



1. Project Data

Project ID P157416	Project Name TANAP	
Country Europe and Central Asia	Practice Area(Lead) Energy & Extractives	
L/C/TF Number(s) COFN-C1400,IBRD-86790,IBRD-86810	Closing Date (Original) 31-Jul-2021	Total Project Cost (USD) 800,000,000.00
Bank Approval Date 20-Dec-2016	Closing Date (Actual) 31-Jul-2021	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	800,000,000.00	0.00
Revised Commitment	800,000,000.00	0.00
Actual	800,000,000.00	0.00

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2. Project Objectives and Components

a. Objectives

The project's development objective was "to diversify Azerbaijan's gas export markets and improve the security of Turkey's and South-Eastern Europe's energy supply". This was as per the Loan Agreement, 2016, Schedule 1, p.7, as well as the Project Appraisal Document (PAD), p.11.



In the analysis that follows, the PDO can be parsed as follows: (i) “to diversify Azerbaijan’s natural gas export markets, (ii) to improve the security of Turkey’s energy supply, and (iii) to improve the security of South-Eastern Europe’s energy supply”.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Trans Anatolian Natural Gas Pipeline (**Estimated cost as appraisal:** US\$7,700 million; **Actual cost at closing:** US\$5,412 million). This component supported the construction of an 1,811 km pipeline, beginning at Turkey’s border with Georgia and ending at Turkey’s border with Greece, as well as associated control systems. It also financed construction of connection points to the Turkish natural gas network in two locations (Eskisehir and Thrace) for delivery of 5.7 billion cubic meters (bcm) annually for the Turkish gas market. The pipeline up to Eskisehir had a diameter of 56 inches; from Eskisehir to the Greek border of 48 inches, except for two parallel 36-inch pipelines for the 18.7 km section crossing the Marmara Sea.

Component 2: Land Acquisition (**Estimated cost as appraisal:** US\$200 million; **Actual cost at closing:** US\$157 million). This component financed land acquisition-related costs, covering: (a) cash compensation for private land acquisition; (b) other assistance, such as implementation of livelihood restoration plans and payments under the Resettlement Action Plan (RAP) Fund to assist affected informal land users, settlers and other expenses required to meet OP 4.12 provisions; (c) expenses for the forestry lands; and (d) design, implementation and monitoring of RAPs. Land acquisition-related costs were met from the Borrower’s resources.

Component 3: Consulting services (**Estimated cost as appraisal:** US\$700 million; **Actual cost at closing:** US\$740 million). This component financed consulting services for studies, design, engineering, procurement, construction management, supervision and monitoring.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost and Financing

Of the US\$ 8.6 billion cost of the project, the World Bank financed US\$800 million, provided as loans to BOTAS (the Petroleum Pipeline Corporation of Turkey) and SGC (Southern Gas Corridor Closed Joint Stock Company, Azerbaijan), of US\$400 million respectively. The Asian Infrastructure Investment Bank (AIIB) co-financed the World bank loans with a US\$600 million sovereign loan to SGC. The remaining US\$7.2 billion were to be financed by commercial and international financing institutions (IFIs). Since actual costs at closing turned out to be substantially (27 percent) lower than anticipated, the actual financing requirements were lower to that extent. The project had in fact been on-going at the time of appraisal of the World Bank loan, with most of the main contracts having been procured and signed during 2012-16, and substantial progress having been achieved at the time of Board approval. The Bank role was to act as a



mobilizer and catalyzer of finance from other partners (including MIGA) and the private sector, and the Bank's participation and due diligence on technical, fiduciary, social and environmental issues helped facilitate subsequent support from other partners such as the EBRD and the EIB, as well as the AIIB.

Financing required for the project was fully mobilized from sovereign and commercial sources within 18 months of World Bank approval. Besides the US\$800 million provided by the World Bank, US\$1.39 billion in IFI financing for the pipeline (TANAP) was realized between December 2016 and March 2018. TANAP's shareholders were able to raise US\$1,159 million in commercial financing, benefiting to some degree from the World Bank's collaboration with commercial financiers, and its due diligence. The remaining US\$2,965 million was mobilized by the Borrowers from sovereign and non-sovereign contributions.

Borrower contribution

The Borrower contribution – BOTAS and SGC being the two Borrowers of World Bank loans - was originally estimated at US\$2,400 million, with US\$2,980 million being actually disbursed by closing.

