Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD1665

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A PROPOSED LOAN
IN THE AMOUNT OF US$400 MILLION
TO
THE SOUTHERN GAS CORRIDOR CLOSED JOINT STOCK COMPANY

WITH THE GUARANTEE OF THE REPUBLIC OF AZERBAIJAN

AND

A PROPOSED LOAN
IN THE AMOUNT OF US$400 MILLION
TO
BORU HATLARI İLE PETROL TAŞIMA ANONİM ŞİRKETİ

WITH THE GUARANTEE OF THE REPUBLIC OF TURKEY

FOR THE

TRANS-ANATOLIAN NATURAL GAS PIPELINE PROJECT

NOVEMBER 22, 2016

Energy & Extractives Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective as of October 31, 2016)

Currency Unit	=	Azerbaijani Manat
Currency Unit	=	Turkish Lira
	=	
AZN 1.64	=	US$1
TL 3.09	=	US$1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AGSC	Azerbaijan Gas Supply Company
AIIB	Asian Infrastructure Investment Bank
APM	automatic pricing mechanism
bcm	billion cubic meters
BOTAŞ	Petroleum Pipeline Corporation of Turkey
BP	BP plc (formerly known as British Petroleum)
COP21	21st annual Conference of Parties to UNFCCC
CAS	Country Assistance Strategy
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
DPL	Development Policy Loan
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
EIB	European Investment Bank
EMRA	Energy Market Regulatory Authority
EPCM	engineering, procurement and construction management contractor
EPIAŞ	Energy Market Operation Corporation
ESES	Environmental Sustainability and Energy Sector
EITI	Extractive Industries Transparency Initiative
EU	European Union
EUAŞ	Electricity Generation Corporation of Turkey
FM	financial management
GDP	gross domestic product
GHG	greenhouse gas
IEA	International Energy Agency
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IFR	Interim Financial Report

IFRS	International Financial Reporting Standards
INDC	Intended Nationally Determined Contribution
IPA	Instrument for Pre-Accession Assistance
IPF	Investment Project Financing
KfW	KfW Development Bank (originally Kreditanstalt für Wiederaufbau)
LNG	liquefied natural gas
M&E	monitoring and evaluation
MENR	Ministry of Energy and Natural Resources (Turkey)
MoEU	Ministry of Environment and Urbanization (Turkey)
MoFW	Ministry of Forestry and Water Affairs (Turkey)
MIGA	Multilateral Investment Guarantee Agency
$mtCO_2$-eq	million tons of carbon-dioxide equivalent
MW	megawatt
MWh	megawatt-hour
NG	natural gas
NGML	Natural Gas Market Law
OHS	occupational health and safety
PMUM	Electricity Market Financial Reconciliation Center
PPP	public-private partnership
RAP	Resettlement Action Plan
RoW	right-of-way
SCD	Systematic Country Diagnostic
SCP	Southern Caucasus Natural Gas Pipeline
SCPx	SCP Expansion
SGC	Southern Gas Corridor Closed Joint Stock Company
SEP	Stakeholder Engagement Plan
SOE	state-owned enterprise
SOCAR	State Oil Company of Azerbaijan Republic
SOFAZ	State Oil Fund of Azerbaijan
TANAP	Trans-Anatolian Natural Gas Pipeline
TAP	Trans-Adriatic Natural Gas Pipeline
TAS	Turkish Accounting Standards
TEIAŞ	Electricity Transmission Corporation of Turkey
TL	Turkish Lira
TP	Turkish Petroleum Corporation
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WB	World Bank

Regional Vice President:	Cyril Muller
Country Directors:	Mercy Tembon & Johannes Zutt
Senior Global Practice Director:	Riccardo Puliti
Practice Manager:	Ranjit Lamech
Task Team Leaders:	Kari Nyman, Yesim Akcollu & Abdulaziz Faghi

AZERBAIJAN AND TURKEY

Trans-Anatolian Natural Gas Pipeline Project

TABLE OF CONTENTS

Page

PAD DATA SHEET

Azerbaijan and Turkey

Trans-Anatolian Natural Gas Pipeline Project (P157416)

PROJECT APPRAISAL DOCUMENT

EUROPE AND CENTRAL ASIA REGION

ENERGY AND EXTRACTIVES GLOBAL PRACTICE

Report No.: PAD1665

Basic Information			
Project ID P157416	EA Category A - Full Assessment		Team Leader(s) Kari J. Nyman, Abdulaziz Faghi, Yesim Akcollu
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 21-Dec-2016	Project Implementation End Date 31-Jan-2021		
Expected Effectiveness Date 31-Jan-2017	Expected Closing Date 31-Jul-2021		
Joint IFC No			
Practice Manager/Manager	Senior Global Practice Director	Country Directors	Regional Vice President
Ranjit J. Lamech	Riccardo Puliti	Mercy M. Tembon Johannes C.M. Zutt	Cyril E Muller

Borrower: Boru Hatları İle Petrol Taşıma A.Ş. (BOTAŞ), Southern Gas Corridor CJSC (SGC)			
Responsible Agency: TANAP Doğalgaz İletim A.Ş. (TANAP)			
Contact:	Yılmaz Öztürk	Title:	Accounting Manager
Telephone No.:	90-312-999-1132	Email:	yilmaz.ozturk@tanap.com

Project Financing Data(in USD Million)			
[X] Loan	[ ] IDA Grant	[ ] Guarantee	
[ ] Credit	[ ] Grant	[ ] Other	

Total Project Cost:	8600.00	Total Bank Financing:	800.00
Financing Gap:	0.00	of which BOTAŞ 400.00 and SGC 400.00	

Financing Source by TANAP Shareholder	Amount
BOTAŞ	**2,600.00**
Borrower	970.00
SGC (Loan to BOTAŞ)	430.00
European Investment Bank (EIB)	800.00
International Bank for Reconstruction and Development (IBRD)	400.00
SGC	**5,000.00**
Borrower	1,000.00
EIB	500.00
IBRD	400.00
Asian Infrastructure Investment Bank (AIIB)	600.00
European Bank for Reconstruction and Development (EBRD)	500.00
Foreign Private Commercial (Identified)	1,000.00
Foreign Private Commercial (Unidentified)	1,000.00
BP	**1,000.00**
TOTAL	**8,600.00**

Expected Disbursements to BOTAŞ (in USD Million)

Fiscal Year	2017	2018	2019	2020	2021	2022				
Annual	150.00	150.00	100.00	0.00	0.00	0.00				
Cumulative	150.00	300.00	400.00	400.00	400.00	400.00				

Expected Disbursements to SGC (in USD Million)

Fiscal Year	2017	2018	2019	2020	2021	2022				
Annual	250.00	100.00	50.00	0.00	0.00	0.00				
Cumulative	250.00	350.00	400.00	400.00	400.00	400.00				

Institutional Data

Practice Area (Lead)

Energy & Extractives

Contributing Practice Areas

Environment & Natural Resources, Governance, Social, Urban, Rural and Resilience Global Practice

Proposed Development Objective(s)

The TANAP Project's Development Objective is to diversify Azerbaijan's gas export markets and improve the security of Turkey's and South East Europe's energy supply.

Components

Component Name	Cost (USD Millions)
Trans-Anatolian Natural Gas Pipeline	7,700.00
Land Acquisition	200.00
Consulting Services for Studies, Design, Engineering, Procurement, Construction management, Supervision, and Monitoring	700.00

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Moderate
7. Environment and Social	Substantial
8. Procurement	Substantial
9. Stakeholders	Moderate
OVERALL	Moderate

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [X]	No [ ]
Have these been approved by Bank management?	Yes [X]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [X]	No [ ]

Explanation:

The Board package includes a recommendation to the Executive Directors to waive: (a) certain provisions of the Procurement Policy: Procurement in IPF and Other Operational Procurement Matters, issued June 28, 2016 (Procurement Policy) (see Annex 3, paragraph 40), and the Anti-Corruption Guidelines, revised July 1, 2016 (ACGs) (see Annex 3, paragraph 41), for TANAP; and (b) the application of the Bank's environmental and social safeguard policies to other projects associated with TANAP (see paragraphs 113-118).

Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36		**X**
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10		**X**
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50 (see paragraph 103)		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
TANAP's Capacity to Implement the Project	**X**		CONTINUOUS

Description of Covenant

The Borrowers shall cause TANAP, through the Subsidiary Agreements, to maintain capacity satisfactory to the Bank for carrying out its responsibilities under the Project.

Name	**Recurrent**	**Due Date**	**Frequency**
The Borrowers' Capacity to Oversee Project Implementation	**X**		CONTINUOUS

Description of Covenant

The Borrowers shall maintain, either itself or through an agent or affiliate acting on its behalf, a dedicated technical team to oversee the implementation of the Project and to liaise with TANAP.

Name	**Recurrent**	**Due Date**	**Frequency**
Transfer of TANAP Shares from SGC to SOCAR Turkey		30-Sep-2017	

Description of Covenant			
SGC shall promptly furnish to the Bank evidence reasonably requested by the Bank of its intended sale of seven percent of its shares in TANAP to SOCAR Turkey Enerji A.Ş. The resulting reduction of SGC's shares in TANAP shall result in an equivalent reduction in the percentage of the Project expenditures to be financed from the SGC Loan proceeds. Due date is indicative.			
Name	**Recurrent**	**Due Date**	**Frequency**
TANAP's Consulting Services Support	**X**		CONTINUOUS
Description of Covenant			
TANAP shall maintain, during the execution and until completion of the Project, a contractor for engineering services.			
Name	**Recurrent**	**Due Date**	**Frequency**
TANAP's Integrated Project Management Structure	**X**		CONTINUOUS
Description of Covenant			
TANAP shall maintain, during the execution and until completion of the Project, an integrated Project management structure consisting of TANAP and external consulting staff.			
Name	**Recurrent**	**Due Date**	**Frequency**
TANAP's Contractors' Compliance with the World Bank's Anti-Corruption Guidelines	**X**		CONTINUOUS
Description of Covenant			
TANAP shall ensure all contractors financed by the Loans have expressly agreed to comply with the provisions of the World Bank's Anti-Corruption Guidelines (ACGs), including the Bank's right to audit. (Financing will only be extended to contracts assessed by the Bank to be eligible, and for which the Project Implementing Entity has received of the respective contractors' written notification of their acceptance of the ACGs.)			
Name	**Recurrent**	**Due Date**	**Frequency**
Implementation of the ESIA Package	**X**		CONTINUOUS
Description of Covenant			
TANAP shall ensure that the Project (including all work performed by contractors) is carried out in accordance with the provisions of the environmental and safeguards documents that constitute the Environmental and Social Impact (ESIA) Package, including the Resettlement Action Plans (RAPs).			
Name	**Recurrent**	**Due Date**	**Frequency**
Independent Environmental and Social Monitoring and Reporting	**X**		QUARTERLY
Description of Covenant			
TANAP shall maintain independent third party monitoring firms, with staffing and terms of reference satisfactory to the Bank, to independently monitor the Project's implementation progress and compliance with terms of the ESIA Package, and to prepare and submit quarterly ESIA monitoring reports and semi-annual external monitoring reports of the RAPs to TANAP and the Bank. Environmental monitoring			

firm was appointed in 2015. The social monitoring firm will be appointed within 45 days of the date of the first signed Loan Agreement.

Name	Recurrent	Due Date	Frequency
Grievance Redress and Appeals Mechanism	X		CONTINUOUS

Description of Covenant

TANAP shall (a) maintain a grievance redress mechanism for TANAP; and (b) establish within 30 days of the date of the first signed Loan Agreement and maintain four independent Appeals Grievance Redress Committees, for addressing complaints not resolved by TANAP's grievance mechanism related to the implementation of the ESIA Package.

Name	Recurrent	Due Date	Frequency
Impact Evaluation of RAP Implementation		31-JAN-2020	

Description of Covenant

TANAP shall no later than one calendar year after the carrying out the RAPs, conduct and furnish to the Bank impact evaluation studies on the outcome of resettlement activities carried out by TANAP.

Name	Recurrent	Due Date	Frequency
Compensation for Land Acquisition	X		CONTINUOUS

Description of Covenant

TANAP shall, in relation to resettlements under the Project, pay all expenditures and any other related payments referenced under the RAPs.

Name	Recurrent	Due Date	Frequency
Occupational Health and Safety	X		CONTINUOUS

Description of Covenant

TANAP shall implement its Working Hours Action Plan in accordance with the compliance schedule set forth in the Plan.

Name	Recurrent	Due Date	Frequency
Information to the Bank on Significant Events	X		CONTINUOUS

Description of Covenant

TANAP shall within five days after its occurrence, notify the Bank of any significant environmental, occupational health and safety related event; and within 30 days provide the Bank with a summary report that includes a description of such significant event, and the measures that TANAP is taking or plans to take to address the event and to prevent any future similar events.

Name	Recurrent	Due Date	Frequency
Progress Reporting	X		MONTHLY

Description of Covenant

TANAP shall monitor and evaluate the progress of the Project and prepare and submit to the Bank monthly Project Reports.

