Turkmenistan
Validation Report
September 2017

Turkmenistan: Country Operations Final Review
Validation, 2002–2016

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In this report, $ refers to US dollars unless otherwise stated.


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Abbreviations

ADB – Asian Development Bank
CAREC – Central Asia Regional Economic Cooperation Program
CIS – Commonwealth of Independent States
COBP – Country Operations Business Plan
CPS – Country Partnership Strategy
COFR – Country Operations Final Review
EBRD – European Bank for Reconstruction and Development
ERIOS – economic report and interim operational strategy
GDP – gross domestic product
GNI – gross national income
IED – Independent Evaluation Department
IMF – International Monetary Fund
NPSED – National Program on Social and Economic Development
PCR – project completion report
PRC – People’s Republic of China
SME – small or medium-sized enterprise
TA – technical assistance
TAP – Turkmenistan–Afghanistan–Pakistan
TAI – Turkmenistan–Afghanistan–Pakistan–India
TCR – technical assistance completion report
TUTAP – Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan

Currency Equivalents
(as of 7 July 2017)

<table>
<thead>
<tr>
<th>Currency unit</th>
<th>TMT1.00</th>
<th>$1.00</th>
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<tbody>
<tr>
<td>= $0.2857</td>
<td></td>
<td>TMT3.50</td>
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Acknowledgments

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The team benefited from a peer review of the draft report by Konstantin Atanesyan of the World Bank’s Independent Evaluation Group. The team is grateful to the Asian Development Bank’s staff at headquarters and the Turkmenistan Resident Mission and to government officials in Turkmenistan for useful discussions and inputs. Comments from Jose Antonio Tan III and Joanne Asquith of Independent Evaluation Department (IED) helped improve the quality of the report.

IED retains full responsibility for this report.
Executive Summary

This report provides an independent assessment and validation of the Turkmenistan 2002–2016 country operations final review (COFR) prepared as a self-evaluation by the Central and West Asia Department of the Asian Development Bank (ADB). The COFR was dated December 2016 and submitted to the Independent Evaluation Department (IED) at the end of April 2017 after endorsement by the Government of Turkmenistan. It considered the country operations successful, based on individual criteria assessments of relevant, effective, efficient, likely sustainable, and with satisfactory development impacts. It also viewed ADB’s and the borrower’s performance as satisfactory. This validation uses the 2015 IED guidelines to provide a check on the COFR assessments. It is based on document review, interviews, and a country visit from 3 to 7 July 2017. The validation considers the country operations successful on the borderline, based on criteria assessments of relevant, effective, less than efficient, likely sustainable, and with less than satisfactory development impacts. The validation also provides recommendations for the design and implementation of the country partnership strategy (CPS), 2017–2021.

Country Context

Turkmenistan’s economy grew at an average annual rate of 9.0% during 2002–2016, fueled mainly by revenues from natural gas exports. The country transitioned from a lower middle-income economy with a gross national income (GNI) per capita of $750 in 2002 to an upper-middle income economy in 2012, with a GNI per capita of $6,670 in 2016.

The economy remains highly dependent on hydrocarbon (gas and oil) exports to the People’s Republic of China. The decline in natural gas prices has put pressure on the economy’s external balances as reflected in the current account balance and external debt ratios.

The government recognizes the need to diversify its markets for exports of natural gas and power, move up the hydrocarbon value chain, and increase the share of nonhydrocarbon sectors in the economy. It also aims to expand the transport network to improve connectivity with neighboring countries, and to position Turkmenistan as a trade and transit hub.

The country is in the early stage of transition, with a large state presence in nearly all sectors. Diversifying growth through private sector development is a key policy challenge. Emerging priorities reflect the government’s growing realization that investments are needed in institution building and human resource development as the main pillars of inclusive and sustainable growth.

ADB Program

Turkmenistan joined ADB in 2000. ADB operations in Turkmenistan were guided by the May 2002 economic report and interim operational strategy (ERIOS), the only strategy that has been approved for Turkmenistan. ERIOS applied to 2002–2004. Since 2014, the program has been guided by four rolling country operations business plans (COBPs).

The country program as of December 2016 was modest, with a small number and volume of operations. Fifteen technical assistance (TA) projects totaling $11.3 million were spread across five sectors: agriculture and natural resources, energy, finance, public sector management, and transport. One loan for $125 million was approved in 2011 for railway development.
Assessment

The COFR viewed the ADB program to be relevant to the country context. ADB’s ERIOS objectives were broad and covered human and social development, sustainable and stable economic growth, and regional economic cooperation. They were broad and indicative to allow enough flexibility for the program to develop gradually in line with government development priorities and ADB strategy. In keeping with the intent of ERIOS, in 2002–2004 ADB operations initially focused on TA projects for training, statistics, and institution building. However, given Turkmenistan’s limited interest in ADB loans and assistance (or in assistance from other development partners), the ADB program did not go much beyond TA projects. These included feasibility studies for the early stages of the massive Turkmenistan–Afghanistan–Pakistan–India (TAPI) natural gas pipeline project, an ambitious initiative to promote regional economic integration by improving energy security.

Support for deepening regional connectivity through energy and transport infrastructure emerged as the government’s preferred area of cooperation with ADB. ADB therefore focused on the energy and transport sectors and the Central Asia Regional Economic Cooperation Program agenda, and on supporting the country’s priorities of establishing new markets to diversify the exports of its primary commodity and positioning itself as a trade and transit hub. The 2011 ADB loan for a railway line connecting the Republic of Iran, Kazakhstan, and Turkmenistan was the only sovereign investment project financed by a multilateral development bank during the review period.

Following the broad objectives and scope outlined in ERIOS, the ADB program has been limited and has evolved in line with government priorities. While delivering a small volume of operations, ADB remained engaged in the key sectors of energy and transport, and in the cross-cutting initiatives of regional economic integration. ADB’s adaptation of its strategic approach and positioning was demanded by the circumstances and is considered by this validation to have been appropriate. As a result, the validation agrees with the COFR’s assessment of the program as relevant to the context.

The COFR assessed ADB’s completed and ongoing operations from 2002–2016 likely effective based on progress toward achieving the COBP objective of strengthening regional cooperation and integration through energy and transport initiatives. Despite the limited scope of the program, the validation concurs with the COFR assessment on the delivery of intended objectives. It notes that the term likely effective in the 2010 IED guidelines is equivalent to the term effective in the 2015 guidelines. More specifically, the validation assesses ADB’s operations effective, in large part due to ADB’s sustained support for a series of five TA projects and its transaction advisory service for the TAPI pipeline. The railway line connecting the Republic of Iran, Kazakhstan, and Turkmenistan is operational, improving regional connectivity. Most of the ADB operations that closed over the period achieved their immediate objectives as set forth in their project documents. The main exceptions were the TA to improve the statistical methodology of the National Institute of State Statistics and Information and the TA on the Central Asian Countries Initiative for Land Management.

The COFR assessed the ADB program efficient based on delivered projects, but not on the implementation efficiency of the TA projects and the loan, which were subject to lengthy delays and cancellations. As a result, the validation regards the program as less than efficient.

The COFR considered the ADB program likely sustainable based on the likelihood that program results in the energy and transport sectors would be sustained by the government. The validation concurs with this assessment. ADB operations supported government priorities to diversify markets for Turkmenistan’s natural gas and power exports and to position the country as a trade
and transit hub. This suggests the likelihood of continued political and institutional support and funding for these priorities to sustain the results of ADB operations.

The COFR assessed the development impacts of the ADB program to be *satisfactory* based on the achievements of ADB-supported activities in the energy and transport sectors and their potential to contribute to regional cooperation and integration. The validation agrees that there is significant potential for ADB to make a positive contribution to development results in the country and the region, particularly to regional economic integration through trade and transport corridors. However, the program overall remained smaller than intended at the beginning of the review period and was of very limited scope. Furthermore, the energy and transport projects prepared during 2002–2016 will lead to expected development impacts only well after 2016. The validation therefore assesses the development impacts of the country program 2002–2016 *less than satisfactory*.

ADB and government performance were assessed *satisfactory* by the COFR. In the validation's view, there is room for improvement in the partnership between ADB and the government of Turkmenistan. Despite ADB's inability to expand the program significantly over most of the past 15 years, ADB appropriately adapted to the pace set by the government, and set up a resident mission in 2010 to further the dialogue and expand the program. On the other hand, mainly as a result of government processes in Turkmenistan, problems and delays arose during the approval and implementation of the small number and modest volume of operations. These led to continued uncertainty in the scale and scope of the ADB program, long timelines for implementation of straightforward TA projects, and cancellation of some operations. The validation expects government performance to improve with time, as the partnership widens and deepens. Nevertheless, this is an area that will require special attention and management.

Balancing the assessments above, the Turkmenistan program 2002–2016 is rated *successful on the borderline*.

**Issues and Recommendations**

While concurring with the recommendations of the COFR on ADB's support for (i) the government's key regional projects in the energy and transport sectors, and (ii) formulation of the ADB program on the "how to" aspects of diversification of the non-hydrocarbon economy, the validation makes three additional recommendations, based on issues and problems it identified.

**Provide more knowledge-intensive support for the economic diversification priorities of the government.** Given Turkmenistan's low level of dependence on official development assistance and its ability to self-finance or access alternative sources during 2002–2016, more knowledge-intensive engagement to support the economic diversification priorities of the government could add value and help ADB position itself as Turkmenistan's development partner of choice. The knowledge support needs to be demand-driven and pragmatic, and ADB could focus on designing and developing high-knowledge content projects and bring in partnerships which the government cannot do on its own.

**Strengthen human capital through private sector development.** In the absence of detailed diagnostics and a road map, improving the skills of small and medium-sized enterprises through private sector development would be a good starting point for ADB to support human capital development in Turkmenistan. Further support for human capital development needs to be demand-driven and prioritized by the government. When the government identifies a road map for human capital development, this could point the way to additional opportunities for ADB support during the CPS period, either on its own or jointly with other development partners.
Build a framework in the CPS to identify risks clearly, and propose robust strategies to manage them. The centralized authorizing environment in Turkmenistan, limited experience with externally-financed projects (especially procurement through international competitive bidding), untested capacity of agencies to apply international best practices, and limited availability and access to statistics and data will require a cautious approach to expanding operations in Turkmenistan. In the near term, the potential devaluation of the local currency poses a macroeconomic risk that needs to be managed.

The assessment of ADB country operations in Turkmenistan during 2002–2016 is summarized in the table below.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>COFR Assessments</th>
<th>Validation Assessments</th>
<th>Reasons for Deviations</th>
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</thead>
<tbody>
<tr>
<td>Program Relevance</td>
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<td>Relevant</td>
<td>No deviation, despite differences in nomenclature used for the assessment in the COFR and validation</td>
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<tr>
<td>Effectiveness</td>
<td>Likely Effective</td>
<td>Effective</td>
<td>TA projects experienced significant implementation delays; ADB’s only sovereign project, the North–South Railway project, was closed 4 years later than estimated at appraisal, after five extensions</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Efficient</td>
<td>Less than Efficient</td>
<td></td>
</tr>
<tr>
<td>Sustainability</td>
<td>Likely Sustainable</td>
<td>Likely Sustainable</td>
<td>ADB’s program remained small for many years; Development impacts will emerge several years after the projects that were prepared during 2002–2016 are implemented as envisioned</td>
</tr>
<tr>
<td>Development Impacts</td>
<td>Satisfactory</td>
<td>Less than Satisfactory</td>
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<tr>
<td>Overall Rating</td>
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<td>Successful on the Borderline</td>
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<tr>
<td>COFR Quality</td>
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<td>Adheres to new IED guidelines</td>
<td></td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, COFR = country operations strategy final review, IED = Independent Evaluation Department, TA = technical assistance.