Dates

The project was approved on December 20, 2016, becoming effective on January 27, 2017. It closed on schedule on July 31, 2021.

3. Relevance of Objectives

Rationale

Country and Sector Context

The Trans-Anatolian Natural Gas Pipeline (TANAP), which crossed Turkey from East to West, was a critical part of the Southern Gas Corridor program of gas production development and transmission. This program consisted of a set of strategically important infrastructure projects aimed at improving the security and diversity of the energy supply of Turkey and the European Union (EU), by bringing natural gas from the Caspian region to Europe.

The energy sector was a key contributor to Turkey's economic growth. A range of reform measures had helped attract private capital to meet the fast-growing demand for energy; however, Turkey's heavy dependence on energy imports – of oil and natural gas – constituted a macroeconomic challenge. Gas accounted for nearly 50 percent of the country's total electricity generation, and – at 50 billion cubic meters (BCM) – Turkey's gas consumption was the third largest in Europe. More than 50 percent of Turkey's gas was imported from Russia, making Turkey the second-largest client of Gazprom after Germany.

Constraints to gas imports and gas market inefficiencies threatened Turkey's energy security. Network capacity and storage limitations constrained the flow of gas, as well as the trading of gas. At the time of appraisal, gas storage capacity was 2.6 bcm, which constituted only 5 percent of annual gas consumption – compared to 25–30 percent in many European cities – which was considered insufficient to cover demand



spikes or supply bottlenecks. The Project, which would help increase the supply of gas to the country, was considered critical to Turkey's energy supply security and macroeconomic stability.

Azerbaijan is one of the oldest oil producing countries in the world. The country had also been developing its natural gas sector rapidly during the previous decade, with proven reserves of the order of 1,000 bcm. Production was of the order of 18.8 bcm in 2014, of which some 6.5 bcm/annum were exported to Turkey under a contract with BOTAS. The Southern Gas Corridor program would increase production at the Shah Deniz field to about 26 bcm, enabling Azerbaijan to more than triple its annual exports, to 22.5 bcm. Azerbaijan had been facing a macroeconomic crisis due to low international prices during 2014-16, and the contribution of TANAP to the growth and diversification of its gas exports was considered as critical for its economic recovery and its goal of closer economic integration with Europe.

For Europe too, the Project represented a major infrastructure priority at the time of appraisal, on account of its potential contribution to South East Europe's energy supply security. Two-thirds of EU consumption at the time came from imports, mostly from Norway and Russia, with EU's own production being on a declining trajectory. At the same time EU gas demand was projected to increase through at least 2030 in all scenarios of the International Energy Agency (IEA)'s World Energy Outlook 2015. Against this background, the European Commission (EC) stressed the high priority of the Southern Gas Corridor in the 2014 "European Energy Security Strategy".

Alignment with Country Strategies

The Project's development objectives were broadly consistent with the World Bank Group (WBG)'s Country Partnership Framework (CPF) for FY16-20 (which remains the latest CPF for Azerbaijan at the current time). Diversification of Azerbaijan's gas exports via TANAP and the Southern Gas Corridor Program was in line with the objectives of Focus Area 2 on "Economic Competitiveness", to the extent that this aimed to integrate Azerbaijan with regional and European energy markets, thereby strengthening its connectivity and transit role, and increasing its exports. There was also some consistency with the objectives of Focus Area 1 ("Public Sector Management and Service Delivery"), through support for improving reporting of extractive industry revenue and use of funds – though this consistency was less than substantial, on account of Azerbaijan's withdrawal from EITI candidate status in 2017.

The Project's objectives were fully aligned with the WBG's CPF for Turkey (FY18-21). Under the CPF's Focus Area 7 ("Sustainability"), Objective 7 specifically included the goals of increasing capacity of gas storage, and of securing and diversifying Turkey's gas supply, including through gas imports from Azerbaijan through the TANAP project.

While the landscape for EU energy and climate policy had evolved during the implementation period of the Project, the Project's development objectives of improving South-East Europe's energy security via the integration of energy markets remained fully aligned with the EC's strategy of the clean energy transition. The European Green Deal, introduced in 2019, aimed to transform the EU into a modern, resource-efficient economy, ensuring the reduction of greenhouse gas (GHG) emissions by at least 55 percent by 2030 relative to 1990 levels, and zero emissions by 2050. Two of the three key principles of this clean energy transition under the European Green Deal included the ensuring of a 'secure and affordable EU energy supply' and the development of a 'fully integrated, interconnected and digitalized EU energy market', which were strongly aligned to the objectives of the Project; in addition to which, the increased availability of gas would enable a more rapid transition out of coal, which is still consumed in some EU



countries. To this extent, the Project's objectives could be considered highly relevant for South-East Europe at the time of project closing.