Conditions		
IBRD	Subsidiary Agreements	Effectiveness

Description of Condition

Subsidiary Agreements have been duly authorized by the Borrowers and TANAP.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Kari J. Nyman	Team Leader (ADM Responsible)	Lead Specialist	Team Leadership	GEE03
Abdulaziz Faghi	Team Leader	Senior Energy Specialist	Energy Operations	GEE03
Yesim Akcollu	Team Leader	Senior Energy Specialist	Energy Operations	GEE03
Salih Kemal Kalyoncu	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist	Procurement	GGO03
Ayse Seda Aroymak	Financial Management Specialist	Senior Financial Management Specialist	Financial Management	GGO21
Alan F. Townsend	Team Member	Senior Energy Specialist	Energy Operations	GEE09
Alexandrina Platonova-Oquab	Peer Reviewer	Senior Carbon Finance Specialist	Climate Action	GGSCE
Arturo S. Rivera	Team Member	Lead Energy Specialist	Energy Operations	GEE03
Arzu Uraz	Safeguards Specialist	Social Development Specialist	Safeguards	GSU03
Bakhtiyar Karimov	Team Member	Regional Coordinator	Natural Gas	GEEX1
Darejan Kapanadze	Safeguards Specialist	Senior Environmental Specialist	Environment	GEN03
Dariusz Kobus	Safeguards Specialist	Consultant	Environment	GEN03
David Reinstein	Peer Reviewer	Senior Oil and Gas Specialist	Natural Gas	GEEX1
Eavan O'Halloran	Team Member	Country Program Coordinator	Country Programs	ECCU6

Emre Kaya	Environmental Specialist	Consultant	Environment	GEN03
Esra Arikan	Safeguards Specialist	Senior Environmental Specialist	Safeguards	GEN03
Gulana Enar Hajiyeva	Safeguards Specialist	Senior Environmental Specialist	Safeguards	GEN03
Heather B. Worley	Team Member	Senior Operations Officer	Energy Operations	GEESO
Hiwote Tadesse	Team Member	Operations Analyst	Quality Assurance	GEE03
I. U. B. Reddy	Safeguards Specialist	Senior Social Development Specialist	Safeguards	GSU06
Jasna Mestnik	Team Member	Finance Officer	Finance	WFALN
Jelena Lukic	Safeguards Specialist	Social Development Specialist	Safeguards	GSUGL
Jorge E. Villegas	Safeguards Specialist	Senior Social Development Specialist	Safeguards	GSU03
Juliana Chinyeaka Victor	Team Member	Senior Monitoring & Evaluation Specialist	Quality Assurance	GEESO
Lala Dadashova	Team Member	Temporary	Team Support	ECCAZ
Lela Shatirishvili	Safeguards Specialist	Consultant	Safeguards	GSU03
Lisa Lui	Counsel	Lead Counsel	Legal	LEGLE
Marina Djabbarzade	Safeguards Specialist	Consultant	Safeguards	GSU03
Nigar Sadikhova	Team Member	Executive Assistant	Team Support	ECCAZ
Patrice Philippe Marie Joseph De Martin De Vivies	Peer Reviewer	Senior Adviser	Natural Gas	GEEDR
Richard Bernard MacGeorge	Team Member	Lead Infrastructure Finance Specialist	Finance	GEEFS
Robert H. Montgomery	Environmental Specialist	Lead Environment Specialist	Environment	GEN04

Rozena Serrano	Team Member	Program Assistant	Team Support	GEE03
Ruth Tiffer-Sotomayor	Safeguards Specialist	Senior Environmental Specialist	Environment	GEN04
Ruxandra Maria Floroiu	Safeguards Advisor	Lead Environmental Specialist	Safeguards	GEN03
Sadig Aliyev	Team Member	Infrastructure Specialist	Energy Operations	GTI03
Selcuk Ruscuklu	Team Member	Program Assistant	Team Support	ECCU6
Tamar Sulukhia	Team Member	Program Leader	Sustainable Development	ECCU6
Tunya Celasin	Team Member	Senior Communications Officer	Communications	ECAEC
Tural Jamalov	Team Member	Financial Management Specialist	Financial Management	GGO21
Turan Hazar	Safeguards Specialist	Consultant	Safeguards	GSU03
Zhengjia Meng	Team Member	Young Professional	Finance	GEEFS

Extended Team

Name	Title	Office Phone	Location
Milosz Momot	Program Manager / External Peer Reviewer	32-229-80750	Brussels

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Turkey	20 provinces				Pipeline route identified.

Consultants (Will be disclosed in the Monthly Operational Summary)

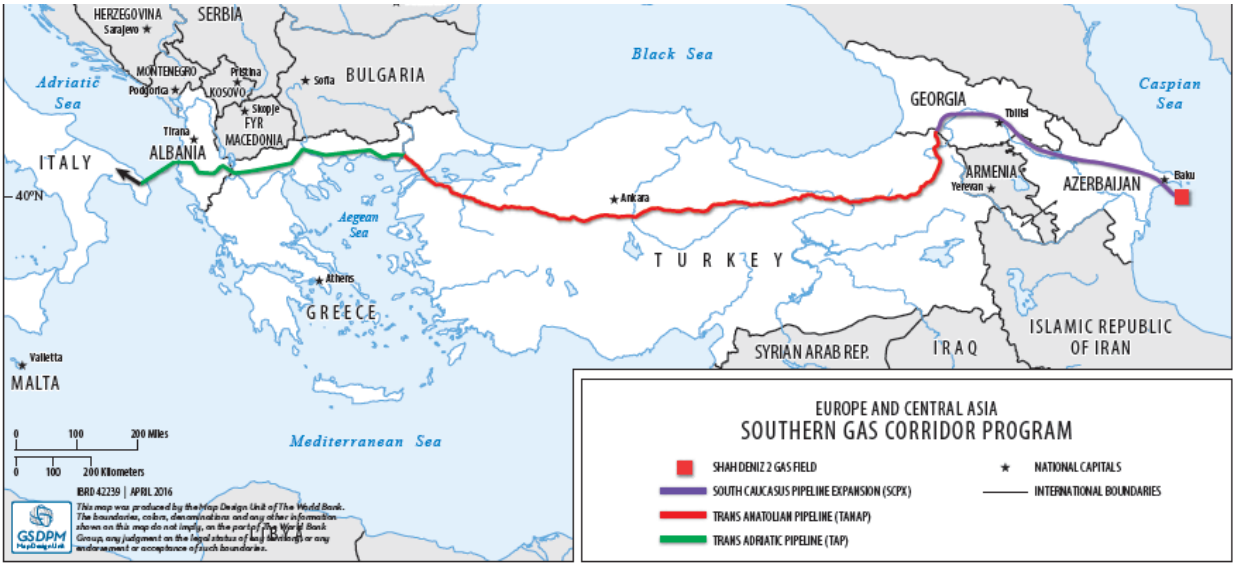
Consultants Required? No consultants are required.

I. STRATEGIC CONTEXT

A. Country Context

Introduction

1. Turkey is the host country of the Trans-Anatolian Natural Gas Pipeline (TANAP) Project ("the Project"). The Project is part of the Southern Gas Corridor Program ("the Program") of gas development in Azerbaijan and gas transmission from Azerbaijan through Georgia, Turkey, Greece and Albania to Italy. The term Southern Gas Corridor is used to describe planned 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 Program including the TANAP Project is the first realization of the Southern Gas Corridor. Reflecting the high priority of the Southern Gas Corridor Program to Azerbaijan, Georgia, Turkey and the countries in South Eastern Europe, along with the World Bank Group, a number of international financial institutions (IFIs) are supporting the Program including the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the Asian Infrastructure Investment Bank (AIIB) and the Asian Development Bank (ADB).



2. TANAP Doğalgaz İletim Anonim Şirketi, i.e. TANAP Natural Gas Transmission Company, is a special purpose private company established under the Turkish Commercial Code to implement the Project and own and operate the TANAP Pipeline System upon its completion. Turkey's national gas company, Boru Hatları İle Petrol Taşıma Anonim Şirketi (BOTAŞ), holds a 30 percent share in TANAP. The Government of Azerbaijan and the State Oil Company of the Azerbaijan Republic (SOCAR) have established the Southern Gas Corridor Closed Joint Stock Company (SGC) as their joint investment vehicle for the Southern Gas Corridor. SGC holds a 58 percent share in TANAP. The remaining 12 percent share is held by BP Pipelines (Tanap) Limited, a subsidiary of the international oil and gas company BP plc (sometimes also referred to by its former name British Petroleum). This Project Appraisal Document (PAD) presents the Project, the Southern Gas Corridor Program, and the proposed World Bank assistance to BOTAŞ and SGC for their financing obligations to TANAP. BOTAŞ and SGC would be the Borrowers

of World Bank loans of US$400 million each. The Multilateral Investment Guarantee Agency (MIGA), a member of the World Bank Group, is considering providing a guarantee under Non Honoring of Sovereign Financial Obligations (NHSFO) cover on loans of up to US$750 million as a credit enhancement instrument allowing SGC to leverage commercial financing at improved terms.

3. The participation of the World Bank in the TANAP project adds value as follows: (a) the Bank brings its advice and experience in the application of international best practice with regards to environmental and social issues, including citizen/stakeholder engagement, as well as fiduciary issues, through its due diligence, which collectively help TANAP enhance the quality of project implementation. This extensive environmental, social and fiduciary due diligence has enabled SGC to seek financing from AIIB and EBRD and it also helped guide the due diligence by all IFIs; and (b) the Bank's role as a mobilizer and catalyzer of finance from other partners strengthens: (i) the ongoing collaboration with the European Commission, EBRD and EIB in the development of the Southern Gas Corridor; and (ii) the new rapidly-developing collaboration with AIIB in the financing of high priority infrastructure projects in accordance with the Co-Financing Framework Agreement between AIIB and the World Bank. In Turkey, TANAP is an integral component of the World Bank's engagement in gas market reform. In Azerbaijan, as part of the Bank's overall engagement in the energy sector, the Bank is supporting the Government in developing and implementing a program on mainstreaming the Extractives Industry Transparency Initiative (EITI) practices into the public reporting system. This concurrent program will be implemented in parallel with the TANAP project.

Turkey

4. Turkey's economic performance since 2000 has been impressive, both before and after the 2008/09 global financial crisis. Macroeconomic and fiscal stability were at the heart of its economic performance, enabling increased employment and labor incomes, making Turkey an upper middle-income country as well as the world's 17th largest economy. Poverty incidence more than halved during the 2002-12 period, from 44 percent to 21 percent of the population, and this decrease was shared across both urban and rural areas. Extreme poverty fell even faster, from 13 to 4.5 percent. During this time, Turkey witnessed dramatic urbanization, opened up to foreign trade and finance, harmonized many of its laws and regulations with EU standards and greatly expanded access to public services. It also recovered well from the global crisis of 2008/09, with high economic growth during the 2010-12 period.

5. Economic growth slowed since 2012, per capita income has stagnated around US$10,000 per year annum, and unemployment is inching upward. These developments need to be addressed for Turkey's continued progress towards reaching high income and reducing income inequality. In addition, slow growth in Europe and the deterioration of the geopolitical environment in parts of Eastern Europe, Central Asia, and the Middle East have negatively impacted exports, investment, and growth in Turkey. The influx of Syrian refugees reached almost three million in 2015–16, and has also created new social, economic, and political demands, particularly in urban centers where the majority of refugees are living[1].

[1] Less than 10 percent live in camps.

6. The reform momentum continues despite the failed coup attempt in 2016. The Foreign Direct Investment (FDI) inflow to Turkey was US$17 billion in 2015. The annualized FDI inflow for 2016 is estimated to be US$10.8 billion as of September 2016. Several international developments may have contributed to a decline of FDI in 2016, which also reflected a decline of FDI to emerging markets overall. In addition, private investment inflow was delayed, leading to slower economic growth. To counter these effects, the government launched new reforms in 2016, focused on incentivizing research and development and enhancing labor market flexibility, to improve the investment and business climate in Turkey. The government also continues to take strong action to promote savings, improve social security and the pension system, and established sovereign wealth fund, as well as housing and dowry account schemes. Further reforms will be needed to address the continuing structural underpinnings of the economy to revitalize private investment, boost growth, and resume Turkey's convergence with Europe. Most notably, new reform momentum is needed to improve the quality of education and to upgrade skills. Only by boosting productivity growth and creating enough high-productivity jobs to accommodate a rapidly growing labor force will enable Turkey to continue to reduce poverty and share prosperity. The Government continues to take action on the reform agenda to include promoting investments and research and development, improving social security and the pension system, establishing a national welfare fund as well as housing account schemes, and reforming the labor market.

Azerbaijan

7. Driven by a hydrocarbon resource boom, Azerbaijan's economic growth averaged 16 percent per annum during 2002-10. A decline in oil production brought down the pace of growth to almost zero in 2011, then slowly recovered although it reached only 2 percent in 2015. For the first five months of 2016, growth is estimated to have contracted by more than 4 percent driven by the continued low prices of oil and a sharp contraction in the construction sector. In parallel, the sharp decline of export revenues driven by the declining oil price cut the current account surplus from 13.8 of GDP in 2014 down to 0.9 percent in 2015 (and into negative going into 2016). The Central Bank of Azerbaijan devalued the Manat by 47.6 percent on December 21, 2015 and announced it would adopt a floating exchange rate regime. This followed an earlier depreciation of the Manat by almost 50 percent in February 2015 when it was de-pegged from the US Dollar in an effort to reduce the financial stress on the local currency from low oil prices. In an effort to adjust to lower oil revenues the Government announced a plan to sharply consolidate spending while refraining from drawing down the State Oil Fund of Azerbaijan Republic (SOFAZ), at least in the near term. Looking forward, oil production will decline gradually through 2017, reducing economic growth by an average of 1.6 percent per year. Gas and condensate production will increase after the commissioning of the Shah Deniz full field development in the Caspian Sea (referred to as "Shah Deniz 2" or SD2), which will yield revenues both from gas and condensate production and transportation. The SD2 gas field is currently being developed to produce 16 billion cubic meters (bcm)/annum for export markets in Turkey and Europe.