Source: Independent Evaluation Department.
A. Validation Purposes and Procedures

1. The Central and West Asia Department (CWRD) of the Asian Development Bank (ADB) is preparing a country partnership strategy (CPS) for Turkmenistan for 2017–2021. The country operations final review (COFR) assessed ADB’s country operations during May 2002 to December 2016 successful, and provided lessons and recommendations to inform the new CPS.

2. ADB’s Independent Evaluation Department (IED) prepared this evaluation report in accordance with its 2015 guidelines. This evaluation aims to (i) validate the COFR prepared by ADB’s CWRD; (ii) assess ADB and borrower performance; (iii) assess the quality of the self-evaluation in the COFR; and (iv) identify issues and formulate recommendations for preparation of the CPS, 2017–2021. The report is based on (i) findings of the COFR; (ii) desk review of documents; (iii) consultations in Turkmenistan by an independent evaluation mission to gather stakeholder feedback and confirmation of issues identified, and to collect additional information; and (iv) headquarters-based interviews with staff familiar with Turkmenistan operations.

3. The validation covers the May 2002 economic report and interim operational strategy (ERIOS), the only strategy approved by ADB for Turkmenistan, which has been supplemented by four programming country operations business plans (COBPs) for 2014–2015, 2015–2016, 2016–2017, and 2018. The validation assessed the performance of completed and ongoing ADB-supported country operations—technical assistance (TA) projects and loans—from May 2002 to December 2016. For the validation of country operations, this report paraphrases content from the COFR when IED has no disagreements, and supplements this with findings from the evaluation mission, discussions with ADB staff, and review of additional documents. The absence of an approved CPS with explicit prioritization objectives, the long period covered by the operational review, and the small portfolio limit the potential for a meaningful assessment of cross-cutting objectives beyond those for regional integration and cooperation.

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1 The COFR’s overall assessment is based on five ratings: relevant, likely effective, efficient, likely sustainable, and satisfactory for development impact. The COFR was dated December 2016 and submitted to IED at the end of April 2017 after endorsement by the government (ADB. 2016. Turkmenistan: Country Operations Final Review, 2002–2016. Manila).


3 The mission was fielded in 3–7 July 2017; undertaken by Maya Vijayaraghavan, Senior Evaluation Specialist, IED.


B. Country Development Context and Government Plans

1. Country Development Context

4. Geography, Population, and Environmental Issues. Turkmenistan is the southernmost republic of the Commonwealth of Independent States (CIS), bordered by the Caspian Sea, Afghanistan, the Republic of Iran, Kazakhstan, and Uzbekistan. As noted in the COFR, 50.8% of the total estimated population of 5.4 million lives in 25 urban centers. The three urban agglomerations of Ashgabat, Dashoguz (a provincial capital) and Turkmenabat account for half the total urban population, with the remaining population spread across 23 urban centers, of which 21 are small and medium–sized cities. Despite Turkmenistan having the third highest urban population in Central Asia, outside these agglomerations the population is dispersed, which constrains the creation of job opportunities.

5. The Karakum desert occupies about 80% of total land area, with cultivable land accounting for only 4% of the total area; consequently, the rural population is less scattered than in some other Central Asian countries. Turkmenistan derives 97% of its total renewable surface water resources from upstream riparian countries, with agriculture the largest water consumer, accounting for about 90% of the supply. Irrigation intensity is very high and thus over 90% of the arable land has become saline. Water resources and agriculture are two critical sectors that are vulnerable to climate change and sustainability, since Turkmenistan is located on the downstream end of the river basins, which it shares with its neighbors.

6. Macroeconomic trends. With an average gross national income (GNI) per capita (Atlas method) of $750 in 2002, Turkmenistan was classified as a lower middle-income economy at the start of the ADB program period. The economy grew at an average annual rate of 9.0% during 2002–2016, with inflation averaging a moderate 6.5%. Fueled mainly by revenues from natural gas exports, growth rates averaged 8.8% during 2002–2011, and Turkmenistan was reclassified as an upper middle-income economy in 2012. The economy continued to grow at a rate of 10.5% during 2012–2014. In 2015–2016, low natural gas prices and the slowing economies of Turkmenistan’s trading partners resulted in a slowdown in the rates of growth to around 6.4%, with a corresponding reduction in GNI per capita (Atlas method) from a high of $7,310 in 2014 to $6,670 in 2016 (footnote 12). Basic data are summarized in Appendix 1.

7. The economy remains highly dependent on hydrocarbons, with the sector accounting for more than 90% of exports and half of gross domestic product (GDP). The country’s growth relies on exports of a single commodity—natural gas—to single markets; first, to the Russian

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7 Population of at least 8,000.
9 Food and Agriculture Organization. 2013. Irrigation in Central Asia in Figures. Aquastat Survey 2012. Italy. On average, Turkmenistan is allocated about 22 cubic kilometers (km)/year from the Amu Darya basin, including 0.68 cubic km/year of internal renewable surface water resources, based on the January 1996 agreement between Turkmenistan and Uzbekistan. It has similar water-sharing agreements with the Republic of Iran.
11 Data on cropping patterns show wheat and legumes cover 57% and cotton 37% of total cropped area. With the entire cultivated land irrigated and high cropping intensity (percentage of harvested irrigated area to total area irrigated), the effects of low water use efficiency are magnified as more than 90% of arable land is saline.
12 World Bank. 2017. World Development Indicators. Washington DC. Accessed on 12 June 2017: http://data.worldbank.org/country/turkmenistan. The threshold for the transition from a low-income to lower middle-income country in 2002 was $735, indicating that Turkmenistan had barely crossed the threshold and was very close to low-income status at the start of the program period.
Federation and CIS until 2008, and then to the People’s Republic of China (PRC) from December 2009 with the commissioning of the Trans-Asia Gas Pipeline in 2009. Despite Turkmenistan’s efforts to diversify its hydrocarbon export markets and routes, falling revenues have put pressure on the country’s external balances. The resulting current account deficit may lead to a balance-of-payments gap that could cause the central bank to draw on its foreign exchange reserves. Tightening of liquidity and foreign exchange regulations have been introduced to maintain the exchange rate peg at 3.5 Turkmen manats per US dollar. External debt ratios have also steadily risen since 2010.

8. The International Monetary Fund (IMF) considers a reduction in the current account deficit to be a near-term priority for Turkmenistan, and argues that a policy package consisting of cuts in public investment spending, slower credit growth, and exchange rate devaluation would help facilitate the needed adjustment. It also emphasizes the need for structural reforms to support continued economic diversification and private sector development. The IMF encourages further improvements in the business and regulatory environment, a decisive push for reform and privatization of state-owned enterprises, downsizing and greater efficiency of public investment, and a continued focus on social protection and human capital development. More generally, the IMF considers that the role of the state in planning and coordinating economic activity should gradually be scaled down.

9. Turkmenistan remains in the early stage of transition, with a large state presence in nearly all sectors of the economy. Diversifying growth through private sector development is a key policy challenge. Developing small and medium-sized enterprises (SMEs) is an effective way to expand the private sector, but there are gaps in the business environment; business skills and standards; and the financial sector, including bank financing, legal framework, and nonbank financing.

10. Structure of output. While the production structure of the economy has changed since 2002, in particular an increase in the combined share of industry and construction, the employment structure has remained relatively unchanged in terms of sector shares of total employment. Employment in Turkmenistan remains agriculture-based. In 2002, the share of

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14 As of 2016, the main pipelines were: the Central Asia–Center Pipeline or northern route supplying CIS markets (with capacity of 45 billion cubic meters (bcm)/year although annual export levels have dropped since 2009); three Trans Asia Gas Pipelines that started operating in December 2009 to the PRC (55 bcm/year capacity); two smaller pipelines to the Republic of Iran (24 bcm/year capacity); and the domestic East–West Interconnector commissioned in December 2015.

15 Turkmenistan and the Republic of Iran signed a gas barter deal in June 2016 worth $30 billion until 2026. However, owing to a dispute with the Republic of Iran in early 2017 regarding payment for gas, exports are likely to decrease in the future.

16 The International Monetary Fund (IMF) estimates that the current account deficit widened to 21% of GDP in 2016. The government does not disclose the size of its reserves.

17 This negatively affects the ability of businesses to engage in import–export operations.

18 The Turkmen manat was last devalued by 19% in 2015, from 2.9 to 3.5 manats per US dollar. Mission findings indicated that the black market exchange rate in July 2017 was at least double the official rate, i.e., at least 7.0 manats per US dollar.

19 IMF. 2017. Middle East and Central Asia Regional Economic Outlook. Washington D.C. External debt was 4% of GDP in 2010, with an estimated increase to 23% in 2016.

20 IMF. 2017. Middle East and Central Asia Regional Economic Outlook. Washington D.C. External debt was 4% of GDP in 2010, with an estimated increase to 23% in 2016.


22 The measures adopted over the past couple of years include public investment cuts, a devaluation of the currency, and an increase in utility tariffs. The administration has also intensified its efforts to develop a local production base. Ambitious plans have been put in place to increase natural gas production, build new pipelines, develop petrochemical industries, expand mining and processing of non-hydrocarbon natural resources, and support private sector development.


industry (including construction) to GDP stood at 42%, which rose to 63% in 2014. Mining, covering the hydrocarbon sector, is the source of more than 90% of annual exports, but employed only 1.4% of the total workforce. This highlights the capital-intensive nature of the sector which limits the proportion of the population who benefit from it. The relative share of agriculture to GDP fell from 22.0% in 2002 to 8.5% in 2014 although agriculture has consistently employed more than 40% of the total workforce. While data on agricultural productivity were not presented in the COFR, improving agricultural productivity and commercialization, and linking producers to markets are needed if Turkmenistan is to achieve economic diversification.

11. **Structure of demand.** The share of household consumption to GDP declined from 45.7% in 2002 to 15.1% in 2012, while gross capital formation increased from 27.6% in 2002 to a high of 47.2% in 2012 (footnote 12). The share of government consumption to GDP declined slightly from 11.1% in 2002 to 8.9% in 2012. The accumulation of physical capital is expected to slow down after the completion of infrastructure projects for the Asian Games.26

12. **Poverty reduction and social development.** As acknowledged in the COFR, limited data are available on the effects of growth on poverty and inequality.27 The country’s human development index assesses progress in three basic dimensions of human development (life expectancy, access to knowledge, and a decent standard of living) and rose from 0.665 in 2010 to 0.691 in 2015.28

13. The completion rate for the 12 years of schooling for primary and general secondary level increased to 97%.29 However, the bulk of secondary education graduates (90%–95% by some estimates) do not progress to higher education or technical and vocational education and training.30 Turkmenistan lags behind other upper middle-income countries on key health indicators such as average years of life expectancy and infant mortality rates: in 2015, the estimated life expectancy was 65.7 years, lower than the income group average by nearly 10 years. The infant mortality rate of 43.7 per 1,000 live births was significantly higher than the upper middle-income group average of 15.8 (footnote 12).