Overall, these objectives were broadly relevant to Azerbaijan's CPF, highly relevant to the CPF for Turkey, and substantially relevant to the sector strategy for the EU. The objectives were sufficiently outcome-oriented and pitched for development status and capacity for the countries involved. As such, the relevance of the project's objectives is assessed as Substantial.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

"To diversify Azerbaijan's natural gas export markets"

Rationale

Theory of Change (TOC)

The project was designed to help diversify Azerbaijan's gas export markets, whilst improving the security of Turkey's and South Eastern-Europe's energy supply. Towards this end, a broad causal connection could be drawn between the project's activities and its outputs and outcomes. Key activities consisted of (a) the construction of an 1,811 km-long gas pipeline across Turkey, from the border with Georgia to the border with Greece, to deliver gas to the Turkish market, as well as to connect with the Trans-Adriatic Natural gas Pipeline (TAP), for conveying gas to European markets; (b) Preparation and implementation of Resettlement Action Plans, Livelihood Restoration Plans, and other assistance to affected persons and communities; and (c) Consultancy services for studies, design, engineering, procurement, construction, management, supervision and monitoring. Outputs produced by these activities included (i) the transmission of gas from Azerbaijan to South-Eastern Europe (plateau level of 10 bcm by 2022) and from Azerbaijan to Turkey (6 bcm plateau level by 2022), (ii) implementation of the TANAP project in a technically sound way, and in compliance with the World Bank's environmental and social safeguards policies. These in turn led directly to PDO-level outcomes, to help ensure that Azerbaijan's gas export deliveries increased to new offtake markets, that the security of Turkey's energy supply would be enhanced, with enhanced gas deliveries through additional imports, and the security of South Eastern-Europe's energy supply would be improved, with increased deliveries from new supply sources by end-2020. The pipelines themselves were designed to be expandable to carry 31 bcm and 20 bcm of gas, to European and Turkish markets respectively, in the future – to be able to transport additional volumes of gas to be produced from Shah Deniz and other fields in Azerbaijan to Turkey and Europe. Higher-level outcomes arising from the project could include enhanced growth and competitiveness of these economies, greater macroeconomic resilience from the deeper



integration of Azerbaijan, Turkey and South-Eastern Europe into international energy markets, and sustainable energy sector development and improved gas sector governance in Azerbaijan and Turkey.

While the activities were broadly appropriate to achieving the desired outcomes, the theory of change (TOC) discussion in the ICR does not specifically analyze whether they were of adequate scale to create a critical mass for change.

The above-mentioned TOC also applies to the efficacy assessment of PDO2 and PDO3, below.

Indicators used to measure the achievement of objectives were consistent with the above results chain. For PDO Indicator 1, the target for assessing diversification of Azerbaijan's natural gas markets to new off-take markets was 4.0 bcm per year by end-2020. For Indicator 2, assessment of the improvement in Turkey's energy supply was based on a target of 4.5 bcm a year of additional gas imports expected by end-2020. For PDO Indicator 3, the target for assessing improvement of South-East Europe's security of energy supply, of 4.0 bcm per year of gas imports from new supply sources by end-2020, was designed to be the mirror indicator of PDO Indicator 1, measuring South-East Europe's gas imports from a new source: Azerbaijan. Projected increases in these deliveries (not used as targets) to plateau levels, from 2022 onwards, were as indicated above.

Outputs

- TANAP's gas transmission capacity to South-Eastern Europe was fully established by end-2020 (there was a delay of some months in commercial operation on account of a slight delay in completion on the TAP side: however the TANAP pipeline construction was completed on schedule, by October 2019).
- Availability of TANAP for gas supply to Turkey reached 5.7 bcm per year by January 2021, more than fully achieving its target of 5.4 bcm per year.
- Gas deliveries to TAP commenced on December 31, 2020, reaching an annualized value of 6.2 bcm per year in January 2021 – surpassing the target of 4.0 bcm.
- Registered grievances addressed within the stipulated time frame (98.73 percent) exceeded the target (of 93 percent) by December 2021.
- As a measure of the pace of resettlement implementation, progress in registration of affected private land parcels (from a baseline of 32 percent in 2016) almost fully achieved the target (99.62 percent vs. 100 percent). Progress in this area was important to enabling on-schedule completion of the pipeline interconnection with South-East Europe.