8. Azerbaijan's economic growth over the past decade has benefited the poor and strengthened the middle class. Poverty rates declined from close to 50 percent in the early 2000s to around 5 percent in 2013. Consumption of goods and services by households in the bottom 40 percent grew by more than 2 percent per annum between 2007 and 2012, twice the rate of the top

60 percent. Improvements in living standards in that same period were accompanied by an expansion of the middle class from more than 4 percent to about 29 percent of the population. Despite this progress, a sizeable share of the population elevated from poverty remains vulnerable and could relapse into poverty with the recent economic slowdown and sharp devaluation of the local currency. In the current fiscal and economic environment, the Government has declared its commitment to economically and socially support the most vulnerable groups, including internally displaced people and low-income households.

Southern Gas Corridor and Europe's Energy Supply

9. The European Commission's 2008 "Second Strategic Energy Review - An EU Energy Security and Solidarity Action Plan", states that: "*A southern gas corridor must be developed for the supply of gas from Caspian and Middle Eastern sources, which could potentially supply a significant part of the EU's future needs. This is one of the EU's highest energy security priorities. The Commission and Member States need to work with the countries concerned, notably with partners such as Azerbaijan and Turkmenistan, Iraq and Mashreq countries, amongst others, with the joint objective of rapidly securing firm commitments for the supply of gas and the construction of the pipelines necessary for all stages of its development. In the longer term, when political conditions permit, supplies from other countries in the region, such as Uzbekistan and Iran, should represent a further significant supply source for the EU.*" Political agreement followed in May 2009 at the Southern Corridor Summit in Prague where a declaration was signed by the Presidents of the European Council and the European Commission for the EU, the Presidents of Azerbaijan, Georgia and Turkey and the Energy Minister of Egypt, in the presence of the representatives of Kazakhstan, Turkmenistan and Uzbekistan. The European Commission reiterated the high priority of the Southern Gas Corridor in the 2014 "European Energy Security Strategy" and the 2015 "Energy Union Package - A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy".

10. An Advisory Council on the Southern Gas Corridor has been set up as a joint initiative of the European Commission and Azerbaijan. The Council brings together all the countries and stakeholders involved to steer the implementation of the Southern Gas Corridor at the political level in order to have the Corridor operational by 2019-2020. The Council has met twice, in February 2015 and in February 2016, and issued joint statements expressing strong support for the implementation of the Southern Gas Corridor. The February 2015 statement was signed by the authorized representatives of Azerbaijan, Albania, Bulgaria, Georgia, Greece, Italy, Turkey, United Kingdom and United States, as well as the European Commission. In February 2016, representatives of Croatia and Montenegro also attended and signed the declaration. The participants declared that they are "*determined to continue and deepen the long-term strategic relationship among the stakeholder countries to the Southern Gas Corridor and between transporters, suppliers, and consumers of energy resources, particularly in securing reliable and sustainable supply of energy from Azerbaijan to Georgia, Turkey and European markets*"; and that they will "*promote the expansion of the Southern Gas Corridor to further markets, including outside the borders of the European Union, such as Energy Community countries in the Balkans" and "welcome additional potential suppliers to Europe and other countries to utilize the Corridor to further diversify natural gas supplies to Europe and other countries*".

B. Sectoral and Institutional Context

Turkey

11. The energy sector has been a key contributor to Turkey's economic growth. A range of reform measures helped attract private sector capital to meet the fast-growing demand for energy, including legislation related to electricity, gas, renewable energy and energy efficiency; the establishment of an energy sector regulatory authority (EMRA); energy price reform; the creation of a functional electricity market; large-scale introduction of natural gas into the energy supply mix; restructuring of state-owned energy enterprises; large-scale private sector participation through privatization including the entire power distribution; and new investment in more than 35,000 megawatt (MW) in power generation capacity. However, Turkey's heavy dependence on energy imports (mostly oil and gas) constitutes a macroeconomic challenge.

12. Turkey made a strategic choice to diversify its energy mix into natural gas. Gas imports started in 1987 and in less than two decades, gas became the most important fuel in power generation displacing indigenous coal. Gas typically accounts for 45-50 percent of the total electricity generation (2015 was an exception with gas at 38 percent due to favorable hydro conditions). Gas power was preferred due to its lower investment cost, operational flexibility and environmental advantages compared to coal. Gas has half the carbon footprint of coal. As a result, Turkey's greenhouse gas (GHG) emissions are much lower today than they would have been without the successful diversification into gas. At about 50 billion cubic meters (bcm) per annum, Turkey's gas consumption is the third largest in Europe after Germany and Italy. More than 50 percent of Turkey's gas is imported from the Russian Federation, making Turkey the second largest client of Gazprom after Germany. The Government's efforts are focused on energy efficiency, renewable energy and the introduction and large-scale application of nuclear energy. Turkey's Intended Nationally Determined Contribution (INDC)[2], submitted to the United Nations Framework Convention on Climate Change (UNFCCC) ahead of the 21st Conference of Parties (COP21) in Paris in December 2015 is discussed in Annex 3.

13. Constraints to gas imports and gas market inefficiencies threaten Turkey's energy security. BOTAŞ dominates the gas market with nearly 75 percent market share. BOTAŞ owns and operates an extensive 12,000 km high pressure natural gas transmission network with 320 gas delivery points. Nevertheless, network capacity and storage limitations constrain the flow of gas and also the trading of gas by prospective competitors. Gas storage capacity of 2.6 billion cubic meters constitutes only 5 percent of annual gas consumption (compared to 20-30 percent in large European countries), which is insufficient to cover demand spikes.[3] These constraints in the gas market and infrastructure prevent Turkey from achieving gas supply security at a reasonable price, and may also threaten the security of electricity supply as gas-fired power generation accounts for about 40 percent of the total electricity generation. Turkey's energy market model envisages a competitive structure where the prices are determined in line with the supply and demand conditions. The forthcoming amendment of Turkey's Natural Gas Market

[2] Following the ratification of the Paris Agreement, INDCs including Turkey's are referred to as Nationally Determined Contributions (NDCs).

[3] According to the World Bank-financed Gas Sector Development Project (P093765) which aims to increase the reliability and stability of gas supply in Turkey through gas storage and network infrastructure.

Law[4] is expected to promote private sector participation and enhance competition in gas import and supply. Moreover, to ensure the harmonious operation with the EU internal market, Turkey considers market integration as one of the main pillars of Turkey – EU energy relations. A detailed discussion of these and other key challenges in the energy market is available in the 2015 World Bank report "Turkey's Energy Transition – Milestones and Challenges" (Dilli and Nyman, 2015).

Azerbaijan

14. Azerbaijan is one of the oldest oil producing countries in the world. The country has also been developing its natural gas sector rapidly over the past decade. Proven natural gas reserves are of the order of 1,000 bcm with the Shah Deniz field making up the largest share of these reserves. Azerbaijan produced about 18.8 bcm in 2014, primarily from the Shah Deniz and the Azeri-Chirag-Guneshli fields. Azerbaijan currently exports about 6.5 bcm/annum to Turkey under a contract with BOTAŞ. The Southern Gas Corridor Program will increase production at Shah Deniz from about 10 bcm to about 26 bcm, enabling Azerbaijan to more than triple its annual exports, from 6.5 bcm to 22.5 bcm.

15. SOFAZ was established in 1999 as the state's vehicle for consolidating earnings from its energy exports and investing into income-generating activities. The average annualized return on investment from SOFAZ's portfolio over the last 10 years is 2.42 percent. Assets held by SOFAZ have been growing consistently year-on-year. This growth has been stymied by the decline in oil prices that started in June 2014 considering the economy is largely driven by revenues from hydrocarbons. Although the state has also embarked on other fiscal measures to reduce deficits, the decline in revenues led to increasing pressure on SOFAZ reserves to meet budgetary shortfalls since the fund is responsible for supporting macroeconomic stability amongst other objectives such as funding major national scale projects to support socio-economic progress. In 2015, SOFAZ's assets[5] dropped by 9.5 percent from a peak of US$37.1 billion to US$33.4 billion, although there has been a resurgence in growth through the first two quarters of 2016 to US$35.1 billion. In 2015, SOFAZ's expenditures amounted to US$9.2 billion of which 88.5 percent was transferred to the state budget, with the remaining 11.5 percent going to SOFAZ-funded projects including: (a) improvement of social conditions of refugees and internally displaced persons; (b) Samur-Absheron irrigation system; (c) Baku-Tbilisi-Kars railway construction; (d) education of Azerbaijani youth abroad; and (e) the Southern Gas Corridor program.

16. SOCAR is the primary state entity involved in exploring oil and gas fields although its share of oil production and gas production in Azerbaijan – as of 2015 – is about 20 percent and 24 percent, respectively. The majority of oil and gas exploration and production is carried out by a number of private companies and consortia, the largest of which is BP as the lead developer and operator of the Shah Deniz (including SD2) and the Azeri-Chirag-Guneshli fields. SOCAR is responsible for production, processing, and transporting of oil, gas, and gas condensate,

[4] At the time of negotiations of the BOTAŞ Additional Finance Loan for the Gas Sector Development Project in early 2014, the amendment had been submitted to the Parliament and was expected to be enacted and become effective by the end of 2014. However, in part due to national elections in August 2014 and elections and other political elections in 2015-2016, the amendment could not be considered by the Parliament.
[5] SOFAZ Annual Report 2015

marketing petroleum and petrochemical products in domestic and international markets, and supplying natural gas to industry and the public in Azerbaijan through its subsidiaries, Azneft and Azergaz. The former is responsible for exploration, development, and production from the older onshore and offshore natural gas fields owned by SOCAR while the latter handles natural gas processing, transport, distribution, and storage for the domestic market. The Government of Azerbaijan and SOCAR established SGC as their joint investment vehicle for the Southern Gas Corridor. SGC is owned by the Ministry of Economy of Azerbaijan and SOCAR with shares of 51 percent and 49 percent, respectively.

17. Azerbaijan joined the Extractives Industry Transparency Initiative (EITI) in 2004 at the outset of this initiative and was the first country to be validated as fully EITI-compliant in 2009. Recent questions posed by civil society organizations in the country have led to Azerbaijan being required to undergo a compliance check by the EITI. The Government's objectives are to: (a) regain its compliant status; (b) become one of the first countries to mainstream transparency reporting across the government institutions; and (c) enhance its Extractive Industries' Management System by mainstreaming disclosures, improving data reporting for the extractives industries and making transparency an integral part of its management systems.

18. Azerbaijan was validated against the 2016 EITI Standard in October 2016. The EITI Board discussed the outcomes of the country validation and came to the decision that Azerbaijan has made meaningful progress in implementing the 2016 EITI Standard, and with considerable improvements across several individual requirements compared to the first Validation in 2015. However, the EITI Board agreed that Azerbaijan had not made sufficient progress on requirements related to civil society engagement and as a result the decision was that Azerbaijan retains its candidate status. Azerbaijan will need to take corrective actions in order to regain its membership status by the next EITI Board meeting in March 2017. Noting the commitment at the highest level by the country to follow-through on regaining membership status, the Bank will continue to working closely with the authorities to support this effort.

19. The Government of Azerbaijan created a National EITI Secretariat, housed within SOFAZ, to coordinate EITI activities in Azerbaijan. Based on dialogue during the preparation of the proposed Project, SOFAZ is planning to carry out an assessment of the country's extractive industries' management system, including current procedures of awarding contracts and licenses, monitoring operations, enforcing environmental protection and social mitigation requirements, collecting taxes, distributing revenues, and implementing sustainable development policies and projects. Based on the outcomes of this assessment, SOFAZ would develop actions on further improvement of disclosures and transparency for extractive industries, as well as enhance state agencies' capacity to effectively regulate Azerbaijan's mineral resource development in a transparent and efficient manner, and foster the private sector development. This would be a concurrent program implemented by the National EITI Secretariat / SOFAZ and funded by the Government, in parallel with the proposed Project. The Bank and other IFIs strongly support this initiative and, in particular, the Bank, at the request of government, will actively assist with the preparation of an action plan including detailed scope of activities under this concurrent program and engage the relevant stakeholders in the process. As part of this support, the Bank has secured funding from the Extractives Global Programmatic Support multi-donor trust fund to support the preparation of the action plan and related activities to be funded by the government.

Europe

20. Projections of global gas consumption and views about the role of gas as a transition fuel vary widely, primarily depending on the projected/desired pace of decarbonizing the world's energy system. The International Energy Agency (IEA) examined the world's energy future in its 2015 World Energy Outlook (WEO-2015)[6] using three main scenarios: (a) the Current Policies Scenario (CPS) takes into account energy and climate policies enacted as of mid-2015; (b) the New Policies Scenario (NPS) – the central scenario in WEO-2015 – takes into account the policies and implementing measures affecting energy markets that had been adopted as of mid-2015 as well as the energy-related components of climate pledges in the run-up to COP21 (submitted by October 2015), together with relevant declared policy intentions, even though specific measures needed to put them into effect may not have been adopted; and (c) the 450 Scenario (450S) depicts a pathway to the 2°C climate goal that can be achieved by fostering technologies that are close to becoming available at commercial scale.