2. **Government Plans**


15. **Emerging government priorities.** The NPSED, 2011–2030 was to be implemented in three phases: 2011–2015, 2017–2023, and 2024–2030. Officials interviewed suggested that the broad priorities for the first phase were diversification of the economy, restructuring sectors, increasing economic growth rates, and improving the well-being of the population. They indicated that these priorities will continue through the second phase, with additional priorities including improvement of human capital and increasing the private sector’s contribution to the nonhydrocarbon economy to 70% by 2023.

16. The 7-year program for the second phase of the NPSED is expected to be finalized in 2017. IED discussions with government officials point to a few priorities in each sector.

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26 Turkmenistan will host the Asian Indoor Martial Art Games in September 2017.
27 The Gini index in 1998 was 40.77, which suggests a medium level of inequality in the distribution of income. Data are not available for the program period (2002–2016).
30 Based on discussions with ADB education specialists.
17. In energy, plans are already in place to increase natural gas production, build new pipelines, and develop petrochemical industries. Officials suggested that the focus of the second phase is likely to be on diversification of production to move up the value chain, and establishing new markets for electricity and natural gas exports. Beyond providing potential financing for these priorities to put the generation and export infrastructure in place in Turkmenistan, they expect ADB to play a regional coordination role to ensure that corresponding infrastructure for imports is in place in neighboring countries within similar timeframes, and to provide knowledge support to facilitate regional trade.

18. In transport, the priorities are likely to be on improving connectivity within the country, and with neighboring countries to create new trade routes. Officials suggested to IED that they expected ADB to add knowledge services to support the most efficient use of the trade routes and transport corridors that have been established, as well as trade facilitation.

19. Turkmenistan completed consultations with the United Nations country team to adopt the 17 Sustainable Development Goals (SDGs) in March 2016. Attainment of these goals is likely to be another key priority of the government, as confirmed by officials during the mission. The country’s Intended Nationally Determined Contributions were prepared well in advance of the United Nations Climate Conference in Paris in December 2015 and identified energy efficiency and conservation, sustainable use of natural gas, and increased use of alternate energy sources as pathways that would enable Turkmenistan to contribute to global targets on climate change.

20. In agriculture and natural resources, the priority is likely to be increasing import substitution and export orientation, strengthening food security, increasing labor productivity, and using innovative technologies. In discussions with IED, officials expressed interest in acquiring advanced technologies for agricultural production and sustainable water use, especially for irrigation.

C. Country Operational Strategy and Program

21. Turkmenistan joined ADB in August 2000, and the ERIOS was prepared in 2002 to guide ADB operations in the country. The ERIOS proposed to support Turkmenistan’s desire to play a more active role in regional economic cooperation and in restoring security, stability, and economic growth in Central Asia. As stated in the COFR and validated by IED, the primary objective of the ERIOS was to raise the living standards of the people of Turkmenistan in a sustainable manner. The three main strategic objectives to achieve this goal were: (i) enhancing human and social development by improving the delivery of such services as drinking water, sanitation, and heating, and by increasing the quality of basic education and health care; (ii) promoting sustainable and stable economic growth through strengthened public sector management, statistics capacity development, improved analysis of the agriculture sector, and use of advanced technologies for agricultural production and sustainable water use, especially for irrigation.

31. The aim is to establish facilities for advanced processing of hydrocarbons and production of final products such as plastics, chemicals, and petrochemicals.

32. Officials shared their experience with a previous project where construction of transmission lines in a neighboring country did not materialize as initially envisioned, leaving newly constructed transmission lines in Turkmenistan idle for 2–3 years. Citing Turkmenistan’s prior experience with a neighboring country in which a company collapsed leaving behind arrears of $13 million, they also expressed a need for continuing ADB support to ensure the drafting of financially stable power purchase and sales agreements.

33. For example, support to improve customs processes and procedures.

34. As part of the consultative process, the government discussed all 17 SDGs and agreed to 148 out of 169 global targets. Of these, 121 global targets were adopted as is, while the remaining 27 were modified given the country context.

35. Over 40% of the workforce is engaged in agriculture. The cost of production is high since the country depends entirely on irrigation for agriculture. Developing other agricultural activities such as storage, processing, and export of high-value food products is likely to be another area of focus in the sector. Related to export-oriented projects, one government official cited the example of processing plants for licorice as a possibility.
and enhanced water resources and soil management; and (iii) promoting regional economic cooperation through energy and transport programs. The ERIOS stressed that these three approaches were indicative and that others could be added in response to government needs. It also noted Turkmenistan’s limited absorptive capacity, and envisaged a tentative level of TA operations of $2.5 million per year.

22. The ERIOS further noted that: the country program “will be implemented in a phased manner, focusing initially on nonlending activities, namely TA for training and institutional strengthening, as well as in-depth economic and sector analyses in sectors in which a suitable policy environment and absorptive capacity exists for potential ADB lending operations;” “the strategic objectives yield some specific areas in which ADB’s operations are likely to be focused;” and “ADB operations will proceed gradually, through selective interventions in a limited range of sectors.”36 This allowed sufficient space for areas of cooperation to develop gradually along lines appropriate for both ADB and the government. During 2002–2016, ADB focused most of its operations on energy and transport infrastructure to enhance regional cooperation and integration.37 ADB’s strategy and program are summarized in Appendix 3.

23. Turkmenistan was classified as a Group C country in 2002, and as such has had access only to ADB’s ordinary capital resources.38 Compared with other ADB member countries in Central Asia, ADB operations in Turkmenistan are modest in scope and volume. Since Turkmenistan became a member country in 2000 up to December 2016, ADB had approved 16 operations (for 15 projects), comprising 15 TA projects amounting to $11.3 million and 1 public sector loan in 2011 for the North–South Railway Project for $125 million.39 ADB operations are listed in Appendix 4.

24. By TA type, of the 15 TA projects, 5 are advisory in nature, 1 is for capacity development, and 4 are for project preparation.40 Although two of the four project preparatory TA projects did not lead to a subsequent ADB investment project, both were implemented by the government using alternative funding sources. While a completion report was not prepared for the Regional Power Interconnection Project,41 discussions with ADB staff suggest that two issues detracted from processing a subsequent loan to Turkmenistan: (i) the government preferred to purchase a lower efficiency single cycle power plant rather than a higher-efficiency combined cycle power plant, which is the prevailing international standard;42 and (ii) the country preferred a negotiated contract rather than international competitive bidding.43 The small-scale project preparatory TA of $150,000 for the Rehabilitation of the Atamyrat–Imamnazar Road did not lead to an investment project.44

36 ADB operations were to consider (i) ADB’s relevant experience in other Central Asian countries; (ii) opportunities for collaboration with other external aid agencies and for mobilizing cofinancing, and (iii) the government’s overall reform commitment in the relevant sectors.
37 Discussions with staff in CWRD indicated that a draft interim CPS was prepared for 2013–2015 (but not finalized for Board endorsement). This also identified energy and transport as priority areas for operations, with regional integration as a cross-cutting theme aligned with the Central Asia Regional Economic Cooperation (CAREC) program.
39 ADB. 2011. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Turkmenistan for the North–South Railway Project. Manila.
40 The remaining five TA projects are regional TA projects for the Turkmenistan–Afghanistan–Pakistan (TAP) Natural Gas Pipeline Project, Phases 1 and 2 and the TAPI Natural Gas Pipeline Project, Phases 1 to 3.
41 As noted in the COFR, the government accessed funds from the Japan Export Credit Agency for this project. This project preparatory TA did lead to a subsequent loan to Afghanistan to construct new transmission lines and substations in its western region, which includes a connection to the existing 220 kV grid.
42 The government’s reason for this was the availability of trained personnel and equipment for operations and maintenance of single cycle power plants.
43 A memorandum of understanding, which would have allowed a negotiated contract, was not signed.
44 While a completion report was not prepared for this TA, the COFR notes that the government perceived ADB lending procedures to be time-consuming and decided to self-finance the road rehabilitation works.
25. By TA scope, of the 15 TA projects, 5 were small-scale TA projects not exceeding $225,000 and 3 were country-specific TA projects above $225,000. Seven of the TA projects were regional in scope, five of which supported the potentially transformational Turkmenistan–Afghanistan–Pakistan (TAP) Natural Gas Pipeline Project and subsequent Turkmenistan–Afghanistan–Pakistan–India (TAPI) Natural Gas Pipeline (when India began its participation in TAPI in 2010). Since 2013, ADB has also provided transaction advisory services to the gas companies of the four participating countries of the TAPI Gas Pipeline Project. In 2016, ADB was requested to provide financial advisory services to TAPI Pipeline Company Limited, the project company formed by the shareholders. These financial advisory services will support preparation of the multi-billion dollar TAPI project.

26. ADB operations during the COFR validation period were focused on a few sectors, mainly transport (two projects for $125.5 million including ADB’s only investment project, the North-South Railway Project), energy (seven projects totaling $5.48 million), and to a lesser extent agriculture and natural resources (two regional projects totaling $4.25 million). There were also small-scale TA projects supporting public sector management (three TA projects) and one finance TA project, which was approved in November 2014 and cancelled in May 2016 (the Financial Sector Reform TA Project) due to changes in the government’s priorities in the sector.45

27. Consistent with the government’s development objectives and ADB’s country strategy, of the eight projects with strategic objectives, six had regional integration and inclusive economic growth as stated strategic objectives, and four identified environmentally sustainable growth as an objective.46 The status of ADB operations by sector is shown in Table 1.

28. TA completion reports (TCRs) are available for 7 of the 12 closed TA projects, 47 4 of which were self-rated successful. Three TA projects—two supporting the TAP Natural Gas Pipeline Project and a TA to the National Institute of State Statistics and Information—were self-rated partly successful.48

| Table 1. Status of Approved ADB Operations by Sector, 2002–2016 |
|------------------|----------------|--------------------|------------------|----------------|
| Sector                        | Approvals  | Active          | Closed              |
|                               | Number     | Number          | Amount ($ million) | Number          | Amount ($ million) |
| Agriculture and Natural Resources | 2         | 4.3             | 1                   | 0.2             | 1                   | 4.0            |
| Energy                        | 7         | 5.5             | 2                   | 1.7             | 5                   | 3.8            |
| Finance                       | 1         | 0.5             |                      |                 |                     |
| Public Sector Management      | 3         | 0.6             |                      |                 |                     |
| Transport                     | 3         | 125.5           |                      |                 |                     |
| **Total**                     | **16**    | **136.3**       | **3**               | **2.0**         | **12**             | **133.9**      |

ADB = Asian Development Bank.

* One technical assistance project (Financial Sector Reform Project) was cancelled in May 2016.

Sources: Asian Development Bank database.