Outcomes

The diversification of Azerbaijan's gas export markets took place on schedule, exports exceeding their end-2020 target value of 4.0 bcm by July 2021 (as mentioned above, the delay being on account of delay in completion of the TAP pipeline, outside the control of TANAP). As of September 30, 2021, a cumulative total of 5.57 bcm p.a. of gas had been exported from Azerbaijan to new natural gas export markets in South-East Europe, with annualized gas deliveries reached 7.4 bcm. The plateau of minimum 10.5 bcm (slightly higher



than the 10.0 bcm target level in the PAD) was expected to be reached in January 2022, as planned at appraisal.

Rating
High

OBJECTIVE 2

Objective

“To improve the security of Turkey’s energy supply”

Rationale

The goal of improving Turkey’s security of energy supply was assessed via one PDO indicator and two intermediate indicators.

Outputs

- The availability of TANAP for gas supply to Turkey reached a level of 5.7 bcm p.a. relative to a target of 5.4 bcm by end-2020.
- 17.5 million gas consumers in Turkey benefited from the supply of gas by end-2020, relative to a target of 15 million.
- The number of community consultations held as of the total number of communities along the actively worked sections of the pipeline fully achieved the target (100 percent) by end-January, 2021.
- The number of community consultations held for women as of the total number of communities along the actively worked sections of the pipeline (and % of consultations held separately for women) fully achieved the target (of 40 percent) by end-January, 2021.
- The share of women employed by construction contractors out of the total number of employees achieved the target (of 6 percent) by end-April, 2018.

Outcomes

TANAP’s capacity for gas transmission to Turkey became fully established by end-June 2018, as planned, and reached an annualized level of 4.5 bcm in July 2020, with total deliveries for the year reaching 4.7 bcm. The plateau of gas deliveries of 5.7 bcm p.a. (based on a contractual volume of 6 bcm p.a., as per TANAP’s agreements with BOTAS, assuming a pipeline availability factor of 95.5 percent) was reached in July 2020, a little ahead of the appraisal timetable, and higher than the anticipated 5.4 bcm. By September 30, 2021, a cumulative total of 12.57 bcm p.a. had been delivered to Turkey, crossing the appraisal target of 8.0 bcm p.a. targeted for mid-December 2020.

Rating



High

OBJECTIVE 3

Objective

“To improve the security of South-Eastern Europe’s energy supply”

Rationale

Improvement of the security of South-East Europe’s energy supply was assessed in terms of deliveries of gas, of up to 4.0 bcm per annum by end-2020, from new supply sources.

Outputs

There were no specific output indicators: the key output being the technically sound implementation of the TANAP project – which was implemented on schedule. However, earlier indicators relating to the number of community consultations held along the actively worked sections of the pipeline, as well as to gender-related targets for women employed by contractors, continued to be relevant here.

Outcomes

The target of South-Eastern Europe obtaining 4.0 bcm of gas per year from a new supply source, Azerbaijan (the mirror indicator of PDO Indicator 1), was fully achieved in 2021. This contributed significantly to increasing the region’s security of energy supply.

Rating

High

OVERALL EFFICACY

Rationale

As seen from the above, the project achieved its three objectives, with no shortcomings noted. Efficacy was rated High for all three objectives, leading to an Overall Efficacy rating of High.

Overall Efficacy Rating

High

5. Efficiency

Economic efficiency



The economic internal rate of return (EIRR) for the project at closing was estimated at 12.3 percent, with a Net Present Value (NPV) of US\$3.94 billion (at a 6 percent discount rate), compared to the estimated rate at appraisal of 10 percent and NPV of US\$2.56 billion. It should be noted that the economic costs assumed for the analysis were the actual investment expenditures for the construction of TANAP, for a pipeline capacity of 31 bcm p.a., while revenues were based on volumes of gas equal to the contractually committed 16 bcm p.a. only. While revenues were expected to build up over time, investment costs were incurred upfront, creating a mismatch in cash flows, thereby contributing to a slightly lower economic rate of return.