21. Europe's demand for energy (total primary energy demand) and GHG emissions are projected to decline in all three WEO-2015 scenarios. The future role of gas in Europe can be extracted from these scenarios, as summarized below and discussed in the Climate Impact section of Annex 3. Gas is an important fuel in Europe's energy mix, with uses in electricity generation, space heating, industrial feedstock and transport. Nevertheless, gas consumption in Europe peaked in 2008 and has since declined by almost 25 percent, in large part due to the rapid expansion of renewable energy generation replacing gas power in the electricity market. The projected gas consumption by 2040 varies substantially across IEA's three scenarios. Current policies are projected to result in a reversal of the decline of gas consumption of recent years to a gradual increase by about 25 percent by 2040. In the New Policies Scenario IEA projects flat demand (with variations: first a slight decline to about 2020, a slight increase to 2030 and back to about the current level by 2040). Gas consumption in the 450 Scenario is projected to decline, slightly to 2030 and more rapidly from 2030 reaching a level of about 25 percent below current consumption by 2040. Projections are presented in Table 6 in Annex 3. The implications of these gas consumption scenarios on Europe's gas imports are discussed below.

22. As European gas production declined beginning about 10 years ago, the EU now imports more than two-thirds of its gas supply, mostly from Norway and Russia. The decline in European production is projected to continue; the IEA projects annual production in Europe to decline by about 100 bcm by 2040 (of which about 80 bcm inside the EU). Europe will continue to rely on imports to meet the gap between demand and declining production. IEA's Current Policies Scenario implies Europe's annual gas imports increasing steadily by over 200 bcm/annum by 2040. In the New Policies Scenario with the projected flat gas demand, annual imports would increase more slowly but still significantly by about 100 bcm by 2040 to compensate for the declining domestic production. Even with the declining gas demand in the 450 Scenario, Europe's imports would continue to increase until 2030 and then start declining

[6] World Energy Outlook 2015", November 10, 2015, (WEO-2015), International Energy Agency. The report covers prospects for all energy sources, regions and sectors and considers the implications for climate change, energy security and the economy. The Project Appraisal Document draws on figures for the New Policies Scenario (the central scenario) from the WEO-2015. IEA released its "World Energy Outlook 2016", (WEO-2016) on November 16, 2016; gas demand and production projections for the EU and Europe from both reports were compared and the results and trends remained the same.

reaching the current level of gas imports in about 2035 and going about 30 bcm/annum below current imports in 2040.

23. Europe's gas supply is generally well diversified, but the Baltics and Central and South Eastern Europe, including Italy, are more dependent on gas from one source. The Southern Gas Corridor facilitates connections to a number of existing and proposed pipelines, enabling supply to gas markets throughout South Eastern and Central Europe (and Western Europe through Italy and Austria). Therefore, the development of the Southern Gas Corridor is one of the EU's highest energy security priorities for both supply and route diversification. The 10 bcm/annum gas flow through TANAP to Europe will account for about 3.5 percent of Europe's imports (and about 7 percent after the possible expansion to 20 bcm/annum flow). According to the European Commission, given the potential supplies of gas from the Caspian Region, the Middle East, and the East Mediterranean, if needed the EU could increase the volume of gas imports through the Southern Gas Corridor route to 80-100 bcm in the future – in principle matching the projected increase in Europe's gas imports in the NPS. This is a long-term vision: in the short-to-medium term liquefied natural gas (LNG) is expected to meet a large share of the growing gap between demand and declining production. Europe has underutilized LNG terminal capacity readily available and the short-to-medium term LNG market outlook is favorable from the perspective of potential buyers. Along with diversified imports, both pipeline gas and LNG, major efforts are underway to strengthen gas network interconnections with Europe.

C. Higher Level Objectives to which the Project Contributes

24. The Project aims at leveraging the WBG institutions' comparative advantages and instruments for the achievement of improved development outcomes. This is reflected in the collaboration between IBRD and MIGA to provide financing and guarantee support to SGC for TANAP. The Bank's due diligence of environmental and social aspects, procurement, financial/economic analysis and other appraisal assessments facilitates other IFIs, potential private lenders and MIGA's risk evaluation and guarantee underwriting process.

25. The Project contributes to the realization of the objectives of the Turkey Country Partnership Strategy (CPS) for the FY12-16 period. The CPS has three main strategic objectives and pillars: Strategic Objective 1 - enhanced competitiveness and employment; Strategic Objective 2 - improved equity and public services; and Strategic Objective 3 - deepened sustainable development. Activities under the Deepened Sustainable Development pillar include policy advice and financing to address energy, environment and climate change challenges in an integrated manner. The Systematic Country Diagnostic has recently been completed in Turkey and the World Bank Group will soon launch the preparation of the new Country Partnership Framework for the period FY17-20. The energy sector is expected to remain among the priority areas of World Bank engagement in Turkey.

26. Financing TANAP is an integral component of the World Bank's program of policy, technical and financial assistance in Turkey to support energy reform in general and gas sector reform specifically. Other elements of Bank support for Turkey's gas market include: (a) support for the establishment of the energy market operations company, EPIAŞ, under the Sustaining Shared Growth Development Policy Loan (SSG-DPL in FY14). EPIAŞ took over in September 2015 the operation of Turkey's first centralized electricity trading platform, PMUM, from the

transmission system operator, TEIAS, and is developing a similar centralized trading platform for gas; (b) support for the proposed amendment of the Natural Gas Market Law for the liberalization of gas imports and wholesale gas trading; (c) financing for the development of the Tuz Golu underground gas storage, which is under construction by BOTAŞ; and (d) supporting the restructuring of BOTAŞ and the institutional development of EPIAŞ and the design of its gas trading platform under the energy sector technical assistance program administered by the Bank with financing from the EU's Instrument for Pre-Accession (IPA) program for Turkey.

27. Other elements of the Bank's energy program in Turkey include: (a) credit lines to five Turkish banks for private sector investments in energy efficiency and renewable energy; (b) investment financing to TEIAŞ for renewable energy integration into Turkey's electricity transmission grid; (c) technical assistance for energy efficiency and renewable energy and electricity market development under the EU/IPA program; and (d) working with Turkey in the global Program for (carbon) Market Readiness. The 2008-2013 Environmental Sustainability and Energy Sector DPL program supported major energy and climate policy measures including some of the measures that underpin Turkey's INDC (discussed in Annex 3).

28. The Project also contributes to the realization of the objectives of the Azerbaijan CPF for FY16-20. TANAP and the Southern Gas Corridor Program contribute to CPF Focus Area 2, Economic Competitiveness, by integrating Azerbaijan with regional and European energy markets, strengthening its connectivity and transit role and increasing its exports. The Bank will also participate in the implementation of the Government's program (described in paragraph 19) to mainstream the extractives industries transparency reporting in country systems. Strengthening the capacity and transparency in public resource management is one of the key objectives of the CPF Focus Area 1, Public Sector Management and Service Delivery. The Government's transparency program will also support addressing a number of key binding constraints identified in the Azerbaijan Systematic Country Diagnostics (March 2015), including issues related to fiscal management, governance and transparency, institutions, skills and systematic data collection and analysis.

29. Revenues in Azerbaijan from gas production and transportation will be substantial, especially in light of declining oil production, and will enable the Government to enhance its asset base and sustain economic growth in the medium and long term. The Government has indicated strong commitment to the Project given its relevance to the country's strategic priorities of integrating with international energy markets, strengthening its transit position in international trade, ensuring long-term revenues from increasing gas production and improving transparency and accountability in public resource management. Another noteworthy energy program is in the electricity sector where the Government and the state-owned electricity distribution company, Azerishig, are embarking on a program to modernize the distribution network throughout the country to increase efficiency, utility performance and ensure financial sustainability of the sector as a whole. This program is currently supported by ADB and discussions are ongoing with the Government to identify potential World Bank support.

30. The Bank has been collaborating since the late 1990s with the European Commission, EBRD, EIB and several bilateral agencies, including KfW and USAID, on developing the Energy Community. The Energy Community began as an effort to develop a regional electricity market in South Eastern Europe and evolved into a long-term process to develop regional

electricity and gas markets and integrate them into the EU's internal energy market. These market aspects of the Energy Community were combined with related energy efficiency, renewable energy, environmental and social dimensions, all grounded upon the Energy Community Treaty which formally established the Energy Community in 2006. Among the Bank's various contributions are studies on gasification and the development of a regional gas network (entitled the Energy Community Gas Ring). The Southern Gas Corridor will transport gas through South East Europe to Italy, with offtake points in Greece and Albania. Greece and Bulgaria will interconnect their networks and Bulgaria, Romania and Hungary will strengthen their interconnections. An interconnection of the Bulgaria and Serbian networks is under consideration. The Bank is currently providing technical assistance for Albania to utilize gas for its energy supply and development. The Bank will also reassess the viability of a proposed Ionian-Adriatic Pipeline (IAP) from Albania through Montenegro to Croatia. IAP and Bulgaria-Serbia interconnection would be key components of the Gas Ring.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

31. The TANAP Project's Development Objective (PDO) is to diversify Azerbaijan's gas export markets and improve the security of Turkey's and South Eastern Europe's energy supply.

Project Beneficiaries

32. The direct beneficiary of the project is TANAP Doğalgaz İletim Anonim Şirketi, i.e. TANAP Natural Gas Transmission Company, a private company established under the Turkish Commercial Code to implement the TANAP project and own and operate the TANAP Pipeline System upon project completion. The TANAP project is part of the Southern Gas Corridor – a program of gas development in Azerbaijan and gas transmission from Azerbaijan through Georgia, Turkey, Greece and Albania to Italy. The SD2 gas field in Azerbaijan is being developed to produce 16 bcm/annum and the revenues that will be generated from gas production and transportation will be very important for Azerbaijan. Georgia will also be a beneficiary – of gas to its network – as part of the agreement on the transportation of SD2 gas through its territory to the Turkish border. BOTAŞ has contracted 6 bcm for the Turkish market and several European gas traders have contracted the remaining 10 bcm for the South Eastern European market, mostly Italy. Hence, the ultimate beneficiaries are the citizens of Azerbaijan and natural gas consumers in Turkey and South Eastern Europe.

PDO Level Results Indicators

33. Progress toward achieving the PDO will be monitored through the following PDO indicators:

i. Diversifying Azerbaijan's natural gas export markets (bcm/annum);
ii. Improving the security of Turkey's energy supply (bcm/annum); and
iii. Improving the security of South East Europe's energy supply (bcm/annum).

III. PROJECT DESCRIPTION

A. Project Components

Project Context: the Southern Gas Corridor

34. The 3,500 km Southern Gas Corridor from Azerbaijan to Italy consists of three pipelines:

i. The existing South Caucasus Pipeline (SCP) will be expanded by looping with a new parallel pipeline referred to as South Caucasus Pipeline Expansion (SCPx) across Azerbaijan and Georgia to Turkey;

ii. TANAP will transport SD2 gas across Turkey; and

iii. Trans Adriatic Pipeline (TAP) will carry the gas through Greece and Albania – with gas offtake points in both countries – and under the Adriatic Sea before coming ashore in Southern Italy. TAP will connect to the Italian natural gas network operated by Snam Rete Gas, from which the Italian market and all Italian gas exit points to European destinations can be reached.

Project Components:

1. TANAP Pipeline System

35. The Project will finance infrastructure investments for the TANAP Pipeline System. At 1,850 km, TANAP accounts for over one half of the 3,500 km pipeline system from Azerbaijan to Italy. TANAP will begin at Turkey's border with Georgia, in the Turkish village of Türkgözü in the Posof district of Ardahan province, and will end at the Greek border in the İpsala district of Edirne province. At that point, TANAP will connect to TAP which will convey the gas to European gas markets. TANAP will connect to the Turkish natural gas network in two locations, at Eskişehir and Thrace, for the delivery of 6 bcm for the Turkish gas market. The pipeline up to Eskişehir will have a diameter of 56 inches; from Eskişehir to the Greek border the diameter will be 48 inches except for two parallel 36 inch pipeline for the 18 km section crossing the Marmara Sea. Detailed description of the TANAP Pipeline System is provided in Annex 2.

2. Land Acquisition

36. The Project involves land acquisition that is required for the TANAP Pipeline System. The land acquisition related costs are/will be financed by resources other than the Bank loans, and cover: (a) cash compensation for private land acquisition (i.e. compensation for permanent, exclusive and temporary land rights basis; damages to crops and assets; and legal administrative expenses); (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 for payment of costs not payable under the Turkish law, but required to meet OP 4.12 provisions; (c) expenses for the forestry lands (i.e. entry costs and annual leases); and (d) design, implementation and monitoring of RAPs. Land acquisition is discussed in paragraphs 85-93.

3. Consulting Services

37. The proposed Project will finance consulting services for studies, design, engineering, procurement, construction management, supervision and monitoring.

B. Project Financing

38. TANAP's shareholders have decided to pursue shareholder finance instead of project finance to reduce time requirements, complexity and the cost of financing. Each shareholder is responsible for its share of the project cost: SGC (58 percent[7]), BOTAŞ (30 percent) and BP (12 percent).

Project Cost and Financing

39. The current cost estimate is about US$8.6 billion (breakdown in **Table 1**). These costs are well below original estimates prepared by international firms, in part due to competitive bidding. As all major contracts have been awarded, there is relative certainty on the costs moving forward and the risk of cost overruns is low, especially since the estimate includes a conservative US$1.4 billion as a contingency provision.

40. BOTAŞ and SGC would be the Borrowers of Bank loans of US$400 million each. MIGA is considering a guarantee on up to US$750 million of loans to support SGC's commercial borrowings[8]. The World Bank Group assistance to SGC would be directed towards SGC's investment in TANAP. This enables SGC and the World Bank Group to focus its due diligence on one project and maximize efficiency of Bank financing, also taking into account that SGCs largest financing needs are in TANAP. It is recognized that this PAD presents the Project as a whole, and in that context, sets forth the Bank's proposed support to each SGC and BOTAŞ in their financing of their respective shares of the Project. This presentation is solely for the purposes of the PAD and is not intended to imply or create any specific arrangements between SGC and BOTAŞ or their host governments.