46 A project can have more than one strategic objective or theme. For instance, the North–South Railway Project identified inclusive economic growth and regional integration as strategic agendas.
47 Three TA projects which were closed several years ago did not have completion reports. The completion report for the North–South Railway Project and the project preparatory TA for the project are planned for 2017 (as per ADB’s eOperations).
29. **Development partners and coordination.** All major multilateral institutions and several United Nations agencies are represented in Ashgabat, the capital of Turkmenistan. The United Nations’ resident coordinator facilitates coordination through quarterly meetings of the development partner coordination group (DPCG) where inter-agency information is shared. As of 2017, there are seven working groups established under the DPCG with the aim of enhancing collaboration and improving aid effectiveness. A convening agency serves as chair or co-chair for each group. The United Nations’ engagement in the country is guided by the 2016–2020 Partnership Framework for Development (PFD), which was signed by the government. The PFD focuses on the SDGs. The European Bank for Reconstruction and Development (EBRD) has a small portfolio (mainly to support SMEs) in Turkmenistan, and intends to maintain the same focus for the foreseeable future. The EBRD has provided credit lines to banks since the 1990s and resumed private sector investments from mid–2008, totaling about €250 million. The development partners active in key sectors and thematic areas are listed in Appendix 5.

30. Turkmenistan received a small volume of development support during the review period. Net official development assistance (ODA) averaged 0.27% of GNI during 2003–2014, as noted in the COFR. In the last 5 years, the Islamic Development Bank, ADB, and EBRD were the top three multilateral partners in terms of financing, while Turkey and the United States of America were the top two bilateral development partners. The World Bank has a reimbursable advisory services program covering macroeconomic statistics, investment climate reforms, and privatization, in addition to studies on diversification. Unlike ADB, the agencies that the mission met (EBRD and United Nations agencies) did not have plans to scale up their operations in Turkmenistan significantly.

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49 During the IED mission, several World Bank staff from Washington, DC were on mission in Ashgabat for discussions with the government on preparation of a systematic country diagnostic. However, the mission’s request for a meeting with the World Bank could not be accommodated.

50 ADB, the European Bank for Reconstruction and Development (EBRD), the European Union, the IMF, the Islamic Development Bank, and the World Bank.

51 The focus areas of the seven working groups are: human rights; law enforcement; human trafficking; health; education; finance and private sector reform; and water, land, and agricultural development (including energy efficiency and climate change).
CHAPTER 2
Validation of the Country Operations Final Review

31. Following IED’s 2015 Guidelines for the Preparation of Country Assistance Program Evaluations and Country Partnership Strategy Final Review Validations (footnote 2), this chapter reviews the findings in the COFR and provides an overall assessment of the performance of ADB’s strategy and operations for Turkmenistan from 2002 to 2016 based on the criteria of relevance, effectiveness, efficiency, sustainability, and development impacts. As noted in para. 26, ADB operations focused on the development of energy and transport infrastructure to enhance regional connectivity. The validation will accord more weight to this priority and to these two sectors in its assessment of country operations.

A. Relevance

32. The COFR assessment of the relevance of the strategy and program was based on: (i) the alignment of the ADB strategy and program with Turkmenistan’s development needs and ADB corporate strategies and priorities; (ii) the 2002 ERIOS, which the COFR noted was for the ADB program during 2002–2004, although a full country strategy was to be prepared based on experience that had accrued; and (iii) the strategic focus of the ERIOS, which was broad and indicative, employing a three-pronged approach, relying on TA. These arguments are valid.

33. The validation agrees with the COFR’s assessment of the program as relevant. Relevance is assessed against the main subcriteria of: (i) the appropriateness of ERIOS and COBP objectives; and (ii) strategic positioning, including focus and sector selectivity. The validation assessed the chronological evolution of ADB operations during the review period.

1. Appropriateness of ERIOS and COBP Objectives

34. At the time the ERIOS was drafted, the government had little experience cooperating with international financial institutions. Likewise, ADB had little experience working with the government. The objectives of the ERIOS were broad and indicative to reflect the development priorities of the government yet flexible enough for the program to develop gradually in line with evolving government priorities and ADB strategy. ADB’s approach was cautious and relied on government commitment, in line with most other development partners of Turkmenistan.

35. ADB made a concerted effort to prepare a draft interim CPS covering 2013–2015, as mentioned in the COFR. The interim CPS identified infrastructure development in transport and energy sectors as priorities, and noted the government’s full engagement in the Central Asia Regional Economic Cooperation (CAREC) program. The mission found that the government had approved this draft, but ADB did not finalize it. Instead, ADB relied on four subsequent COBPs for 2014–2018, which continued the consistent focus on the development of energy and transport infrastructure to enhance regional connectivity.

52 The COFR notes that the consultation mission was fielded in mid-2011.
2. Strategic Positioning, Including Focus and Sector Selectivity

36. In keeping with the intent of the ERIOS, ADB operations initially focused on TA for training and institution strengthening during 2002–2004. Operations during this period focused on three specific issues identified in the ERIOS. These operations consisted of seminars on ADB operational policies and procedures, to strengthen institutional capacity; improving the statistical methodology of the National Institute of State Statistics Information so it could generate verifiable socioeconomic data for the design of effective policies and programs; and rehabilitation of the Atamyrat–Imamnazar Road, to strengthen regional economic cooperation by improving the transport corridor to Afghanistan to facilitate cross-border trade, and for the delivery of humanitarian assistance. The remaining ADB support during this period was provided through two TA projects for the diversification of markets for natural gas exports, the cornerstone of Turkmenistan’s economy; these supported feasibility studies for the TAP Natural Gas Pipeline Project.

37. Before ADB established its resident mission in 2010, only two more TA projects were provided: (i) for a multi-country partnership for sustainable land management which was relevant to climate change adaptation, and (ii) for the second phase of the seminars on ADB operational policies and procedures. The COFR explained that the government had decided not to borrow from ADB in 2002–2010 as its economy was registering high growth rates. This growth was attributed to the diversification of markets for natural gas exports to the PRC, ending the near buyer’s monopoly of the Russian Federation and CIS markets. Turkmenistan signed a multilateral agreement in 2007 with the Republic of Iran and Kazakhstan to construct a north–south railway line to increase regional trade. The country is repositioning itself as a transit and trade hub focusing on energy and transport programs, although it still maintains its permanent neutrality doctrine.

38. Other points made by the COFR reinforce the relevance of the program over the years, and highlight ADB’s ability to adapt to evolving government needs in response to changing macroeconomic conditions. ADB support for the TAPI Natural Gas Pipeline Project since December 2002 relied on TA and analyses from background studies to inform its policy discussions, and to finalize gas sales and purchase agreements between the four parties. ADB followed this up with a transaction advisory service agreement in November 2013 that increased ADB nonfinancial support. The government sees ADB support as crucial to its efforts to diversify its markets for natural gas exports to South Asia and to diversify its nonhydrocarbon economy in the long term, reducing the country’s susceptibility to external shocks. The validation sees the continuing support by ADB for the massive and ambitious TAPI project, which has the potential to yield large benefits across four countries, as crucial.

39. **Energy.** The COFR regards ADB’s support for the government’s efforts to export energy as relevant. These initiatives included channeling Turkmenistan’s natural gas to South Asian markets through the proposed TAPI, and power exports to South Asian markets through the ongoing Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan (TUTAP) and planned TAP programs. The five TA projects for TAP and TAPI totaling $3.95 million began in December 2002 (with the latest approved in September 2011) and in the COFR’s view they reduced the political risks and set the stage for private investments in a complex regional initiative. Based on the limited evidence in TA documents and discussions with ADB staff, this can be validated. IED agrees that ADB support for the interconnection with Afghanistan on the Afghan side scheduled

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53 This TAP program refers to power interconnection, and is different from the two TAP TA projects which supported the initial steps of the TAPI project for exports of natural gas.
for completion in 2020 is critical for power exports. IED also agrees that the recent TAP regional interconnection initiative for which ADB is the secretariat was relevant.\textsuperscript{54}

40. **Transport.** The COFR sees ADB support in railways as *highly relevant* to increasing regional connectivity, a major agenda for ADB. An improved north–south railway line should reduce the distance for freight transportation by about 680 kilometers from Central Asia to Persian Gulf ports. The line would link the Republic of Iran with Kazakhstan and it is projected that freight traffic could more than triple from current levels by 2020. This validation sees the ADB railways support as *relevant* since the loan financed a section of the railway line for the provision of selected outputs such as signaling and telecommunications.

41. **Other sectors.** The COFR sees the two TA projects covering seminars on ADB operational policies and procedures as *relevant*, particularly in the period before a resident mission was established in August 2010.\textsuperscript{55} ADB TA support for statistics capacity development for the National Institute of State Statistics and Information during January 2003–June 2005 was also assessed as *relevant*.\textsuperscript{56} As discussed earlier (para. 36), these TA projects responded to specific issues highlighted in the ERIOS.

42. The COFR highlights ongoing preparation for a market–based financial intermediation loan with a resource envelope of $200 million as *relevant*, despite the below-cost lending programs of the government. The government plans to increase the private sector’s participation in the nonhydrocarbon economy by up to 70% by 2020 and ADB financing would add value by bringing to bear international experience from other countries. IED agrees that privatization and private sector support should be a major objective of ADB in Turkmenistan, but does not wish to validate the relevance of a loan which is yet to be approved and is outside the review period.

43. ADB’s small-scale TA of March 2016 to establish sanitary and phytosanitary measures for food safety, improve accreditation capabilities of food safety laboratories, and strengthen capacity to implement animal and plant health measures was regarded as *relevant* by the COFR, which this validation agrees with. There is no existing formal strategy for sanitary and phytosanitary measures and many administrative laws are based on the state standards inherited from the former Soviet Union. ADB coordinated the Central Asian Countries’ Initiatives for Land Management (CACILM)\textsuperscript{57} from July 2006 but withdrew in July 2010 due to changes in corporate priorities. ADB provided a TA project for a sustainable land management information system for participating countries, and for Turkmenistan the focus was pasture management.\textsuperscript{58} The COFR notes that the termination of the joint program following the withdrawal of ADB in 2010 has seen no subsequent collaborative approach across development partners to combat desertification which IED agrees is still a key challenge.

44. From the broad and indicative objectives and scope outlined in ERIOS, the ADB program gradually evolved and narrowed in line with government priorities. While delivering a small volume of operations, ADB has remained engaged in the key sectors of energy and transport, and the cross-cutting initiative of regional economic integration. The adaptation of its strategic


\textsuperscript{57} The CACILM was initially planned as a 10-year partnership that started in 2006 to combat land degradation and improve rural livelihoods. The participating countries were Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

approach and positioning was demanded by the circumstances and is considered by the validation to have been appropriate. As a result, the validation agrees with the COFR's assessment of the program as relevant to the context.

B. Effectiveness

45. The COFR considered ADB’s completed and ongoing operations from 2002–2016 likely effective. The assessment of effectiveness was based on progress toward achieving ERIOS and COBP objectives. The validation considered ADB’s operations effective, based on the overall evidence on the achievements of TA projects and the loan for the North–South Railway Project, and on progress made in ongoing projects. As discussed below, the achievements vary by sector.