Operational/Administrative Efficiency

The project’s results were achieved at a total cost of US\$6.3 billion, which was substantially less than the appraisal estimate of US\$8.6 billion. These savings (of 27 percent) were in part on account of cost-effective implementation, including cost-efficient procurement, efficient contract implementation, plus favorable market conditions affecting prices of some inputs, such as steel pipes. These results were achieved with only minor delays – related mostly to TAP construction (on account of the Covid-19 pandemic).

From an overall perspective, given the savings in costs and the minimal delays in gas deliveries, which took place at a time of a health pandemic, the project’s efficiency can be considered to be High.

Efficiency Rating

High

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	10.00	0 <input checked="" type="checkbox"/> Not Applicable
ICR Estimate	✓	12.37	0 <input checked="" type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project’s development objectives remain substantially relevant to the needs of Azerbaijan’s energy sector, contributing to the energy security needs of Turkey and South-Eastern Europe. Its overall efficacy is rated High, the project having achieved its key development objectives. Its efficiency is similarly rated High, on the basis of both economic analysis and Operational/Administrative efficiency considerations. As such, its overall outcome is rated Highly Satisfactory. The rating is justified by the project’s performance in terms of budget and timeline, which can be considered favorably in comparison to other similarly large and complex infrastructure projects.



a. Outcome Rating
Highly Satisfactory

7. Risk to Development Outcome

Key risks to development outcome include (a) possible political risks, given the number of countries crossed by the Southern Gas Corridor from the Shah Deniz 2 field to Italy - though these risks have now decreased after all components of the Corridor became operational; and (b) economic and financial risks, arising from any decline in demand for natural gas in the importing regions or if piped gas through TANAP were to become severely uncompetitive compared to other fuels – though these risks had also declined as LNG prices soared during 2020 and 2021. Also, the project could potentially be further expanded, as the TANAP and TAP pipelines were designed to be expandable to 31 bcma and 20 bcma respectively – which would solidify the development outcomes achieved. The addition of compressor stations would lead to a doubling of gas throughput to Europe to 20 bcm, coupled with an increase in gas offtake by Turkey (up to 11 bcm).

8. Assessment of Bank Performance

a. Quality-at-Entry

The project design was aligned with the larger Southern Gas Corridor, which – at a cost of US\$46 billion – was by far the largest set of infrastructure investments under development at the time. The Southern Gas Corridor brought together the Governments of Azerbaijan and Turkey, along with BP and several other state and private companies in a very large public-private partnership program. The cooperation of the three main partners in the TANAP program built on the successful Baku-Tbilisi-Ezurum Natural Gas pipeline and the Baku-Tbilisi-Ceyhan oil pipeline projects. Project design drew upon the key lessons arising, including the need for clearly identifying the scale and complexity of land acquisition, use of resettlement fund, monitoring and reporting, and an effective grievance redress mechanism.

As noted by the ICR (p.31), the project's design was sound and appropriate for achieving the PDO, as was the technical and financial appraisal. The project was able to address Environmental and Social Safeguards (E&S) issues identified during appraisal, including via a Resettlement Action Plan (RAP), notwithstanding the advanced stage of preparation and implementation activities. The project's institutional and implementation arrangements, which included establishing TANAP as a private company under the Turkish Commercial Code to implement the project and operate the pipeline after completion, and contracting a major engineering firm to carry out design and engineering for the project, were adequate, allowing for successful and on-schedule implementation despite the significant complexity of the infrastructure.

There were two shortcomings. According to the ICR (p.31), the appraisal might have benefited from a more comprehensive climate and GHG emissions impact assessment. Similarly, the project team's economic assessment might have benefited from a more thorough assessment of the alternatives to gas supply to demonstrate that gas was indeed the least-cost option to achieve the PDO.



Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

The project appears to have been adequately supervised. The Bank team conducted 8 bi-annual supervision missions over a four-year period, providing exceptional continuity in the task team throughout implementation, with one of the task team leaders, as well as the environmental, social, procurement and FM team members staying with the operation from beginning to end. This proved to be greatly beneficial to the operation in terms of client relations, especially when implementation challenges arose that needed to be addressed.