[7] SGC intends to reduce its share in TANAP to 51 percent through a sale of 7 percent to SOCAR Turkey Enerji A.Ş. (a subsidiary of SOCAR in Turkey). The transaction is expected to be made effective by mid-2017.
[8] Prior to 2015, WBG's private financing arm International Finance Corporation (IFC) was expected to support TANAP but the move from project finance to shareholder finance shifted the choice from IFC to IBRD and MIGA instruments.

Table 1: Project Cost, Financing and Bank Group Support (US$ billion, rounded)

Project Components	Project cost	WBG Support 1/	% Financing
Direct Costs of the Project Onshore and Offshore Pipelines Compressor Stations SCADA/Telecom System Services including studies, design, engineering, procurement, construction management, supervision and monitoring	**6.1**	**1.55**	**25%**
Other Costs of the Project Owner's Items Commissioning and Pre-Operation Land Acquisition	**1.1**		
Contingencies	**1.4**		
Total Cost of the Project	**8.6**	**1.55**	**18%**
Financing BOTAŞ SGC BP	**8.6** 2.6 5.0 1.0	**1.55** 0.4 1.15 -	**18%** 15% 23%
Total Financing	**8.6**	**1.55**	**18%**
1/ Including IBRD loans and MIGA guarantee			

BOTAŞ

41. BOTAŞ' financing share in TANAP is about US$2.6 billion. SGC is providing finance to BOTAŞ for one-sixth of its 30 percent share in TANAP (equivalent to over US$0.4 billion). In addition to the World Bank, financing is expected to be provided also by EIB.

SGC

42. SGC is investing about US$12 billion in the Southern Gas Corridor Program, including about US$5 billion in TANAP. This is a significant amount that is difficult to be raised solely from commercial lenders. It is also essential for SGC – as major investor in the Program – to ensure adequate debt substantiality for the overall viability of the Program. Therefore, financing from the World Bank and other IFIs provides SGC with longer maturity/lower cost financing to balance the higher cost/short tenure commercial borrowings that they will need. The Bank is also supporting SGC with mobilization of other IFIs, and through its due diligence on environmental and social aspects, helps other IFIs provide such financing to SGC.

43. SGC's funding has been through a combination of several instruments. A portion of SGC's capital requirements in the Program was provided as equity with US$1,741 million injected as of May 31, 2016. SOFAZ has also been a major debt provider to SGC, as a holder of about US$2.5 billion of SGC bonds issued in the local market in 2014 and maturing in 2024. In March 2016, SGC closed its inaugural 10-year Eurobond offering to investors from Europe, the US and the Middle East with a face value of US$1 billion and a yield of 7 percent. SGC's overall financing plan for the period of 2016-2019 considers a funding requirement of approximately US$3.5 billion net of contributions made as of May 31, 2016 and transfers from the sale of shares to SOCAR Turkey Enerji A.Ş. (expected to be concluded in 2017).

44. Of the total SGC financing requirements for TANAP, US$1.5 billion have already been financed by SGC as of May 31, 2016 with a remaining balance of US$3.7 billion yet to be financed (of which US$0.7 billion will be needed through the end 2016 and US$3 billion for 2017-2019.) Any residual financing needs beyond what can be raised from IFIs and commercial lenders would be met by SGC shareholder equity and/or SOFAZ bonds. For the two SGC bonds issued (US$1 billion and US$2.5 billion) the full amounts are distributed amongst SGCs investments in SD2, SCPx, TANAP and TAP, as required.

45. Up to 2016, SGC financed its investments from its equity and through bonds purchased by SOFAZ, in recognition of the highest priority of the Program to Azerbaijan. The sources of financing being considered by SGC comprise: (a) loans from the World Bank, AIIB, EIB and EBRD; (b) proceeds from the SGC bonds; and (c) commercial loans (in part backed by the proposed MIGA guarantee). Raising of SGC debt is informed by market soundings conducted by SGC with support from its financial advisor, Lazard. SGC's overall funding structure is expected to comprise equity (14 percent), bonds due to SOFAZ (21 percent) and external debt (65 percent). On World Bank Group financing, SGC has evaluated a number of options including direct lending, guarantees for credit enhancement on commercial bonds and/or loans supported by possible IBRD and MIGA guarantees and a combination of these. Consideration was given to: (a) cost of financing (pricing and maturity); (b) amount mobilized; and (c) risks. SGC opted for an IBRD loan of US$400 million and a MIGA guarantee on loans of up to US$750 million to support commercial borrowings.

C. Series of Project Objectives and Phases

46. The TANAP Pipeline System is designed to be implemented in phases, of which the first phase is the Project. The first step in the first phase, to be completed by mid-2018, will initially start with delivery of 1 bcm of gas to Turkey and is expected to reach a plateau level of 6 bcm/annum in 2021. The second step in the first phase, to be completed by early 2020, will start delivery of gas to TAP for Europe and is expected to reach a plateau level of 10 bcm/annum in 2022. The Project will have then reached its contracted 16 bcm/annum capacity. PDO indicators reflect these targets.

47. TANAP and TAP pipelines are designed to be expandable to 31 bcm and 20 bcm, respectively. With the addition of compressor stations, transit to Europe could double to 20 bcm and offtake by Turkey could increase to 11 bcm (or a higher volume of gas could be delivered to the Turkish market with less transit). This potential future project phase would be highly attractive as the low incremental investment requirement (mainly compressor stations) would

enable a substantial reduction in transmission charges. However such expansion is dependent on the availability of additional gas beyond the currently committed 16 bcm/annum of gas production from SD2. This additional gas would likely come from additional wells in the Shah Deniz field or from other new discoveries. Given the potential supplies of gas from the Caspian Region, the Middle East, and the East Mediterranean, the EU could over time increase the volume of gas imports through the Southern Gas Corridor route to 80-100 bcm if needed (Europe's gas imports are discussed in paragraphs 22-23). Going above the 31 bcm/annum towards 80-100 bcm/annum volumes would also require expansion of the transmission capacity of the Southern Gas Corridor.

D. Lessons Learned and Reflected in the Project Design

48. The Southern Gas Corridor is a one-of-a-kind Program. At an estimated cost of about US$46 billion and with over a dozen shareholders on four different projects, it is by far one of the largest infrastructure investments currently under development. As such, it is difficult to draw many lessons due to the lack of similar projects or programs over the past few decades. However, there are some lessons that can be drawn from a previous attempt to develop a similar gas pipeline system as well as other smaller multi-country gas transmission projects as outlined in the following paragraphs.

49. Developing large cross-border pipeline systems is challenging and therefore managing relative size of the program and reaching closure on guaranteed upstream supplies is crucial. For the past ten years, the Nabucco Project dominated gas transit pipeline efforts, intergovernmental negotiations and discussions in international conferences and workshops. The Nabucco Project was envisioned as a 30 bcm/annum gas pipeline system to bring gas from the Caspian and Middle East to Europe. Uncertainties about gas supplies, the scale and complexity of the pipeline system and the project's commercial and financial requirements ultimately proved overwhelming, despite strong support from the European Commission and expected financing from international financial institutions. Azerbaijan (one of the envisioned sources of gas to Nabucco) and Turkey stepped in and negotiated and entered into gas sale and transit, intergovernmental and host country agreements in 2011-2013 including the development of TANAP. The participation of BP, as both a lead investor and operator of the Shah Deniz gas field and in the development of the pipeline system is another noteworthy lesson, as opposed to a situation where a lead investor and developer in the upstream gas field is not invested in or tied to the midstream components. BP, Azerbaijan and Turkey as investors in both SD2 and the pipelines played a major role in turning the Southern Gas Corridor concept into reality by also ensuring that signed contracts and agreements are in place prior to significant investments taking place. The SD2 consortium selected TAP to link SD2 through SCPx and TANAP to the European market. The result is a pipeline system of 16 bcm (about half the capacity of the foregone Nabucco project) that is being built as three separate, more manageably-sized projects to transport gas originating from the SD2 field.

50. Commitment of governments and credible private developers through direct shareholdings in project companies is paramount. The Southern Gas Corridor brings together the Governments of Azerbaijan and Turkey, BP, and several other state and private companies as investors in a very large public-private partnership program. Azerbaijan is the lead public investor in the Southern Gas Corridor and through SGC Azerbaijan is involved in each of the

four companies including a majority share in TANAP. Turkey is involved in three of the four Southern Gas Corridor companies including a minority share in TANAP through BOTAŞ and a 19 percent share in SD2 and SCPx through the Turkish Petroleum Corporation. Through BOTAŞ Turkey has contracted 6 bcm of the 16 bcm annual output of SD2 field. BP is the lead private investor. It is involved in each of the four companies, most prominently as the lead developer and operator of the existing Shah Deniz and the new SD2 gas fields. The cooperation of Azerbaijan, Turkey and BP in the TANAP project builds upon the successful Baku-Tbilisi-Ceyhan Oil Pipeline and the Baku-Tbilisi-Erzurum Natural Gas Pipeline projects. The strategic significance goes beyond Azerbaijan and Turkey as discussed in the section on Strategic Context. The European Commission and several Member States have worked for years to help the countries and companies reach this milestone to open the Southern Gas Corridor.

51. Lessons could also be drawn from other projects on Environment and Social impacts including maintaining good community relations along the pipeline corridor. For example, on the IFC financed Baku-Tbilisi-Ceyhan pipeline project the Southern Gas Corridor benefitted from clear identification of scale and complexity of land acquisition, use of a resettlement fund, monitoring and reporting and an effective grievance redress mechanism done for those earlier projects. In addition, monitoring of the contractor's responsibility on environment and social impacts was also strengthened with the hiring of an engineering, procurement and construction management (EPCM) firm, a focus on local employment and procuring goods and service needs of contractors locally helped maintain good community relations. All these aspects are ones that TANAP (and the Program overall) have taken seriously and committed to integrating these into project implementation.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

52. The legal basis of TANAP was established under "The Intergovernmental Agreement Between the Government of the Republic of Turkey and the Government of the Republic of Azerbaijan Concerning The Trans-Anatolian Natural Gas Pipeline System" and its attachment "The Host Government Agreement between the Government of the Republic of Turkey and The Trans Anatolian Gas Pipeline Company B.V[9] Concerning Trans-Anatolian Natural Gas Pipeline System".[10] These Agreements were signed on June 26, 2012 and approved by Law No. 6375 dated January 2, 2013. The Law was published in the Official Gazette on January 17, 2013 and the Agreements were published in the Official Gazette on March 19, 2013. The two Agreements provide for TANAP to offer capacity up to 31 bcm/annum – the maximum volume the pipeline could carry with the addition of five compressors stations.

53. TANAP was established as a private company under the Turkish Commercial Code to implement the Project and operate the TANAP Pipeline System after project completion. The three shareholders have set a policy for TANAP to "*effectively ship Azerbaijani gas to Turkey and Europe through natural gas pipeline systems which use the best practices and exceed industry standards.*" TANAP has contracted a major engineering firm to carry out design and

[9] It was subsequently novated to TANAP Doğalgaz İletim Anonim Şirketi.
[10] An addendum to the Host Government Agreement was signed by the parties on May 26, 2014.

engineering for the project. Work is progressing at a rapid pace with all major contracts awarded and construction underway. The entire 16 bcm/annum production of SD2 and the gas transmission capacity of the pipelines, including TANAP, have been contracted under long-term gas sale and transportation agreements.

B. Results Monitoring and Evaluation

54. TANAP will provide reports on its activities regularly. EMRA reports on Turkey's natural gas imports, and Eurostat reports on natural gas imports into the EU. The progress of project implementation will be reported and evaluated at a number of different levels. TANAP's EPCM contractor and the environmental and social monitoring consultant report to TANAP. TANAP reports to its shareholders, including BOTAŞ and SGC, and under the Host Government Agreement it also reports to Turkey's Ministry of Energy and Natural Resources. TANAP, BOTAŞ and SGC will start reporting to the Bank under project and loan agreements as soon as they have been executed. In addition, the Bank will provide project implementation support through a decentralized team in Ankara and Baku as well as Washington, DC based staff. One of the Bank's task team leaders for the project as well as financial management, procurement, environment and social development specialists for the implementation phase are located in the World Bank Ankara office, which facilitates close interaction in-between formal implementation support missions.

55. TANAP's Resettlement Action Plan (RAP) for the Project provides comprehensive M&E arrangements including establishing a data base management system, external monitoring, completion audit and end-term impact evaluation. The World Bank's "Operational Policy 4.12 on projects with significant involuntary resettlement risks provides for the client to retain independent professionals to advise on compliance and verify the clients' monitoring information including consultations with affected people. TANAP has engaged environmental and social monitoring consultants under a US$9 million contract, partly supported by the EU. TANAP and the Bank have agreed that these consultants will submit their reports directly to the Bank at the same time as they are submitted to TANAP. TANAP has a comprehensive Stakeholder Engagement Plan that is being implemented by TANAP with agreed citizen engagement indicators to be tracked as part of the Bank's implementation support. TANAP's RAP and Stakeholder Engagement Plan are discussed in Section VI.E.

56. Going broadly beyond TANAP and into the entire Southern Gas Corridor Program, an Advisory Council on the Southern Gas Corridor (described in paragraph 10) brings together all the countries and stakeholders involved to steer the implementation of the Southern Gas Corridor at the political level and to ensure that it becomes operational by 2019-2020. IFIs supporting the Program including the Bank are coordinating project preparation activities and will collaborate during implementation through completion with support from SGC.