46. Energy. ADB support for the proposed TAPI Natural Gas Pipeline Project was provided through five TA projects approved during 2002–2012: two phases of feasibility studies for the TAP Natural Gas Pipeline Project which were self-rated partly successful; and the subsequent three phases of the TAPI Natural Gas Pipeline Project, when India began its participation in TAPI in 2010. As the secretariat for TAPI, ADB organized ministerial-level steering committee meetings that resulted in key agreements at governmental and commercial levels. The outputs were pre-feasibility studies, risk analysis and mitigation, a study on gas storage options, legal advice, market analysis, and security assessments. The above activities were reflected in project documents and were validated. From 2013, in its role as transaction advisor, ADB facilitated the creation of the TAPI Pipeline Company Limited (TPCL) to build, own, and operate the pipeline with gas companies of the four participating countries, as noted in the COFR. Further, in 2016, ADB was asked to provide financial advisory services to the TPCL. Government officials interviewed indicated that the issue of commissions for these financial advisory services is under discussion with ADB.

47. The mission was not able to interview Turkmengaz staff knowledgeable about the TAPI project as the entire team was in Afghanistan and returned to Ashgabat after the mission dates. However, all government officials interviewed by the mission acknowledged ADB’s major role in the high-profile, high-value TAPI pipeline, which has been a key government priority for many years. When completed, this project will establish a new trade route for the supply of natural gas to energy-deficient countries in the region. The officials believe that the pipeline also has the potential to yield important non-revenue benefits such as strengthening Turkmenistan’s relations with its neighbors, and ensuring peace and stability in Afghanistan.

48. The TA for the Regional Power Interconnection Project did not lead to a subsequent loan to Turkmenistan. The COFR notes that the TA constituted part of the third phase of TUTAP with ADB supporting the interconnection in Afghanistan, which is validated. The COFR assessment that the TA supported a feasibility study and coordinated negotiations for the power purchase and sales agreement between Turkmenistan and Afghanistan in June 2012, February 2013, and February 2014 is validated. While ADB approved the Afghanistan component of the interconnection in December 2012, for which procurement activities are ongoing, the

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59. These include the Gas Pipeline Framework Agreement and the Inter-Governmental Agreement which were signed at the TAPI Heads of State Summit in December 2012, and the gas sales and purchase agreements which was finalized and signed in May 2012.

60. Turkmen state energy firm Turkmengaz has a majority stake in TPCL through its 95% holding in the Galkynysh Pipeline Company (its special purpose company), which controls 85% of TPCL. The Afghan Gas Enterprise, Pakistan’s Inter State Gas Systems Ltd., and GAIL (India) Ltd. each have a 5% stake.

61. The Galkynysh gas field in Turkmenistan will be the source of natural gas for the TAPI pipeline; the anticipated output for the pipeline is 33 bcm of gas a year. The current estimate for the TAPI pipeline project is $10 billion.

62. The mission learned that approximately 2.5 million ethnic Turkmen are Afghan nationals, and live in the region of Afghanistan bordering Turkmenistan. The president of Afghanistan (Ashraf Ghani) was on an official visit to Turkmenistan during the mission dates, when he reiterated his country’s commitment to the TAPI pipeline; he also expressed enthusiasm for a railway linking Afghanistan, the Republic of Iran, Pakistan, and Turkmenistan.
Turkmenistan component was financed by the Japanese Export Credit Agency. The third phase is expected to be completed by 2020.

49. Officials interviewed by the mission hoped that the project in Afghanistan would be implemented as scheduled. They indicated that this would open possibilities for exports of power from Turkmenistan to other countries in the region, with Afghanistan receiving power for its own use, and serving as a conduit country for power transmission to other countries in the region. The officials also indicated their interest in exploring the possibility of power exports to the Republic of Iran and Turkey in the future. Unfortunately, no data are available for increased electricity production and exports. However, because of outcomes resulting from the five TA projects and the transaction advisory services for the mega TAPI project, the ADB program in the energy sector is rated *effective* overall.

50. **Transport.** The COFR reports that the ADB-financed North–South Railway Project was completed in November 2016. It consisted of physical infrastructure for track maintenance and safety equipment; and deployment of signaling, power and telecommunications systems in addition to institutional development and project implementation support. Further, the COFR notes that international experience on corporatization and commercialization of railways was shared with government counterparts.

51. Since this was the first, and only, investment project in ADB’s operations during the review period, preparing a project completion report (PCR) as soon as possible would present a clear picture of the issues and challenges encountered in preparing, processing, and implementing an investment project in Turkmenistan. Findings from a well-documented PCR can provide useful lessons for the design and implementation of future investment projects; in the absence of a PCR, there is only anecdotal evidence of project achievements.

52. Discussions with Ministry of Railways officials and staff suggest that they valued ADB support in bringing new technology into the sector, and benefited from their interactions with the international consultants. They consider the project a success based on the project outputs for which they received ADB support (specifically for access to new technology in signaling and telecommunications), and improved accessibility to markets in Kazakhstan and the Republic of Iran. They acknowledged that an anticipated increase in revenues would take some time, validating information provided by ADB staff. Although there is lack of data to assess sector-level outcomes, support for the transport sector is assessed *effective* based on project achievements described above.

53. **Other sectors.** The COFR rates ADB support for statistics capacity development *less than effective*. ADB supported the carrying out of a Turkmen living standards survey in 2003, preparation of an updated socioeconomic profile of households, and strengthening of the family budget survey during January 2003–June 2005. The COFR and the TCR state that there is evidence that the capacity of the staff in the implementing agency to administer living standards surveys and analyze the data collected was strengthened. However, the TCR was of the view that the statistical agency should not receive any other TA support which involves the collection and analysis of data unless data analysis can be carried out in an open and scientific manner. Although this TA did not take shape as envisioned by ADB, and was self-rated *partly successful*, the mission learned that the World Bank provided support for a repeat of this survey in 2011 under a reimbursable services agreement. As with all data collected in Turkmenistan, access to the data set is restricted. The validation concurs with the COFR assessment of *less than effective*.

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63 The mission did not schedule a visit to the project site due to time constraints and additional government approvals needed for travel outside Ashgabat. The project site is about a 7-hour drive (one-way) from Ashgabat.

54. The validation concurs with the COFR assessment that the two TA projects covering seminars on ADB operational policies and procedures contributed to ADB’s engagement with Turkmenistan. These TA projects provided administrative support for the implementation of ADB operations until the resident mission was established in August 2010.

55. The COFR states that limited results were achieved under the TA project on CACILM, and the validation concurs with this assessment. Two TA projects did not lead to ADB loans, but they were nevertheless implemented using funds from other sources. The government self-funded the rehabilitation of the Atamyrat–Imamnazar Road, and accessed funding through the Japanese Export Credit Agency for the power project. This indicates that Turkmenistan has access to alternative sources of financing and technical expertise to meet its infrastructure needs. The TA on financial sector reforms was cancelled because of changes in government plans.

56. The validation concurs with the COFR assessment that ADB has been instrumental in shaping the proposed TAPI Natural Gas Pipeline Project over the past decade. Based on an investment agreement of April 2016 between the state gas companies of the countries participating in TAPI, engineering, route surveys, environmental and social safeguards studies are to be undertaken. As noted in the COFR, the eventual effectiveness of ADB support to develop the energy infrastructure—through the TAPI Natural Gas Pipeline Project and TUTAP and TAP regional power transmission initiatives—would also depend on external factors such as improvements in the security situation in Afghanistan.

57. On balance, based on evidence from completed and ongoing operations in the energy and transport sectors to support regional integration, and despite limited achievements in other sectors, ADB support is assessed effective.

C. Efficiency

58. The COFR considered the ADB program efficient based on delivered projects, but not on the implementation efficiency of loan and TA projects, as reflected in the extent of delays and cancellations. Considering these implementation delays and cancellations, the validation concluded that the program was less than efficient.

59. Process efficiency. All except one closed TA project experienced significant implementation delays. On average, TA projects’ closing dates were late by nearly 2 years (23 months). The three ongoing TA projects have all been extended beyond the original closing dates. The North–South Railway Project, ADB’s only investment project in the country, was closed nearly 4 years later than envisaged at appraisal after five extensions. Discussions and follow-up meetings with ADB staff in headquarters suggest an authorizing environment in Turkmenistan that is highly centralized and unpredictable, which can partly explain the delays in process.

60. Energy. The validation agrees with the COFR assessment of ADB’s role in the development of the TAPI Project, first through support for feasibility studies and since 2013 as transaction advisor. ADB guided the creation of the TAPI pipeline company, and selected a commercial consortium leader to build, own, and operate the pipeline. For the first time in Turkmenistan, ADB received a success fee and a monthly retainer fee and was paid for its advice where no financing was either provided or committed. This was validated through discussions with ADB staff who were familiar with the transaction advisory services provided by ADB.

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65 The TA on the rehabilitation of the Atamyrat–Imamnazar Road was closed ahead of schedule but the TA did not lead to a loan.

66 Of the 16 ADB operations, only 3 are ongoing; 12 operations have been closed, and 1 was cancelled.
61. As noted previously (para. 48), although ADB processed a transaction TA for the Turkmenistan component of TUTAP with a total amount of $1.4 million, the government chose to finance this project through the Japanese Export Credit Agency. However, the COFR noted that ADB approved the Afghanistan component of the interconnection in December 2012 and the turnkey contracts were awarded in 2015. These are expected to be completed by 2020. ADB staff in Afghanistan confirmed progress in implementing this project.

62. **Transport.** The COFR states that the government is focusing on expanding freight rail traffic with Afghanistan, the Republic of Iran, and Kazakhstan through new rail corridors, and there are plans for the government to invest substantially in building major expressways. Ministry of Railways officials interviewed confirmed that expanding the rail network within and between countries was a priority.

63. The implementation difficulties faced in the North–South Railway Project are confirmed in the COFR. The project management consulting firm demobilized in September 2014 and delays in payments to the contractor were also experienced. As a result of an intervention by ADB, the executing agency assigned a new project manager to supervise the project. Although the loan was extended until 30 November 2016, there was no truncation of planned activities during implementation.

64. As discussed in the project documents and summarized in the COFR, the economic rationale for the North–South Railway Project was based on lower transit costs, shorter travel times, improved accessibility to external markets, and increased revenues to railways from freight traffic, in addition to development of a local tourism zone. Because of an anticipated increase in trade with Kazakhstan and the Republic of Iran, freight traffic through this railway line was projected to more than triple by 2020 from current levels. In the view of officials interviewed, it will take some time for the anticipated outcome of increased revenues to be achieved since the railway line is currently underutilized because of the economic downturn. This may affect the economic rate of return.

65. In the absence of a PCR for the North–South Railway Project, for its assessment of its efficiency the validation relied on views of government officials interviewed, and discussions with the ADB project officer. While government officials and staff were satisfied with the overall outcome of the project, they said that the international consultants’ lack of familiarity with the technical specifications related to Russian standards used in railway lines in Turkmenistan led to some confusion, and delays in the timelines for the project. However, ADB staff suggested that implementation delays resulted from “prolonged resolution of contractual issues between the executing agency and contractor relating to outstanding invoices and suspension of works of the project management consultant.”

66. Because of lengthy delays in implementing the modest number and volume of operations, and cancellations, the validation considers the ADB program less than efficient.