The Bank coordinated closely with other development partners active in the project throughout implementation, ensuring that requests to the client – especially on E&S follow-up - were streamlined and consistent. The team also stayed engaged with key stakeholders, maintaining direct lines of communication with TANAP and both borrowers, as well as with national governments and international private-sector financiers. A close relationship was maintained with MIGA and the Asian Infrastructure Investment Bank (AIIB), with the Bank taking the lead in carrying out missions and client communications jointly or on behalf of AIIB, as per the Co-Lender's Agreement.

The ICR reports (p.33) that performance reporting was candid, facilitating adequate management guidance and responses. In early 2020, with the onset of the Covid-19 pandemic, the Bank responded flexibly to the situation, switching to virtual arrangements.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The project's Theory of Change was fairly clear and straightforward. PDO indicators reflected the three main outcomes of the project and progress on these indicators was attributable to project-related activities. Regular reporting on all aspects of the Project was set up to be done on a monthly basis by TANAP, thereby providing timely updates and enabling the Bank team to respond to any issues. In view of the size of the operation, third-party monitoring companies were contracted by TANAP to conduct regular independent environmental and social audits of the project's activities.

According to the ICR (p.24), a minor shortcoming was that the project did not have any intermediate indicators to measure construction progress prior to commissioning of the infrastructure. Another was that



several indicators did not include current plus cumulative measurement, which might have been more useful than just current measurement.

b. M&E Implementation

The M&E function appears to have been satisfactorily managed for reporting by TANAP. Data were collected on a continuous basis, analyzed in a methodologically sound manner, and reported monthly to its shareholders and the World Bank. Towards this end, TANAP invested in a substantial capacity to monitor a large number of activities taking place in parallel, in addition to external support from independent monitoring agents and an external engineering, procurement and construction management consultant. Findings from the project were disseminated via publication of all M&E documents, in addition to presentations at conferences and publication of a lessons-learned note.

c. M&E Utilization

Data on performance and results progress were adequately used by borrowers and the Bank to inform project management and decision-making – as for instance the close and frequent monitoring of health and safety incident rates, which informed the World Bank’s engagement and recommendations on occupational health and safety.

M&E Quality Rating

High

10. Other Issues

a. Safeguards

a. Safeguards

The project was classified as Category A, triggering OP 4.01. An Environmental and Social Impact Assessment (ESIA) was prepared at the outset, to satisfy both Turkish and IFC standards. A comprehensive ESIA package was disclosed on both TANAP’s website the Bank’s external website in July 2016. OP 7.50 (Projects on International Waterways) was deemed not applicable to the project, even though the pipeline would cross a number of international waterways.

Since the project involved about 7,000 hectares (ha) of land, including 4,576 ha of private land acquisition affecting more than 115,000 landowners, resettlement action plans (RAPs) were implemented, in compliance with OP 4.12. By project closing, implementation of two RAPs, expropriation processes and livelihood restoration plans were substantially complete and independently verified. Registration of private land parcels stood at 99.55 percent as of December 6, 2021. A post-resettlement impact evaluation conducted by TANAP to assess the outcome of compensation and livelihood assistance received by the affected people confirmed the satisfactory implementation of the agreed actions in the RAP, particularly regarding the key commitments related to mandatory compensation payment under Turkish law. TANAP also established a Social and Environmental Investment Program (SEIP) to help accelerate socio-economic development and



protect natural resources along the pipeline route and around the construction sites. This broadened the scope of TANAP's interventions from risk and impact mitigation measures aimed at directly-affected households to interventions contributing to the economic and social development of local communities more broadly. The SEIP benefited over 40,000 people, prioritizing vulnerable groups including children, women, physically challenged persons and farmers to improve their socio-economic well-being.

Although the project had several large associated facilities in the form of upstream gas facilities and pipelines, IBRD received from its Board a safeguards policy waiver for TANAP's associated facilities.

A Grievance Redress Mechanism (GRM) was put in place by TANAP in compliance with the GRM provisions in the legal documents. As of December 6, 2021, 5,364 grievances were received in the GRM, of which 99 percent were closed. For cases that the GRM process was not able to solve to the satisfaction of the complainants, four Appeals Committees with independently appointed members were put in place. The Appeals Committees reviewed some 25 cases, of which 3 remained open at project closing and complainants of four cases indicated that they preferred to escalate the issues to the courts.

By project closing, all reinstatement activities in the four lots had been fully completed, including bio restoration and reforestation activities. Bio restoration monitoring continues to be conducted by TANAP's consultants and contractor teams. Additionally, the biodiversity offset management strategy, which was in line with EBRD's performance standards, was finalized and disclosed in-country.