C. Sustainability

57. As discussed in Section A above, TANAP has a solid legal foundation. The commercial foundation is also strong: the entire 16 bcm/annum production of SD2 and gas transmission capacity of the pipelines including TANAP have been contracted under long-term gas sale and transportation agreements. Buyers/shippers include BOTAŞ, Georgian Oil & Gas Corporation,

Axpo Trading AG, Bulgargaz EAD, DEPA Public Gas Corporation of Greece S.A., ENEL Trade SpA, Uniper SE, Gas Natural Aprovisionamientos SDG SA, Engie S.A. (formerly known as GDF Suez S.A.), HERA Trading srl and Shell Energy Europe Limited. Two shippers have contracted the entire capacity of TANAP: BOTAŞ for the supply to the Turkish market and the Azerbaijan Gas Supply Company (AGSC) for the entire gas flow for Europe. AGSC manages gas sales and transportation contracts for the Shah Deniz consortium. It is operated by SOCAR.

58. While conducting its activities, TANAP aims to achieve a number of sustainable development objectives:

i. Follow all national laws and regulations;

ii. Apply international standards;

iii. Apply best practices within the natural gas industry; and

iv. Require that all work within the project is carried out in full compliance with the requirements of national health, safety and environmental regulations.

59. Bank participation in the Project contributes to sustainability by bringing TANAP its advice and experience in the application of international best practice related to environmental and social issues, including citizen/stakeholder engagement, to help TANAP enhance the quality of project implementation.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

60. BP is the lead developer and operator of SD2 and investor in each part of the entire Southern Gas Corridor Program. In view of its scale and complexity, BP considers the Program to be "*the global oil and gas industry's most significant and ambitious undertaking yet.*" The Southern Gas Corridor involves seven governments and several companies, as well as the European Union and the European Commission as sponsors, and the European Commission also in an important role as the overseer of the EU's energy acquis. Following more than a decade of dialogue and development, the implementation of the entire program has started. The SD2 gas field is under development; its entire output of 16 bcm/annum and gas transmission capacity of the Southern Gas Corridor have been contracted under long-term gas sale and transportation agreements. This reflects the strategic priority of the program for realizing EU's and Turkey's energy security and sustainable energy goals and the competitiveness of SD2 gas. In many countries in the EU and in Turkey, natural gas can make an important contribution to improving the sustainability of the energy sector as gas emits half as much CO2 as coal. In the Bank's view the main commercial risk to the Southern Gas Corridor Program is likely to be the price of gas in Europe's increasingly competitive gas markets. Price risk is carried by the SD2 consortium. Turkey's still emerging gas market is less competitive. The price risk in the Turkish gas market will be carried by BOTAŞ.

61. Notwithstanding the very large size of the Project, a Moderate overall risk rating has been assigned after the completion of the Bank's extensive due diligence process. TANAP's overall risk rating Moderate at this advanced stage of project implementation is premised on the

following considerations: (a) the governments of Azerbaijan and Turkey have entered in gas sale and transit, intergovernmental and host country agreements and TANAP has entered in long-term Gas Transportation Agreements (GTAs) for the entire 16 bcm capacity of its pipeline system; (b) project sponsors have established, capitalized and staffed a special purpose company, TANAP, to implement the project; (c) TANAP has contracted a major engineering firm for design and engineering and has set up an integrated team for procurement and construction/project management services for the project; (d) all major contracts have been awarded and reviewed as part of the Bank's due diligence; (e) construction is underway; and (f) environmental and social impact studies and mitigation plans have been completed and reviewed as part of the Bank's due diligence. Successful completion will nevertheless require competent and relentless project and contract management and supervision of TANAP's contractors including their environmental and social management plans.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

62. The entire 16 bcm/annum production of SD2 and the gas transmission capacity of the pipelines, including TANAP, have been contracted under long-term gas sale and transportation agreements. The approach used in the quantitative project economic analysis is to use TANAP's estimated gas transmission revenues as a proxy for economic benefit and compare this conservative measure of benefits against the investment and estimated operational costs (excluding tax payments to the Government) of the TANAP Pipeline System.

63. Estimated revenues build up in accordance with the estimated gas production profile of SD2 (see Annex 1). The pipeline to Eskişehir is expected to be commissioned by mid-2018 and to the Greek border by early-2020, and revenues will build up slowly mirroring the estimated gradual gas flow ramp-up. On the cost side, the assumption used for the analysis is based on a pipeline capacity designed for 31 bcm while the revenues on the other hand, are based on volumes of gas equal to the contractually committed 16 bcm, only. While revenues take time to build up, the investment costs are incurred upfront, thereby creating a mismatch in the cash flows, which contributes to a slightly lower economic rate of return (ERR).

64. Based on the assumptions outlined above, the ERR and Net Present Value (NPV) (using a discount rate of 6 percent) are estimated by the Bank at about 10 percent and US$2.56 billion, respectively. The estimated economic benefits and costs are presented in Annex 4.

65. The project's financial viability was assessed by comparing TANAP's estimated revenues from transmission services against TANAP's investment and estimated operational costs, including Value Added Tax (VAT) and tax payments to the Government. Based on this analysis, the financial rate of return (FRR) for the project is estimated by the Bank at 9 percent – which exceeds the estimated cost of capital of both BOTAŞ and SGC. The NPV for the project is estimated by the Bank to be US$1.81 billion at a financial discount rate of 6 percent.

66. If additional gas supplies are available, the capacity of the TANAP Pipeline System could be raised to 23 bcm/annum (e.g. by 2023 as currently envisioned) and 31 bcm/annum (e.g. by 2026) with relatively small investments by adding compressor stations. This is likely to increase

the benefits from the project given the marginal incremental cost of adding compressor stations to the transmission system. The project investment costs are all-inclusive, meaning they take into account all the costs of setting up and running TANAP (the company) including but not limited to, technical studies, staff salaries, facilities rent, insurance, and other overhead costs. Most of these costs would not have been ordinarily included in the analysis; however, considering that the project is being implemented by a special purpose vehicle, it was considered appropriate to factor these in for the purposes of deriving economic costs.

67. The economic benefits of gas supply facilitated by TANAP are greater than the ERR for the pipeline suggests. Natural gas is the most important fuel in Turkey's primary energy and power generation fuel mix today. Supply from SD2 will double Turkey's gas imports from Azerbaijan from about 6.5 to about 12.5 bcm/annum. This will help meet the growing demand for natural gas and meet Turkey's energy supply security and diversification objectives. The across-the-country pipeline will ease congestion on BOTAŞ transmission network by providing much needed East-to-West transmission capacity. TANAP estimates that during construction the project will employ about 9,000 people directly and another 5,000 people indirectly through construction, support services, pipe manufacturing and other areas of the project. During the operational period, TANAP expects to provide permanent employment to about 300 people (current 16 bcm/annum project) and subsequently up to about 500 people (at 31 bcm/annum flow).

68. Access to gas is improving rapidly. Unlike electricity, access to gas is still far from universal but the number of gas consumers increased from about 6 million in 2006 to more than 11 million in 78 cities in 2015. In line with the progress of BOTAŞ' transmission network development and EMRA's program to attract private companies into gas distribution, over 60 cities across Turkey are now served by private distribution companies. BOTAŞ is expected to complete its national gas transmission system investment program by 2017, which will extend the gas transmission network to all provinces across Turkey. The Natural Gas Distribution Companies Association of Turkey (GAZBIR) projects the number of gas consumers to reach about 15 million by 2020.

69. Gas is also important to the EU's energy mix, with uses in electricity generation, space heating, industry and transport. As domestic production has declined, EU now imports over two thirds of its gas supply, mostly from Norway and Russia. The 10 bcm/annum gas flow accounts for about 3.5 percent of Europe's imports (and about 7 percent after the possible expansion to 20 bcm/annum flow). The strategic significance is far greater: the program opens the Southern Gas Corridor and marks the first entry of Caspian gas into Europe's gas market. The European Commission and several Member States have worked for years to help the directly involved countries and companies reach this milestone. The strategic priority is reflected by the inclusion of the Southern Gas Corridor in the EU's list of "Projects of Common Interest (PCI)", starting from Turkmenistan and including Trans-Caspian Pipeline as well the three pipelines in the Program including TANAP. Europe's gas demand, supply and import outlook for the period up to 2040 is discussed in Section G and elaborated in the Climate Impact section of Annex 3.

70. The rationale for public sector financing is the strategic priority of the Southern Gas Corridor as a provider of energy security to Turkey and energy security (through route and supply diversification) to South East Europe. In Azerbaijan, the macroeconomic conditions have

added pressure on public expenditures to satisfy competing priorities between social programs, priority infrastructure projects and other economic activities. World Bank and other IFI financing for SGC alleviate pressure on the Government budget to allocate funds for the Southern Gas Corridor. The participation of the World Bank in the TANAP project adds value by bringing its advice and experience in the application of international best practice with regards to environmental and social issues, including citizen/stakeholder engagement, as well as fiduciary issues which collectively help TANAP enhance the quality of project implementation. This extensive environmental, social and fiduciary due diligence has enabled SGC to seek financing from AIIB and EBRD and it also helped guide the due diligence by all IFIs. In Turkey, TANAP is an integral component of the World Bank's engagement in gas market reform. In Azerbaijan, the Bank is supporting the Government in developing and implementing a program on mainstreaming EITI practices into the public reporting system.

B. Technical

71. TANAP is responsible for the overall management and implementation of the Project to ensure the pipeline system is realized per the required standard, within time, budget and safety requirements. Front-end engineering design (FEED) of the pipeline system was carried out for TANAP in 2013-14 by an international engineering firm. In May 2014 TANAP employed an EPCM under a large multi-year contract to review the FEED and provide detailed engineering; engineering, procurement and construction management; logistics and materials management; and project management services through project completion and initial operation. The EPCM contractor's main office is located in London, with support being provided from their Mumbai office. All personnel required for project management, construction management and for liaison and coordination activities with governmental authorities, land acquisition etc. are located in a large project office in Ankara.

72. TANAP and the EPCM contractor have recently executed a major change order to reflect the higher volume of engineering and procurement work since 2014. Following a memorandum of understanding, they have also negotiated and agreed two new framework contracts under which the EPCM contractor and its main sub-contractor will provide staff to TANAP to work embedded in the TANAP organization as part on an Integrated Project Management Structure.

73. Project construction started in 2014. The project is being implemented in two steps: the first step, to be completed by mid-2018, will have the capacity to deliver 6 bcm/annum to Turkey; the second step, to be completed by early 2020, will have the capacity to deliver another 10 bcm/annum to TAP for Europe. The project will have then reached its contracted 16 bcm/annum capacity.

C. Financial Management

74. The proposed World Bank loans will finance BOTAŞ` and SGC's payments to TANAP for investment expenditures incurred by the company. Disbursements will be based on the investment expenditures made by TANAP for the Trans-Anatolian Natural Gas pipeline. These expenditures will be under contracts that would have been already awarded by the time of project effectiveness. These contracts have been procured under the TANAP's procurement policy (discussed below). Payments made by TANAP to its contractors under contracts selected for

Bank financing will form the basis of disbursements from the World Bank. The Bank would disburse to BOTAŞ and SGC through their designated accounts for the project. The withdrawals will be based on Interim Unaudited Financial Reports (IFRs). BOTAŞ and SGC would prepare IFRs on a quarterly basis (with support from TANAP), show the details of the transfers to TANAP (for TANAP contracts selected for Bank financing and whose respective contractors have accepted the application of the Bank's Anti-Corruption Guidelines, and BOTAŞ' and SGC's respective shares of payments on those contracts) and the World Bank will make disbursements to BOTAŞ and SGC based on the amounts included in the IFRs. Based on the quarterly IFRs BOTAŞ and SGC will have an option to withdraw advances on a quarterly or monthly basis, or even more frequently if needed.

75. BOTAŞ, SGC and TANAP will submit their audited entity financial statements annually to the Bank. These statements will be prepared in accordance with the International Financial Reporting Standards (IFRS). The IFRs for the project and audited project financial statements will also be submitted. The IFRs will be submitted to the Bank on a quarterly basis and within 45 days following the end of the quarter and audited statements will be submitted within six months of the end of each calendar year. The format of the IFRs and project financial statements has been agreed with BOTAŞ, SGC and TANAP.

76. BOTAŞ has established and maintained satisfactory financial management (FM) arrangements under the ongoing World Bank-financed Gas Sector Development Project. The audited entity and project financial statements have been received on time and auditors have issued a clean opinion on these project financial statements. However, as in previous years, the auditors issued a qualified audit opinion on BOTAŞ entity financial statements for the year 2015. These qualifications are mainly due to differences between the Turkish Accounting Standards applied by BOTAŞ and IFRS according to which the audited financial statements were prepared. Audit qualifications relate to non-consolidation of some subsidiaries, lack of audit evidence about the inventories, insufficient audit evidence about BOTAŞ' tangible and intangible assets as well as insufficient audit evidence about trade receivables, payables and bank accounts. BOTAŞ prepares financial reports in accordance with the new IFRS-compliant Turkish Accounting Standards (TAS) with support from their auditors. TAS became mandatory for all State-Owned Enterprises (SOEs) including BOTAŞ beginning January 1, 2015 in accordance with the Commercial Code and the supporting Council of Minister`s decision. BOTAŞ is currently strengthening its capacity in the application of TAS/IFRS. BOTAŞ will receive technical assistance under the EU/IPA Energy Sector Technical Assistance – Phase 1 Project aiming at fulfilling transparency and disclosure requirements of the State Economic Enterprise Decree Law and the Commercial Code in the financial reporting and auditing areas. If needed, further technical assistance can be financed under the technical assistance component of the ongoing Gas Sector Development Project.