### D. Sustainability

67. The COFR assessed the program likely sustainable based on the likelihood that program results in the energy and transport sectors will be sustained by the government. The validation concurs with the COFR assessment of likely sustainable. This is because the government priority to diversify markets for its natural gas and power exports and position itself as a trade and transit

67 The railway lines in Turkmenistan are based on Soviet-era standards. Officials believed confusion and delays could have been avoided if ADB had also hired and trained local Turkmen consultants familiar with these standards.
hub suggests it will continue to support these programs. It is reasonable to conclude that funds will be available to sustain the results of the ADB program.

68. **Energy.** The COFR contrasts the sustainability of the proposed TAPI Natural Gas Pipeline Project and that of the ongoing TUTAP regional power initiative, on the differences in their respective designs. While the TAPI Natural Gas Pipeline Project is a stand-alone project, the TUTAP initiative is a series of individually justified investments being implemented through a phased approach to allow interconnection between the different electricity grids of Central Asia and South Asia. The COFR suggests that initial progress on the TAPI pipeline project can be driven by the Government of Turkmenistan as the major shareholder, but progress on TUTAP will depend on the commitment of other countries participating in the initiative. Officials interviewed confirmed that the TAPI project is a high priority for the government, given its commitment to diversify export markets for natural gas. Officials interviewed could only comment on the power sector investments on the Turkmenistan side, so the overall sustainability of the TUTAP initiative in other countries could not be validated.

69. Following the transaction advisory services agreement in November 2013 for TAPI, ADB guided the creation of a pipeline consortium owned by the gas companies of the four participating TAPI countries. A consortium leader was then selected to build and operate the pipeline, followed by an investment agreement committing the shareholders to provide a total of more than $200 million for engineering, route surveys, and environment and social safeguards studies. Assuming the consortium is based on commercial principles and adopts a project financing approach, this should ensure the sustainability of ADB support. Capacity issues will be crucial as a project financing approach will involve accessing capital markets, which require quick decision-making and setting realistic expectations on implementation timelines.

70. **Transport.** The COFR suggests that the financial sustainability of ADB railway investments are assured because of the solvency of Turkmenistan’s railway system and increasing freight volume and revenues. Freight along the ADB-financed railway segment is expected to be mainly transit traffic and the executing agency has the means to operate and maintain the infrastructure improvements after completion. Although mission findings suggest that the anticipated increase in traffic and revenues could take some time, Ministry of Railways officials assured the mission that adequate funds were available for operations and maintenance of the railway system.

71. ADB has not undertaken a country procurement diagnostic, nor are reports such as public expenditure financial accountability assessments available from other development partners. The government has limited experience on international competitive bidding as there have been few lending operations by development partners. As was rightly pointed out in the COFR, ADB will therefore need to support the executing agencies in carrying out proper international competitive bidding processes in the same way as was undertaken for the North–South Railway Project.

72. Data on the government’s budgeting and financial reporting have restricted circulation. In terms of reforms, Ministry of Finance officials indicated that there are plans to phase in several budget reforms starting in 2018. These include a new budget code and a medium-term budget framework. These are areas where ADB could consider providing support in the future.

73. Much of the ADB program has focused on government priorities in energy and transport sectors and the cross-cutting objective of regional economic integration. Because of continued government support in these areas, the validation concurs that the overall ADB country program is likely sustainable.
E. Development Impacts

74. Development impact is assessed by (i) ADB’s contribution to the country’s development results, particularly its contribution to achieving the cross-cutting objectives in strategic documents; and (ii) sector-level impacts.

75. The COFR considered development impact satisfactory, based on achievements in ADB-supported activities in the energy and transport sectors which could contribute to the cross-cutting objective of regional cooperation and integration. The validation agrees that there is a significant potential for ADB to make a positive contribution to development results in Turkmenistan and the region, particularly to regional economic integration through trade and transport corridors. However, the development impact of ADB operations is not yet evident and will take a long time to manifest itself, i.e., only after the projects prepared during the review period are implemented.

76. The objectives identified in the TA report for the first TA project for the TAPI Natural Gas Pipeline Project were establishing the technical feasibility and economic and financial viability of constructing and operating a gas pipeline from Turkmenistan through Afghanistan and Pakistan. The COFR describes the important potential contribution of the TAPI project to development impacts in all four participating countries. The proposed TAPI project will enable Turkmenistan to diversify the markets for its natural gas exports to South Asia and to reduce the buyer’s monopoly of the PRC market. For the countries receiving exports of natural gas (Afghanistan, India, and Pakistan), the project can strengthen energy security by providing a cleaner fuel source for future power plants, enabling them to reduce their dependency on fossil fuels.

77. The COFR argues that incorporation of commercial principles and a project financing approach in TAPI can have demonstration effects on the role of the private sector. This applies particularly to the upcoming actions on financial due diligence, fundraising efforts, and related actions to achieve financial closure. Similarly, the COFR suggests that ADB support through TUTAP aims to diversify power exports and markets through commercially viable projects.

78. The validation notes that it will take time to prepare the TAPI project and to raise funds to implement it. The project, which will pass through Afghanistan and Pakistan, also faces significant security and geopolitical risks so a robust risk mitigation framework is imperative for successful implementation. If these risks can be mitigated, the validation agrees that the project can offer a unique platform for regional cooperation with the potential for enhancing regional security.

79. The North–South Railway Project was the first investment project supported by ADB since Turkmenistan became a member country in 2000. The COFR reported that, to ensure environmental and social sustainability, ADB applied the Safeguard Policy Statement (2009) to the North–South Railway Project, the Regional Power Interconnection transaction TA, and reviewed initial findings on the TAPI Natural Gas Pipeline Project. For the North–South Railway Project, the environmental impacts were identified as category B (medium-scale impact) and involuntary resettlement impacts were categorized as C (no impact). An initial environmental examination was prepared, with the environmental management plan as an output of the transaction TA. During the construction stage, the contractor implemented the environmental management plan, while supervision consultants monitored its implementation. For the Regional Power Interconnection Project, ADB was involved in preparing environmental and social safeguard documents. ADB reviewed the preliminary environmental assessment of the TAPI Natural Gas Pipeline Project prepared by consultants. While safeguard actions for the North–South Railway project can be validated as soon as the PCR is issued, there is insufficient evidence
in available project documents to validate the statements for the TAPI or power interconnection project.

80. Of the three ERIOS strategic objectives (para. 21), ADB supported activities in the energy and transport sectors for regional cooperation and integration. Given the modest number and volume of ADB operations, the other two cross-cutting strategic objectives of the ERIOS (human and social development, and sustainable and stable economic growth) did not receive attention. As a result of ADB’s modest operations, which averaged one TA project approval per year and only one investment project during the review period, whose impacts are yet to emerge, the development impacts of the ADB program are assessed less than satisfactory.

F. ADB and Borrower Performance

81. The COFR considered ADB's performance satisfactory, based on its assessment of ADB's role in responding to client needs, adhering to ADB policies and procedures, and continuing to engage in the core sector of the economy—natural gas.

82. The COFR notes that, despite limited government demand for financing, ADB remained engaged in the natural gas sector. As the secretariat of the TAPI Natural Gas Pipeline Project, ADB approved five TA projects between December 2002 and September 2011.

83. ADB transitioned from providing free services as the secretariat of TAPI to offering fee-based advisory services. Following the transaction advisory service agreement signed by the state gas companies of the four participating TAPI countries with ADB on 19 November 2013, Turkmengaz was selected in August 2015 as the consortium leader to build, own, and operate the pipeline. ADB fees include a success fee and a monthly retainer fee, with payments for its advice where no financing was either provided or committed. These were validated through discussions with project officers. As noted in the COFR and validated earlier, the ongoing TUTAP and planned TAP program have potential to diversify the country’s markets for power exports to South Asia.

84. ADB’s approach has been broadly cautious and has relied on government commitment, in line with most other development partners of Turkmenistan. In the validation’s view, there is room for improvement in the partnership between ADB and the government of Turkmenistan.

85. Mainly because of government processes in Turkmenistan and the government’s limited experience of working with ADB, several problems and delays arose during approval and implementation of the small number and modest volume of operations. These included: (i) a highly centralized authorizing environment, resulting in long timelines for approvals, and uncertainty in scope and scale of programs; (ii) limited government experience with externally-financed projects, especially procurement through international competitive bidding; (iii) untested capacity of agencies to apply international best practices and ADB processes and procedures; and (iv) limited availability and access to official government statistics and data. These led to continued uncertainty in the scale and scope of the ADB program, long timelines for implementation of straightforward TA projects, and cancellation of some operations. The validation expects government performance to improve with time, as the partnership widens and deepens. Nevertheless, this is an area that will require special attention and management.
G. Overall Assessment

86. ADB’s engagement in Turkmenistan during 2002 to 2016 is considered successful by the COFR. The country program as of December 2016 was modest, with a small number and volume of operations—16 projects (15 TA projects and 1 investment project) with total approvals of $136.3 million across 5 sectors—energy, transport, agriculture and natural resources, public sector management, and finance. ADB investment was limited to one loan project in the railway subsector. As noted earlier, the main areas of ADB engagement were in the energy and transport sectors. Regional cooperation and integration was the main strategic focus of ADB support in these sectors; there was limited support for the other two strategic objectives of the ERIOS.

87. As the COFR points out, ADB support focused on Turkmenistan’s long-term priority to diversify the markets for its natural gas exports (through the proposed TAPI Natural Gas Pipeline Project) and more recently for power exports (through the ongoing TUTAP), and one investment in transport infrastructure (North–South Railway corridor linking Turkmenistan with the Republic of Iran and Kazakhstan). ADB support for TAPI and TUTAP has been through TA, although an unsuccessful attempt was made to finance a loan for the Turkmenistan–Afghanistan interconnection of TUTAP. Turkmenistan joined the CAREC program in 2010, after which ADB’s first loan was provided in 2011 for the railway project. Although the benefits envisioned at the time of project preparation will take time to emerge, the railway line has improved regional connectivity between the Republic of Iran, Kazakhstan, and Turkmenistan.

88. The COFR concluded that ADB had demonstrated success in regional initiatives such as in the proposed TAPI project (with ADB as secretariat in 2003 and a transaction advisor from November 2013); the ongoing TUTAP, which involves the construction of transmission lines for power exports; and the North–South Railway Project. Only the TA projects for statistics capacity development, financial sector development, and land management did not take shape as ADB had anticipated.

89. The validation considers ADB TA projects, the loan for the railway project, and fee-based advisory services during 2002–2016 to be relevant and effective, less than efficient, and likely sustainable, with less than satisfactory levels of development impact. Balancing the assessments on the evaluation criteria, the validation assesses the ADB program successful on the borderline. A summary of assessment with ratings on individual criteria is given in Table 2.
Table 2. Summary of Assessment

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>COFR Ratings</th>
<th>Validation Ratings and Weighting (Scoring)</th>
<th>Main Reasons for Rating Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Relevance</td>
<td>Relevant</td>
<td>Relevant</td>
<td>No deviation, despite differences in nomenclature used for the assessment in the COFR and validation</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Likely Effective</td>
<td>Effective 20% (2) = 0.4</td>
<td>TA projects experienced significant implementation delays; ADB’s only sovereign project, the North–South Railway Project, was closed 4 years later than estimated at appraisal, after five extensions</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Efficient</td>
<td>Less than Efficient 20% (1) = 0.2</td>
<td>TA projects experienced significant implementation delays; ADB’s only sovereign project, the North–South Railway Project, was closed 4 years later than estimated at appraisal, after five extensions</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Likely Sustainable</td>
<td>Likely Sustainable 20% (2) = 0.4</td>
<td></td>
</tr>
<tr>
<td>Development Impacts</td>
<td>Satisfactory</td>
<td>Less than Satisfactory 20% (1) = 0.2</td>
<td>ADB’s program remained small for many years; Development impacts will emerge several years after the projects that were prepared during 2002–2016 are implemented as envisioned</td>
</tr>
<tr>
<td>Overall Rating</td>
<td>Successful</td>
<td>Successful on the borderline The score is 1.6.</td>
<td></td>
</tr>
</tbody>
</table>

COFR Quality Satisfactory Adheres to new IED guidelines.