Total greenhouse gas emissions (GHG) during operations were found to have been substantially lower than estimated at appraisal (by a factor of about four). Even though additional gas had to vented on account of a gas leak, resulting in an increase in GHG emissions, total emissions in 2021, at 0.256mt CO₂ eq., were far below the appraisal estimate of 0.4 mt CO₂ eq./annum at full capacity.

Third-Party E&S monitoring was initiated from 2014 by TANAP, which engaged three independent E&S consultants as monitoring agents during 2014-19, with regular reporting on environmental and social issues. The ICR reports (p. 30) that the recommendations of these agents were systematically addressed by TANAP.

As reported by the ICR (p.30), all but one of the intermediate results indicators related to social impacts, grievances, consultations and employment of women were successfully met or exceeded the end-term targets. The only indicator not fully met was the registration of affected land parcels, which however was met to the extent of 99.62 percent by project closing.

b. Fiduciary Compliance

According to the ICR (p.30), TANAP managed satisfactory financial management (FM) arrangements throughout implementation. The project utilized IFR-based disbursement, with Interim Financial Reports (IFRs) being submitted on time and found to be satisfactory. Audit reports from BOTAS, SGC and TANAP were all submitted on time and found to be satisfactory and all FM-related covenants were complied



with. The ICR does not specify whether audit reports received unqualified opinions from external auditors.

The ICR reports (p.30) that all procurement-related covenants were complied with, and all major contracts completed satisfactorily and on timely basis. TANAP was an early adopter of the Bank’s new Procurement Framework, whilst following TANAP’s own procurement procedures. Contracts under the project were procured as advance procurement specified in the Bank’s Procurement Regulations. Procurement was supported by a skilled external engineering, procurement and construction management contractor (EPCM), under a multi-year contract, with close involvement of TANAP’s technical and commercial teams. According to the ICR, TANAP managed decisions regarding contract implementation in a highly professional way, contributing significantly to the cost savings achieved during the procurement process.

c. Unintended impacts (Positive or Negative)

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d. Other

Gender: The project made significant efforts to consult female beneficiaries, and increase female employment by contractors. TANAP carried out separate consultations for women in their own dwellings, thereby ensuring that they were informed about the project, land acquisition procedures, its benefits, local employment opportunities, safety trainings and its planned social investment program. Among the affected communities, TANAP provided local employment opportunities through its contractors for unskilled women to be able to earn additional income for their households. At project closing the share of female employees among contracts stood at 11 percent, more than double the project target of 5 percent.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Highly Satisfactory	Highly Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	High	High	
Quality of ICR	---	Substantial	

12. Lessons

IEG derives the following lessons drawn from the ICR:

1. The use of shareholder finance in lieu of project finance can sometimes be useful when project structures are complex. In the case of the TANAP project, the choice of the financing



structure was justified in light of the complexity of the Southern Gas Corridor program project, the strategic nature of the project, and the possibility of minimizing implementation delays, which would have had substantial impacts on downstream gas customers and consumers.

2. For large infrastructure projects, it is important for institutional structures for implementation to be put into place prior to Board approval. The TANAP operation was implemented on time, under budget, and with full fiduciary compliance, which was possible because it was appraised when the institutional structure for implementation was fully ready, the main contracts had already been procured, and works had already begun.

3. The World Bank's involvement in transformative infrastructure projects can help deepen engagement with countries at a broader level, thereby enabling wider contributions to country development agendas. The Bank's involvement in the TANAP project led to the building up of trust which facilitated engagement in several other areas under the umbrella of the Bank Group's Country Partnership Framework (CPF) for Azerbaijan FY16-20. It also demonstrated to the government and wider stakeholders in Azerbaijan how the Bank could engage and deliver on important projects, thereby paving the way for other partners to support the country.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well written and internally consistent, and provides a fair amount of detail on implementation issues, especially on environmental and social compliance. The achievement of objectives is adequately analyzed and based on solid evidence. Strengths and weaknesses in the M&E system and elsewhere are highlighted and discussed. Overall, the narrative appears to support the ratings and available evidence. One area which could have been better framed are the key lessons from the project: the review has tended to present findings and conclusions more than lessons with a broader application to potential future operations and interventions.

a. Quality of ICR Rating

Substantial

