technical reports and training programs focused on solutions that will facilitate the adoption of new technologies, for example, technologies that help improve the project management capacity of the national railway operator with efficient and up-to-date logistics solutions and methods. ADB will also provide several KPSs as part of ongoing CAREC initiatives, such as training programs and policy meetings. ADB may also deliver KPSs to help Turkmenistan explore opportunities for bilateral cooperation programs. While ADB assistance has focused on railways, new areas for KPS delivery could involve the creation of a database on the road network traffic conditions, as well as on travel time for freight and passenger transport between major points of origin and destination.

10. **Finance sector development.** ADB will consider offering various knowledge solutions to promote the development of Turkmenistan's finance sector, focusing on introducing best practices and achieving international standards. These will be done through training programs to upgrade the skills of government officials from the Ministry of Finance, the Central Bank, and other financial institutions. ADB could potentially provide resources to participating financial intermediaries for advisory services to improve lending processes with proper evaluation and pricing of risks for lending to small and medium-sized enterprises.

11. **Private sector development.** ADB is committed to delivering various knowledge solutions that promote Turkmenistan's private sector development, such as studies and training programs, to improve (i) the country's economic diversification process; (ii) the ability to introduce logistics solutions to strengthen the competitiveness of domestic firms (i.e., identifying effective ways to calculate the most economically efficient routes for goods delivery); and (iii) the capacity to conduct risk assessment of financial and infrastructure projects. ADB is also ready to assist Turkmenistan with studies and policy briefs to support the design and implementation of a strategy for economic diversification, covering a discussion on the pros and cons of introducing policies for import substitution and export expansion.

12. **Other areas.** ADB's Central and West Asia Department conducted a regional study, titled Good Jobs for Inclusive Growth in Central and West Asia, to help formulate policies that will promote the creation of productive, well-paid, and safe jobs in support of inclusive growth. The department will produce a report, edited volumes, background papers, and policy briefs based on study results. It will organize seminars and conferences to disseminate the study's findings, which are anticipated to inform national policy makers on pathways to reduce inequality, enhance employment opportunities, and amplify the impact of ADB operations on inclusive growth.

13. **Trade facilitation.** To support the introduction of trade facilitation measures, ADB will work with the government and private sector organizations to simplify the existing sanitary and phytosanitary standards in accordance with international standards. Training programs and workshops will assist in harmonizing Turkmenistan's regulatory framework, strengthening local capacity, and sharing knowledge to support the modernization of such standards.

C. Areas of Collaboration with Partners

14. **Government and local institutions.** ADB will work closely with local think tanks and training institutes to ensure effective KPS delivery. The Institute of Strategic Planning and Economic Development is an important think tank that could serve as a key partner in conducting studies and analyses of Turkmenistan's economy. The banking college of the Central Bank of Turkmenistan is also a potential good local partner for delivering training programs in the finance sector. ADB will consider signing memorandums of understanding and knowledge partnership agreements, as appropriate, with relevant local institutions to facilitate the delivery of KPSs in the country. ADB's Turkmenistan Resident Mission, led by its country director, will serve as the custodian of all ADB-supported knowledge work in the country.

15. **Development partners.** In addition to ADB, development partners such as the European Bank for Reconstruction and Development, the European Union, the International Monetary Fund, the United Nations Development Programme, and the World Bank have been assisting Turkmenistan in generating and sharing knowledge by preparing studies and technical reports and organizing training programs. ADB will closely coordinate KPS assistance to Turkmenistan with other partners to reduce unnecessary overlaps and capture synergies. Knowledge partnerships will also be forged with the CAREC Institute and the ADB Institute.

D. Resource Allocation

16. Turkmenistan will benefit from country-specific and regional KPSs delivered by various ADB departments and the ADB Institute. During 2017–2019, ADB estimates to contribute about \$1 million in technical assistance grants and staff consultancy to produce KPSs for Turkmenistan.¹ During this period, regional projects and initiatives—mostly under the CAREC Program—will also allocate financial resources to KPSs, thereby increasing the resource envelope.

¹ This amount excludes funds earmarked for meeting just-in-time knowledge needs.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/CPS/?id=TKM-2017>

1. Inclusive and Sustainable Growth Assessment
2. Development Coordination Matrix
3. Country Operations Business Plan