Source: Independent Evaluation Department.

H. Assessment of Quality of Self-Evaluation

90. Overall, the validation assessed the quality of the COFR as satisfactory. The final review of country operations generally followed the 2015 IED guidelines, except for the weights prescribed in the guidelines to arrive at the overall rating and the term used for the rating category on the effectiveness criterion—which relied on earlier 2010 guidelines that was discontinued for validations. The COFR provided useful information and candid assessments in many areas.

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68 The COFR used the term likely effective instead of effective.
CHAPTER 3

Issues and Recommendations

91. This validation supports the three recommendations of the COFR that ADB should: (i) continue to support the government’s key regional projects on natural gas and power exports, (ii) formulate its program on the “how to” aspects of diversification, and (iii) continue investments in transport infrastructure improvements to help government efforts to reposition Turkmenistan as a transit country. This validation also highlights some issues based on its own review and makes some related recommendations for the CPS, 2017–2021.


92. Issue 1. Turkmenistan has a low level of dependence on ODA and was able to self-finance or access alternative sources of financing during 2002–2016. The country looks to ADB for more knowledge-intensive engagement to support its efforts to diversify its economy.

93. Recommendation 1: Provide knowledge support for the economic diversification priorities of the government. Government officials explained to the mission that ADB had an important role to play in regional economic integration, particularly in transport, establishing energy transportation corridors to diversify markets for Turkmenistan’s natural gas exports, and supplying power to neighboring countries. Turkmenistan looks to ADB to play a coordination role to facilitate regional economic integration through trade, and to provide knowledge solutions to further its near-term priority of tapping new markets for natural gas and power exports. The knowledge support needs to be demand-driven and pragmatic, and ADB could focus on designing and developing high-knowledge content projects and bring in partnerships which the government cannot do on its own. Meeting the knowledge needs of the government through advisory services and knowledge products can add value and help ADB position itself as Turkmenistan’s development partner of choice. These areas are aligned with ADB’s strategic agenda of regional cooperation and integration, and more specifically the CAREC priority to improve connectivity through transport, energy, and trade links that can create economic corridors in the longer term. It is also consistent with ADB’s strategy to support upper middle-income countries through knowledge solutions and the introduction of best practices.69

B. Strengthen Human Capital through Private Sector Development

94. Issue 2. Available data indicate that Turkmenistan lags behind other upper middle-income countries in human capital development. Further, due to the capital-intensive nature of the hydrocarbon economy, the sector does not generate much employment.

95. Recommendation 2: In the absence of detailed diagnostics and a road map, improving the skills of SMEs through private sector development would be a good starting point for ADB’s support for human capital development in Turkmenistan. The need to prioritize investments in human capital is recognized in the NPSED (2011–2030) and mission findings suggest that this area is likely to receive greater attention during the second phase (2017–2023) of the government

program. ADB’s strategic agenda of inclusive growth is aligned with this need and remains relevant for the CPS, 2017–2021. Diversifying growth through support for SMEs is an effective way to expand the private sector and generate employment. Further support for human capital development needs to be demand-driven and prioritized by the government. The World Bank has just started the process of assessing the authorities' willingness and ability to collaborate on a systematic country diagnostic. This may offer a road map for human capital development, and could point the way for additional opportunities for ADB support during the CPS period, either on its own or jointly with other development partners.

C. Build a Framework in the Country Partnership Strategy to Identify Risks Clearly, and Propose Robust Strategies to Manage Them

96. Issue 3. Several problems arose during government approval and implementation of the small number and modest volume of ADB operations in Turkmenistan. These included: (i) a highly centralized authorizing environment, resulting in long timelines for approvals and uncertainty in the scope and scale of programs; (ii) limited government experience with externally-financed projects, especially procurement through international competitive bidding; (iii) untested capacity of agencies to apply international best practices and ADB processes and procedures; and (iv) limited availability of and access to official government statistics and data. In the near term, the potential devaluation of the local currency poses a macroeconomic risk that needs to be managed.

97. Recommendation 3: The proposed CPS, 2017–2021 should consider current experience with government approvals and implementation, and build a framework to identify risks clearly and propose robust strategies to manage them.
Appendixes
## APPENDIX 1: BASIC COUNTRY DATA

### Turkmenistan: Country at a Glance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP ($ billion, current)</td>
<td>4.5</td>
<td>8.1</td>
<td>22.6</td>
<td>35.9</td>
</tr>
<tr>
<td>GDP Per Capita ($, current)</td>
<td>970.0</td>
<td>1,707.0</td>
<td>4,479.0</td>
<td>6,672.5</td>
</tr>
<tr>
<td>GDP Growth (%)</td>
<td>0.3</td>
<td>13.0</td>
<td>9.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Agriculture</td>
<td>-11.7</td>
<td>14.1</td>
<td>29.8</td>
<td>...</td>
</tr>
<tr>
<td>Industry</td>
<td>-0.9</td>
<td>10.6</td>
<td>-1.0</td>
<td>...</td>
</tr>
<tr>
<td>Services</td>
<td>6.6</td>
<td>27.1</td>
<td>18.4</td>
<td>...</td>
</tr>
<tr>
<td>Gross Domestic Investment (% of GDP)</td>
<td>27.6</td>
<td>22.9</td>
<td>51.9</td>
<td>...</td>
</tr>
<tr>
<td>GNI Per Capita, Atlas Method</td>
<td>750.0</td>
<td>1,590.0</td>
<td>4,070.0</td>
<td>7,120.0</td>
</tr>
<tr>
<td>Consumer Price Index (annual % change)</td>
<td>8.8</td>
<td>10.7</td>
<td>4.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Liquidity (M3) (annual % change)</td>
<td>1.5</td>
<td>5.6</td>
<td>74.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Overall Fiscal Surplus or Deficit (% of GDP), Current Market Prices</td>
<td>0.2</td>
<td>0.8</td>
<td>2.0</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Trade Balance (% of GDP), Current Market Prices</td>
<td>11.8</td>
<td>14.1</td>
<td>10.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Current Account Balance (% of GDP), Current Market Prices</td>
<td>6.7</td>
<td>6.2</td>
<td>-10.8</td>
<td>-12.3</td>
</tr>
<tr>
<td>Exports (% of GDP)</td>
<td>32.9</td>
<td>34.8</td>
<td>43.7</td>
<td>33.2</td>
</tr>
<tr>
<td>Imports (% of GDP)</td>
<td>-21.1</td>
<td>-20.8</td>
<td>-33.5</td>
<td>-29.0</td>
</tr>
<tr>
<td>Exchange Rate (average period, Turkmen manats per US dollar)</td>
<td>1.0</td>
<td>1.3</td>
<td>2.9</td>
<td>3.5</td>
</tr>
<tr>
<td>External Debt Service (% of exports of goods and services)</td>
<td>14.3</td>
<td>6.3</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>External Debt (% of GDP)</td>
<td>47.5</td>
<td>15.4</td>
<td>2.6</td>
<td>...</td>
</tr>
<tr>
<td>Poverty Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population (million)</td>
<td>4.6</td>
<td>4.7</td>
<td>5.0</td>
<td>5.4</td>
</tr>
<tr>
<td>Population Growth (annual % change)</td>
<td>1.1</td>
<td>1.1</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Maternal Mortality Ratio (per 100,000 live births)</td>
<td>56.0</td>
<td>53.0</td>
<td>46.0</td>
<td>42.0</td>
</tr>
<tr>
<td>Infant Mortality Rate (below 1 year/per 1,000 live births)</td>
<td>62.7</td>
<td>57.8</td>
<td>50.4</td>
<td>43.7</td>
</tr>
<tr>
<td>Life Expectancy at Birth (years)</td>
<td>64.1</td>
<td>64.4</td>
<td>65.0</td>
<td>65.7</td>
</tr>
<tr>
<td>Adult Literacy (%)</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population with Access to Safe Water (%)</td>
<td>59.9</td>
<td>60.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population with Access to Sanitation (%)</td>
<td>62.4</td>
<td>62.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate (%)</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide Emissions (million tons)</td>
<td>39,966.6</td>
<td>48,338.4</td>
<td>57,289.5</td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide Emissions Per Capita (tons)</td>
<td>8.7</td>
<td>10.2</td>
<td>11.4</td>
<td>...</td>
</tr>
<tr>
<td>Forest Area (% of total land area)</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Urban Population (% of total population)</td>
<td>46.4</td>
<td>47.0</td>
<td>48.4</td>
<td>50.0</td>
</tr>
</tbody>
</table>

... = not available, GDP = gross domestic product, GNI = gross national income, US = United States.

Note: Asian Development Bank (ADB) uses gross national income per capita Atlas method as basis for ADB country classification.

## Appendix 2: Government Key Objectives and Priorities

<table>
<thead>
<tr>
<th>Strategic Priorities of the National Development Plans</th>
<th>National Program on Social and Economic Development, 2011–2030&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>The strategy covered 1999–2010. Its objectives were: sustainable economic high growth, macroeconomic stability, diversification, entrepreneurship, and promotion of foreign investment.</td>
<td>The program covered 2011–2030. Its objectives were strong growth, a stronger geopolitical and geo-economic situation, and an improvement in the living conditions of the population.</td>
</tr>
<tr>
<td>Food security with domestically produced food under strict quality control.</td>
<td>The program has three programming cycles.</td>
</tr>
<tr>
<td>Social security and improved social safety nets.</td>
<td>Government-led investments to increase the living standards of the population during 2011–2015.</td>
</tr>
<tr>
<td>A deeper private sector to diversify the economy with a focus on industries, advanced engineering, and social infrastructure in 2024–2030.</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes the National Rural Development Program (2008) and the Sectoral and Regional Development Program (2011).