77. SGC has established reliable and solid financial management system for project management. SGC finance department director and his subordinates responsible for financial management and disbursement arrangement of the project have all relevant knowledge and skills despite SGC's lack of prior experience with IFIs funded projects and operations. The company is being audited by an independent auditor from its inception and received unmodified audit opinion in accordance with IFRS for 2014 and 2015.

D. Procurement

78. The World Bank's New Procurement Framework was approved by the Bank's Board of Executive Directors on July 21, 2015 and became effective from July 2016. The New Procurement Framework will be applied for the proposed Project. According to the Advance Procurement and Retroactive Financing provision in the new Framework, the Borrower may wish to proceed with the procurement process before signing of the Legal Agreement. In such cases, if the eventual contracts are to be eligible for Bank IPF the procurement procedures, including advertising, shall be consistent with sections I, II and III of the World Bank Procurement Regulations for IPF Borrowers (but note paragraph 40 of Annex 3). Goods, works, non-consulting services and consulting services under the Project have been procured in accordance with TANAP's own rules and procedures (discussed in Appendix 3). The World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 (Anti-Corruption Guidelines) will apply to contractors, suppliers and consultants benefiting from Bank financing under this Project (also note paragraph 41 of Annex 3). The following paragraphs summarize the Bank's due diligence with further details provided in Annex 3.

79. TANAP has established a comprehensive procurement system, including a procurement policy and a procurement and contracting manual. TANAP's procurement policy specifies that procurement of all services, works, goods and equipment (including for pre-construction, construction, installation, commissioning and decommissioning of the pipeline system) shall be in compliance with internationally accepted competitive procurement practices. Such internationally accepted competitive procurement practices are specified to include: (a) competitive bidding, including the development of contract strategies; (b) non-discrimination; (c) approved bidder lists; (d) transparency including objective pre-agreed technical and commercial criteria for the selection of bidders and award of contracts; (e) anti-corruption measures; and (f) pre-agreed key performance indicators for the contracts. In addition, TANAP's procurement strategy takes into account all technical and commercial aspects proportionally including market research and analysis and risk management to active value for money for the Project.

80. TANAP's procurement policy requires TANAP to exercise due care with respect to awards of contracts, receipts, payments, and accounting of funds and internal controls, in accordance with TANAP's Anti-Bribery and Corruption Policy and all relevant anti-corruption legislation, including but not limited to: (a) the UK Bribery Act 2010; (b) the US Foreign Corrupt Practices Act (FCPA); (c) legislation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or the United Nations Convention Against Corruption; (d) the anti-corruption or anti-money laundering laws of any country in which project activities are to be undertaken; and (e) good and prudent practices generally followed by the international gas pipeline industry under similar circumstances. The procurement policy further requires TANAP to include, to the extent practically possible, in its contracts with independent contractors, provisions which constitute a statement/warranty from the contractor confirming that it will comply with all relevant anti-corruption legislation, including those listed above.

81. Procurement is one of the tasks of the EPCM employed by TANAP since May 2014. All major procurements are supervised by a shareholder level TANAP Contracts Committee (TCC) consisting of members of the shareholders. The TCC reviews any updates or changes to TANAP's Master Procurement Plan and Annual Procurement Plan before submission to the Board of Directors. Following review and endorsement by the TCC, contracts up to the thresholds specified in the procurement policy are approved by TANAP's General Manager; awards for contracts higher than the threshold are submitted for approval to TANAP's Board of Directors.

82. Project construction started in 2014 and all EPC and equipment/material supply contracts have been awarded. Onshore 56" pipeline construction contracts were awarded in December 2014 and site works are underway. EPC contract for metering and compressor stations was awarded in February 2016 and the EPC contract for off-shore pipelines and fiber optic cables was awarded in July 2016. TANAP has since awarded all remaining major contracts which mean that all contracts to be financed under the proposed Bank loans to BOTAŞ and SGC will have been awarded prior to the approval of the two loans.

83. BOTAŞ and SGC have demonstrated adequate capacity to oversee the procurement activities implemented by TANAP. However, they have limited knowledge about the Bank's New Procurement Framework, and risks related to this will be mitigated through training provided by the Bank's procurement specialist.

84. A summary of the procurement arrangements is provided in Annex 3 including risk mitigation measures which have been discussed with and agreed by BOTAŞ, SGC and TANAP.

E. Social (including Safeguards)

85. *Social Impacts.* A 1,850 km pipeline crossing Turkey from East to West will inevitably have environmental and social impacts. TANAP with the assistance of international and local consulting firms and local consultants has prepared and disclosed on its web-site on June 22, 2015, an ESIA Report, a Guide to Land Acquisition and Compensation, a RAP and a Stakeholder Engagement Plan based on international good practices and standards, including the 2012 IFC Performance Standards. The documents were disclosed both in Turkish and English. The Bank's due diligence reviewed TANAP's social and land acquisition (and environmental) policies and mitigation plans and their implementation against the applicable World Bank Environmental and Social Safeguards policies. In addition, TANAP at the request of the World Bank has completed an audit through independent consultants on the implementation of RAP for pipeline route. The purpose of this due diligence is to ensure that the core principles and mitigation measures of the applicable World Bank policies are integrated into TANAP's project design and implementation practices. This relates to compensation valuation of land and assets, mitigation of livelihood impacts, implementation arrangements, monitoring and evaluation, grievance redress mechanism, consultations and disclosures. The Bank carried out three field visits to different project sites between November 2015 and June 2016 to assess the implementation on the ground and solicit feedback from project affected people on the implementation of land acquisition compensation and related social impacts. Annex 3 discusses the outcome of social (and environment) due diligence and pipeline RAP audit findings, highlighting the issues identified and proposed measures to bridge the gaps.

86. The World Bank's Social Safeguards due diligence, outcome of RAP audit, guidance to TANAP in updating entitlements to different types of impacts, assisting TANAP to develop its disclosure policy, and strengthening its capacity are important contributions of the Bank in attracting other IFIs to finance TANAP. AIIB's and EBRD's financing to SGC will rely on Bank's assessment of safeguards compliance for their financing and will provide complimentary support to the Bank during supervision of implementation of safeguard actions.

87. *Social Safeguards Policies.* Institutional and implementation arrangements are in place to deal with land acquisition and livelihood impacts. Though the project requires land of 6,600 hectares including 4,300 hectares of private land, 96 percent of these lands are acquired for a temporary period of three years for temporary easement to be used for construction (20 meter corridor) and the rest to be taken under exclusive and unrestricted land right basis (16 meter right-of-way). These lands are returned to the land owners after construction (without restrictions for about 50 percent of the land, corresponding to the temporary easement, and with some restrictions on planting and construction of buildings in case of the remaining 46 percent of the land under exclusive and unrestricted easement). Thus, most of the impacts due to land acquisition are temporary. Only about 260 hectares of land (4 percent) is acquired on an ownership basis for the above ground installations (AGIs). The total number of affected land owners is estimated to be about 95,000 and includes some informal settlers (less than 200 families) who are cultivating public lands. The number of land owners to be affected for permanent land acquisition is less than 1,000 (about 1 percent). Since majority of the land acquisition is for a temporary period of about 3 years, and as there is no physical displacement, the impact of land acquisition is not considered a major issue in this project. A separate RAP has been prepared and disclosed for permanent land acquisition impacts associated with AGIs describing the land acquisition impacts and compensation payment procedures and livelihood restoration mechanisms to assist those who have lost livelihoods.

88. Turkey's "Expropriation Law" No. 2942 has been used to acquire private lands. Under this law, expropriation for the project has been done on a consent basis, where the land owners were offered a valuation price and if the land owner agrees with the price, the land has been registered and compensation has been paid within 45 days (article 8). If consent has not been reached, the expropriation has been carried out on urgent expropriation basis through court procedures (article 27)[11]. The compensation valuation includes considerations of net income, capitalization and sale transaction from Title Registration office and real estate prices, etc. The compensation for the 16 meter right-of-way (ROW) corridor with exclusive rights basis (i.e. permanent easement) is in the range of 70-90 percent of the compensation as available under permanent land acquisition and the land is made available to original landowners for their use with some restrictions . In case of the 20 meter additional ROW corridor with temporary easement rights during construction, the compensation is estimated to be in the range of 15-30 percent. In addition to the compensation, additional compensation for productivity loss associated with the 36 meter corridor estimated at 30 percent for first year, 20 percent for second year and 10 percent for third year are also paid. Based on the Bank's due diligence findings, in order to meet the Bank's OP 4.12 requirements, TANAP has updated the Entitlement Matrix to

[11] Article 27, which secures land access, is followed by Article 10 (registration in the name of BOTAŞ) in which both involved parties have chance to challenge the land prices. After finalizations of Article 10, parties (BOTAŞ and landowners) still have right to independently challenge the court's final price with the Supreme Court.

include transaction costs required for the purchase of replacement land or assets, transitional allowances to those who lose more than 20 percent of their lands permanently, provision for acquisition of unviable land parcels, additional crop loss compensation for the unviable land parcels in case of pipe line route , and measures for livelihood support to vulnerable groups and others who have lost source of livelihood. The updated entitlements will be applied retroactively. The compensation amounts and other support provided in the Entitlement matrix are expected to meet the World Bank's OP 4.12 Involuntary resettlement requirement of payment of compensation at replacement cost for loss of land and assets attributed to the project. TANAP has adopted and published a disclosure policy on their website related to the disclosure of safeguard documents and monitoring reports and has provided information to stakeholders when requested about the implementation of safeguard documents. In addition to compensation payable under Turkish Expropriation Law, TANAP has set up a RAP Fund to pay additional compensation and R&R assistance including to those affected informal users over and above Turkish legislative requirements to meet international standards.

89. The land acquisition is substantially completed and BOTAS (Lands Rights Entity) has obtained access to almost all lands (about 99 percent). However, registration of lands required for pipeline construction in favor of BOTAŞ is reported to be 44 percent (80 percent of public lands and 33 percent of private lands). About 32 percent of private land acquisition has been concluded in amicable settlements and the remaining lands are secured through "immediate/emergency expropriation" process (Article 27 of Turkish Expropriation Law) mostly due to non-availability of land owners for negotiations or where ownership records are not updated. Only about 5 percent of the land owners have appealed to the court for enhancement of compensation rates.

90. Since land acquisition was substantially completed at the time of the World Bank's involvement with this project, the Bank has undertaken due diligence of RAP implementation to identify the gaps, if any in relation to OP 4.12 Involuntary Resettlement policy provisions and TANAP has commissioned an independent consultants to undertake an audit of RAP implementation. Based on the outcome of these two actions, TANAP has committed to taking remedial measures to address those gaps and a time frame for finalization and implementation of remedial measures, described in "Addendum to RAP for Pipeline Route". The proposed remedial measures includes: livelihood restoration/improvement measures to support vulnerable and other groups who have lost source of livelihoods, compensation for unviable land parcels in case of permanent land lost and additional crop compensation in case of pipeline route, livelihood restoration plan for the affected fishing communities, strengthening the process of dissemination of information of Entitlements and assistance to project affected persons (PAPs), capacity enhancement of TANAP Team, strengthening grievance mechanism, appointment of external consultants for monitoring of RAP implementation / remedial measures, putting in place a disclosure policy for safeguard documents and other related information including the contact details for seeking additional information by the interested people, etc. Since the remedial measures require further assessments, surveys and strategies to finalize the plans, TANAP agreed that remedial actions described in "Addendum to RAP for Pipeline Route" will be subject to the Bank's prior review to ensure that they adequately respond to the needs of the affected people.

91. As part of the ESIA process, 63 public meetings were held between February-March 2013. In addition, 17 focus group meetings with women and 135 village head meetings were held as part of the RAP preparation. To date, three consultation meetings with local and international NGOs have been held, as part of Turkish legislation requirements, where in about 1,250 people participated. In addition, 25 focus group meeting, 15 in-depth interviews with village headmen were also conducted as part of the preparation of the RAP for Above Ground Installations (AGIs). A project brochure was distributed in these meetings and a power point presentation was made, and question and answer sessions were conducted. Most of the issues raised in the meetings were about the project and compensation related issues. The impacts to land and livestock, and grievance redress mechanism to deal with construction related impacts during construction were also raised. One significant issue brought up during consultations was the local employment opportunities during construction and reinstatement works. The other issues raised were related to gas distribution and improvements to supply, social investment in villages along the route, water quality, agriculture impacts and potential limitation on crops, waste management, damages to existing roads from construction traffic, security of pipelines as well as safety of people and animals, and health risks. Going forward, TANAP proposes to hold annual stakeholder meetings to engage stakeholders for meaningful participation on an ongoing basis. TANAP has established procedures for receiving grievances from the affected communities. In each pipeline lot, the grievance redress mechanism is made accessible and shared with affected communities in consultations and project information meetings. The channels available for reporting complaints includes: toll free phone number, phone/fax of the local project office, email, letter, complaint form, discussion or meetings. All complaints received are registered online and their resolution is tracked. As of September 2016, 731 complaints were received and 583 (80 percent) were resolved. Most of the complaints are related to damage to fields/irrigation channels, crop damage compensation, etc. The grievance redress mechanism is being strengthened by setting up four independent "Appeals Committees" for each of the geographical areas falling within the four pipeline construction lots including corresponding AGIs falling in those lots to consider those complaints where people are not satisfied with the grievances made to TANAP. The committees will consist of three members chosen from local universities/institutes, local NGOs or person of good repute from the local area. TANAP will prepare internal monitoring reports of the RAPs and submit them to the Bank on a quarterly basis. In addition, TANAP will strengthen its monitoring of RAP implementation including actions under the Addendum to the Pipeline Route RAP through semi-annual external monitoring by monitoring consultants experienced in expropriation/ livelihood issues.