## APPENDIX 3: ASIAN DEVELOPMENT BANK OPERATIONAL STRATEGY AND PROGRAM

<table>
<thead>
<tr>
<th>Period Covered</th>
<th>Economic Report and Interim Operations Strategy</th>
<th>Country Operations Business Plan</th>
<th>IED Validation Team Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADB Strategic Priorities and Sector Focus</strong></td>
<td>Improve in-country standards through (i) human and social development, (ii) sustainable economic growth, and (iii) regional cooperation through energy and transport</td>
<td>Energy and transport infrastructure to enhance regional cooperation and integration</td>
<td>Energy and transport infrastructure to enhance regional cooperation and integration</td>
</tr>
<tr>
<td><strong>Resource Envelope</strong></td>
<td>No resource envelope identified for lending as ADB operations were to start with pilot activities before being scaled-up Annual TA operations of $2.5 million identified</td>
<td>OCR envelope of $160 million $1.2 million mainly for project preparatory TA</td>
<td>OCR envelope of $104 million $1 million mainly for project preparatory TA</td>
</tr>
<tr>
<td><strong>Approved Operations</strong></td>
<td>Program totaled $127.81 million</td>
<td>Approvals in this COBP period totaled $500,000</td>
<td>No new approvals</td>
</tr>
</tbody>
</table>
### Sectors Selected for ADB Support

<table>
<thead>
<tr>
<th>Government Sector Objectives</th>
<th>Sector Outcomes ADB Contributes to and Indicators</th>
<th>IED Validation Team Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy (Strategy 2020 Core Area 1: Infrastructure and 3: Regional Cooperation and Integration)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expand Electricity Production and Upgrade Power Generating Units</td>
<td>1.1 Power purchase agreement signed for export of additional 1,500 GWh of electricity to Afghanistan (2010 baseline: 320 GWh) 1.2 Conclusion of commercial agreements on TAPI regional gas export pipeline 1.3 Signed gas sales and purchase agreements (GSPA) for TAPI gas pipeline for 30 billion cubic meters per year Updated Interim CPS Results Framework in COBP 2015–2016 2. Increased electricity production • Baseline: 20.1 TWh (2012) • Target: 21.0 TWh (2020) 3. Increased country exports • Baseline: 2.69 TWh (2012) • Target: 13.44 TWh (2020)</td>
<td>1. Achieved. Gas Pipeline Framework Agreement (GPFA) and the Inter-Governmental Agreement (IGA) were signed at the TAPI Heads of State Summit in December 2010. The GSPA was drafted, finalized, and signed in May 2012. 2. No data available to confirm progress. 3. No data available to confirm progress.</td>
</tr>
<tr>
<td><strong>Transport (Strategy 2020 Core Area 1: Infrastructure and 3: Regional Cooperation and Integration)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance Transport Networks and Integrate with those of the Neighboring Countries</td>
<td>1.1 Increased movement of people and goods in Turkmenistan (a) Number of people using railway • Baseline: 4.653 million passengers (2012) • Target: 5.055 million passengers (2015) (b) Number of people using road transport • Baseline: 275 million people (2012) • Target: 286 million passengers (2015) 1.2 Increase in trade through railways and roads • Baseline: 420.8 million tons (2012) • Target: 540.2 million ton (2020) Updated Interim CPS Results Framework in COBP 2015–2016 2. Expanded railway network in operation • Baseline: 3.2 thousand km (2012) • Target: 4.0 thousand km (2020)</td>
<td>1.1 No data available. 1.2 No data available to confirm progress. 2. Railway network in operation. Republic of Iran, Kazakhstan, and Turkmenistan are connected by the new railway line.</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, COBP = country operations business plan, CPS = country partnership strategy, GDP = gross domestic product, GWh = gigawatt hours, IED = Independent Evaluation Department, km = kilometer, KSTA = knowledge support technical assistance, OCR = ordinary capital resources, TA = technical assistance, TAPI = Turkmenistan–Afghanistan–Pakistan–India, TRTA = transaction technical assistance, TWh = terawatt hours.

### APPENDIX 4: ASIAN DEVELOPMENT BANK OPERATIONS IN TURKMENISTAN

<table>
<thead>
<tr>
<th>Approval No.</th>
<th>Title</th>
<th>Sector</th>
<th>Type</th>
<th>Source of Fund</th>
<th>Approved Amount ($ million)</th>
<th>Disbursed Amount</th>
<th>Approval Date</th>
<th>Original Closing Date</th>
<th>Actual Closing Date</th>
<th>Status</th>
<th>TCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Sector Development Modernization of Sanitary and Phytosanitary Measures for Food Safety</td>
<td>Energy</td>
<td>PPTA</td>
<td>TASF</td>
<td>0.23</td>
<td>0.02</td>
<td>22-Sep-16</td>
<td>31-Oct-17</td>
<td>30-Sep-17</td>
<td>Active</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Financial Sector Reforms</td>
<td>Finance</td>
<td>PATA</td>
<td>TASF</td>
<td>0.50</td>
<td>0.00</td>
<td>12-Nov-14</td>
<td>30-Sep-16</td>
<td>05-May-16</td>
<td>Cancelled</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Afghanistan and Turkmjenian: Regional Power Interconnection Project</td>
<td>Energy</td>
<td>PPTA</td>
<td>TASF</td>
<td>1.50</td>
<td>1.17</td>
<td>24-May-12</td>
<td>30-Jun-14</td>
<td>30-Jan-14</td>
<td>Active</td>
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<tr>
<td>4</td>
<td>TAPI Natural Gas Pipeline Phase 3</td>
<td>Transport</td>
<td>RDTA</td>
<td>TASF</td>
<td>0.23</td>
<td>0.22</td>
<td>14-May-10</td>
<td>31-Dec-10</td>
<td>21-Nov-11</td>
<td>Closed</td>
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<tr>
<td>5</td>
<td>Seminars on ADB Operational Policies and Procedures (Phase 2)</td>
<td>ANR</td>
<td>CDTA</td>
<td>TASF, IFAD,</td>
<td>4.03</td>
<td>3.44</td>
<td>24-Nov-06</td>
<td>31-Dec-08</td>
<td>18-May-11</td>
<td>Closed</td>
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<tr>
<td>6</td>
<td>North-South Railway</td>
<td>Transport</td>
<td>Project</td>
<td>OCR</td>
<td>125.00</td>
<td>116.27</td>
<td>15-Mar-11</td>
<td>31-Mar-13</td>
<td>22-Mar-17</td>
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<tr>
<td>7</td>
<td>TAPI Natural Gas Pipeline Phase 2</td>
<td>Transport</td>
<td>RDTA</td>
<td>TASF</td>
<td>0.53</td>
<td>0.51</td>
<td>23-Dec-10</td>
<td>30-Apr-11</td>
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<td>8</td>
<td>TAPI Natural Gas Pipeline</td>
<td>Energy</td>
<td>RDTA</td>
<td>TASF</td>
<td>0.23</td>
<td>0.22</td>
<td>14-Nov-10</td>
<td>31-Mar-11</td>
<td>14-Apr-11</td>
<td>Closed</td>
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<td>9</td>
<td>North–South Railway</td>
<td>Transport</td>
<td>PPTA</td>
<td>TASF</td>
<td>0.35</td>
<td>0.28</td>
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<td>31-Dec-10</td>
<td>21-Nov-11</td>
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<tr>
<td>10</td>
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<td>PSM</td>
<td>PATA</td>
<td>TASF</td>
<td>0.15</td>
<td>0.10</td>
<td>26-Jan-07</td>
<td>28-Feb-09</td>
<td>30-Nov-10</td>
<td>Closed</td>
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</tr>
<tr>
<td>11</td>
<td>Central Asian Countries Initiative for Land Management (CACILM) Multi-country Partnership Framework Support Project Feasibility Study of the TAP Natural Gas Pipeline Phase 2 Feasibility Study of the TAP Natural Gas Pipeline Improving the Statistical Methodology of the National Institute of State Statistics and Information Rehabilitation of the Atamyrat-Imannazar Road</td>
<td>ANR</td>
<td>CDTA</td>
<td>TASF, IFAD,</td>
<td>4.03</td>
<td>3.44</td>
<td>24-Nov-06</td>
<td>31-Dec-08</td>
<td>18-May-11</td>
<td>Closed</td>
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<tr>
<td>12</td>
<td>Energy RETA TASF</td>
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<td>RETA</td>
<td>TASF</td>
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<td>0.50</td>
<td>18-Dec-03</td>
<td>31-Oct-04</td>
<td>16-Dec-08</td>
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<td>Energy</td>
<td>RETA</td>
<td>TASF</td>
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<td>0.95</td>
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<td>31-Aug-03</td>
<td>31-May-08</td>
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<td>PS</td>
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<td>14</td>
<td>PSM ADTA TASF</td>
<td>PSM</td>
<td>ADTA</td>
<td>TASF</td>
<td>0.27</td>
<td>0.20</td>
<td>02-Oct-02</td>
<td>31-Mar-04</td>
<td>23-Jun-05</td>
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<td>PS</td>
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<td>15</td>
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<td>Transport</td>
<td>PPTA</td>
<td>TASF</td>
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<td>0.15</td>
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<td>16</td>
<td>Seminars on ADB Operational Policies and Procedures</td>
<td>PSM</td>
<td>ADTA</td>
<td>TASF</td>
<td>0.15</td>
<td>0.15</td>
<td>08-Aug-01</td>
<td>31-Jul-03</td>
<td>30-Mar-07</td>
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</tr>
</tbody>
</table>

| Total        | 136.29                                                               | 125.23       |

ADB = Asian Development Bank, ADTA = advisory technical assistance, ANR = agriculture and natural resources, CDTA = capacity development technical assistance, GEF = Global Environmental Facility, IFAD = International Fund for Agricultural Development, OCR = ordinary capital resources, PATA = policy and advisory technical assistance, PPTA = project preparatory technical assistance, PSM = partly successful, PSM = public sector management, RETA = regional technical assistance, RDTA = research and development technical assistance, S = successful, TAP = Turkmenistan-Afghanistan-Pakistan, TAPI = Turkmenistan-Afghanistan-Pakistan–India, TASF = Technical Assistance Special Fund, TCR = technical assistance completion report.

Sources: Asian Development Bank databases.
## APPENDIX 5: DEVELOPMENT PARTNERS ACTIVE IN KEY SECTORS AND THEMATIC AREAS

<table>
<thead>
<tr>
<th>Sector</th>
<th>Development Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>EBRD, EU, World Bank</td>
</tr>
<tr>
<td>Education</td>
<td>EU, TİKA</td>
</tr>
<tr>
<td>Energy</td>
<td>ADB, EBRD, EU, IsDB, World Bank</td>
</tr>
<tr>
<td>Finance</td>
<td>EBRD, IMF, World Bank</td>
</tr>
<tr>
<td>Health</td>
<td>WHO, USAID</td>
</tr>
<tr>
<td>Public Sector Management</td>
<td>EU, UN Agencies, World Bank</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>IsDB</td>
</tr>
<tr>
<td>Trade</td>
<td>EBRD</td>
</tr>
<tr>
<td>Transport</td>
<td>ADB, EBRD, IsDB, World Bank</td>
</tr>
<tr>
<td>Water Supply</td>
<td>IsDB</td>
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</tbody>
</table>

### Thematic Areas

<table>
<thead>
<tr>
<th>Thematic Areas</th>
<th>UN agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment and Climate Change</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>UN agencies</td>
</tr>
<tr>
<td>Governance</td>
<td>EU, UNDP</td>
</tr>
<tr>
<td>Human Development</td>
<td>UN agencies</td>
</tr>
<tr>
<td>Private Sector Development</td>
<td>EBRD, EU</td>
</tr>
</tbody>
</table>


Sources: Websites of development partners cited.
APPENDIX 6: LINKED DOCUMENT