92. *Citizen Engagement.* TANAP has a comprehensive Stakeholder Engagement Plan for engaging with citizens in a well-informed, participatory way. The Stakeholder Engagement Plan is being implemented by TANAP and supported by the Bank in line with mutually agreed goals for citizen engagement. According to the Stakeholder Engagement Plan, interacting with citizens is "a key activity within large-scale projects because it creates an open communication channel with relevant stakeholders including citizens, allows stakeholders to understand the impacts of the project, and helps the sponsor address local expectations and incorporate feedback in project design". The project explicitly supports public participation meetings, annual reports summarizing the feedback received during consultations processes and explaining how the feedback was reviewed and considered by TANAP, and a process for capturing men's and women's feedback separately when appropriate. These feedback mechanisms have been developed during project design to ensure transparency and a continuous dialogue with

stakeholders and beneficiaries, as well as to comply with relevant Turkish law. There are systematic consultations with project affected communities during the pre-construction and construction phases. TANAP has proposed to hold annual stakeholder meetings to present the progress in implementation and seek views and suggestions from the affected communities as part of ongoing engagement with affected communities. TANAP has also planned for a substantial Environmental and Social Community Investment Program for the entire impacted route. In order to determine the main thematic areas of the investment program, TANAP carried out a needs assessment through participatory consultations with affected communities. Particular attention will be given during implementation to supporting TANAP in closing the feedback loop and reporting on any action taken in this regard. During implementation of the investment program, TANAP will hold regular consultations with affected communities who will be the main beneficiaries of this Environmental and Social Community Investment Program. These consultations will allow the beneficiaries to voice their needs and be part in the implementation and monitoring of the program. The project aims to monitor citizen engagement activities through indicators in order to ascertain the views of beneficiaries and ensure they actively participate in the environmental and social investment program.

93. *Grievance Redress Mechanism:* Both in the Pipeline and AGI RAPs and in the Stakeholder Engagement Plan TANAP has established procedures for receiving grievances from the affected communities. In each lot of the route, the grievance redress mechanism is made accessible and shared with affected communities in consultations and project information meetings. All the contact details and communication channels for reaching out to community liaison officers (CLO) are shared and displayed in Muhtar (headmen) offices, local government authorities and in construction camp sites. There is a Stakeholder Consultation and Grievance Database which records grievances and tracks performance. Once a compliant is received through a CLO, the complainant fills in a complaint form with signatures from the complainant and the CLO. Then the CLO registers the complaint into the grievance database so that the complaints are also accessed and tracked from TANAP headquarters. The grievances are logged and a close-out form is prepared when the grievance is resolved within 30 days. TANAP has issued clear instructions on how grievances are submitted and processed, including a minimum period that a complainant must wait to receive a reply; and alternatives for submitting a grievance in person to a staff member if a stakeholder is not able to or comfortable submitting a grievance in writing. TANAP provides these instructions to each contractor CLO and TANAP's social specialists through their internal training. The channels available for reporting complaints includes: Toll free number, phone/fax of the local project office, Email, Letter, compliant form, conversion, discussion or meetings. All the complaints received are registered online and their resolution is tracked. As of September 2016, 731 complaints have been received and 583 (80 percent) (including those subject to seasonality and third-party assessments and decisions) so far resolved. Most of the complaints are related to damage to fields/irrigation channels, crop damage compensation, etc. The grievance redress mechanism is being strengthened with constitution of four independent "Appeals Committees" for each of the geographical areas falling within each of the four construction Lots including corresponding AGIs falling in those Lots to consider those complaints where people are not satisfied with the grievances made to TANAP. The committees will consist of three members chosen from the local universities/institutes, local NGOs or person of repute from the local area.

94. *Gender:* The project will have social impacts either directly or indirectly on gender. The project already has positive provisions for women. TANAP is carrying out separate consultations for women in their own dwellings. Even though most of the impacted land owners are men, women are informed about the project, land acquisition procedures, its benefits, local employment opportunities, safety trainings and its planned social investment program. Among the affected communities (mostly in rural settlements), TANAP has provided local employment opportunities through its contractors for unskilled women to be able to earn additional income for their households. Most of them are either working in the catering or cleaning unit of the construction camp sites. They stay in the construction site and have their own rooms. From three field visits that the Bank team had with women separately, there has been demand from women to benefit from the community social investment programs that the project will set up.

95. Gender-disaggregated data will be collected at all levels as possible, for analytical purposes together with the aim of having gender-inclusive design of future projects (in social investment program) and informing also TANAP and BOTAŞ for their operations. The project aims to gather data on proportion of women among unskilled and skilled labor hired in the entire project. Regarding land and compensation issues, although the Turkish law has gender-neutral provisions for land owners, men are more often title holders than women in Turkey[12]. The project will make sure women-land owners or users affected under the project receive fair amount of compensation that covers what they are entitled to. This is also detailed in the disclosed RAP. Lastly, the project will pay attention to: (i) having gender-specific investments under the social investment program; and (ii) setting up feedback mechanisms in the four lots during the construction and operations phase of the project that they are equally accessible to both women and men.

96. *Appraisal and Negotiation Requirements.* TANAP has met the appraisal requirements by preparing: (a) a RAP for AGIs triggering permanent land acquisition (about 260 hectares); and (b) an "Addendum to RAP for Pipeline Route" to propose remedial measures arising out of the Bank's due diligence and RAP audit findings. The draft reports were reviewed by the Bank and found to be high quality, comprehensive on issues and well organized. Both TANAP and the World Bank have disclosed these two draft documents on September 22 and September 23, 2016 respectively. The final versions of the Addendum to RAP for Pipeline Route, English and Turkish versions, were re-disclosed on October 24, 2016, and the RAP for AGIs, English version on October 27, 2016 and Turkish version on November 4, 2016. More implementation on land acquisition and related impacts is provided in Annex 3.

F. Environment (including Safeguards)

97. The Bank carried out a detailed environmental and social due diligence to determine whether environmental and social safeguard assessment and management documents prepared by TANAP are consistent with the World Bank safeguard polices. The environmental and social assessment documents for the associated projects (SD2, SCPx and TAP) were also reviewed as a part of the Bank's due-diligence process from a risk-based approach. TANAP project was categorized as -A- according to OP 4.01 and Annex 1 according to Turkish EIA Regulation. At

[12] According to findings of the 2014 Title Deed Ownership research by the Directorate General of Land And Cadastre, women title deed ownership is found as 35% whereas for men 65%.

the initial stages of the project, the shareholders of TANAP planned to attract international project financing from the outset of project design, therefore an ESIA to satisfy both Turkish and IFC's environmental and social standards (2012 IFC Performance Standards) was prepared. ESIA studies were conducted during 2012-2014 by Cinar Engineering Consulting Co. (a local environmental consultancy company) and additional quality control was provided by Golder Associates and ERM Group. The ESIA was prepared both in Turkish and English. The Turkish version was submitted to the Ministry of Environment and Urbanization and received the 'EIA Positive' on July 24, 2014. This version of the ESIA report was disclosed on TANAP's website in 2014 and remains available on its site. A comprehensive ESIA package (an updated Executive Summary and revised versions of supporting safeguards documents) was disclosed on TANAP's website on July 22, 2016 and on Bank's external website on July 29, 2016.

98. The ESIA package contains a Biodiversity Action Plan (BAP) with a baseline methodology beyond Turkey's national requirements. The study evaluated designated protected/sensitive sites and also studied the potential sites for European Nature Information System (EUNIS), Natura 2000 and internationally recognized important areas. The BAP provides specific information and guidance for the necessary actions for conservation of biodiversity along the proposed route. During the ESIA studies a Cultural Heritage Assessment has been conducted for the project and annexed to the ESIA, which was also disclosed as a part of ESIA package.

99. TANAP held extensive public consultation meetings as part of the ESIA process. Sixty-three public participation meetings were held to inform the Project-affected communities about the Project and to gather any concerns, feedback and suggestions. In addition, TANAP has a solid community relation management, grievance redress and stakeholder engagement mechanism in place.

100. The Bank's environmental due-diligence showed that the quality of TANAP's safeguards documents is satisfactory and TANAP's environmental and social management system (ESMS) for checking the compliance of works undertaken by construction contractors is working well. TANAP is an underground pipeline project with limited, localized and temporary impacts. Most of the impacts are related to disturbance of land, dust emissions, surface water quality impacts during the construction phase. Project also consists of several compressor stations which will be above ground and they will have more permanent but insignificant impacts.

101. The impacts on biodiversity have been considered using an internationally accepted methodology in the preparation of the BAP as part of the ESIA process. The due diligence identified that the routing exercise has been conducted to avoid critical natural habitats, although some areas were unavoidable. There are 67 terrestrial and 27 freshwater critical habitats identified. No critical habitats are identified in the marine environment. Terrestrial critical habitats cover only 0.39 percent of the ESIA (500m) corridor and 5.6 percent of the ROW (36m) and according to the quantitative impact assessment their impacts are not significant. Therefore, the due diligence confirmed that the mitigation measures as defined in ESIA and BAP are sufficient. TANAP's construction contractors prepared extensive reinstatement plans to set the detailed actions for the restoration of habitats.

102. TANAP pipeline route passes through Meric (Evros), Aras, Euphrates basins and the pipeline also has an offshore section in Dardanelles. The impacts of the Dardanelles crossing (offshore section) was evaluated in the ESIA report and due to the method of pipe-laying no major impacts are foreseen related to the environment. The temporary impacts related to construction of the offshore pipeline will be on aquatic habitats, and necessary measures were put in place in the ESIA and BAP. River and Dardanelles crossings will be implemented by the construction contractors and Method of Statement process will be used. Supplementary ESIA studies determined that while the crossings have environmental impacts in their vicinity, they do not have trans-boundary impacts.

103. OP 7.50 (Projects on International Waterways) is not applicable to the project even though the pipeline will cross a number of international waterways.[13] Management reached the determination not to apply OP 7.50 to this operation based on: (a) the conclusion that any impact of pipeline construction or operation on such waterways would be temporary, localized and in any event purely *de minimis*; and (b) an updated interpretation of OP 7.50, grounded in recent developments in relevant international law, and in particular customary international water law as reflected in the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, which requires states to notify each other only of planned measures that may have "significant adverse effects" before such measures are implemented. Such an understanding of OP 7.50 means it is inapplicable in cases of solely *de minimis* impacts.

104. During pipeline routing studies, culturally significant sites were designed to be avoided where feasible; however, there are still some sensitive areas on the ROW. The selected route avoids most of the cultural areas but nevertheless passes through 11 areas including a few small settlements, ancient cemeteries/graves and/or terra cotta, waterline, etc. A Cultural Heritage Management Plan was prepared to minimize the impacts on those sites and a protocol agreed between TANAP and the Ministry of Culture and Tourism. There is also a detailed chance finds procedure which is successfully applied by TANAP and its construction contractors.

105. The due diligence concluded that TANAP's ESMS is an effective system that sets the rules for successful implementation of ESIA for TANAP and its construction contractors. TANAP also hired a local environmental and social monitoring consultancy firm (CINAR Engineering Consulting Co.) who is providing quarterly monitoring reports to TANAP and the Ministry of Environment and Urbanization. Due diligence also identified some areas for further improvement. They have been addressed by TANAP by: (i) updating the mitigation and monitoring plan of TANAP's ESIA (entitled the Commitments Register) to reflect revisions in the pipeline route, and BAP (ii) integrating soil reinstatement plans and adding a bio-restoration monitoring plan to BAP; (iii) integrating the monitoring consultant to TANAP's Management of Change Process; (iv) improving the quality of the monitoring reports and creating a direct

[13] These include the Posof River which drains into the Aras River, an international waterway that is shared with Armenia, Azerbaijan, Georgia and Turkey and which eventually discharges into the Caspian Sea. It will also cross a number of other smaller rivers including Bas and Karasu Rivers (Erzurum Province); Harosman River, Kura River and Cotsuyu River (Ardahan Province); Belcam River and Bolukbasi River (Kars Province); Kayislipinar River (Erzurum Province); and Sogutluk Creek abd Cevizlik Deresi Creek (Edirne Province). The pipeline will also go under the Dardanelles Strait which is within Turkey but which connects with the Sea of Marmara, the Aegean and Mediterranean Seas.

reporting line between the monitoring consultant and lenders including the Bank. TANAP disclosed the updated Commitments Register and the BAP on October 18, 2016.

106. *Labor and Occupational Health and Safety*. The Bank's environmental due diligence also assessed TANAP's Occupational Health and Safety (OHS) management and labor procedures. Due diligence results showed that TANAP's OHS system addresses the continuous identification of dangerous conditions, evaluation of associated risks, and implementation of control measures. The main responsible parties for OHS compliance are the construction contractors. Compliance is monitored by TANAP's integrated project management structure. Due to scale of the OHS provisions committed by TANAP, Bank requested a summary table listing OHS provisions and linking them with responsible monitoring vs supervision authority. TANAP shared that summary table with the Bank during appraisal and it was found acceptable. Safeguards due diligence related to labor and OHS identified that TANAP and construction contractors have effective labor and OHS policies and procedures in place to manage the construction of the project and the OHS policies of the project are deemed to be comprehensive and coherent. TANAP will inform the Bank about any significant event (social, labor, health and safety, security or environmental incident, accident or circumstance) as soon as reasonably practicable, but no later than five calendar days after the occurrence of the event. TANAP will prepare a report on the event and the corrective action and submit to the Bank within 30 calendar days of the event.

107. The Bank's due diligence assessed risks associated with labor and working conditions, and reviewed human resources (HR) policies and procedures applicable to employees from TANAP and project contractors. TANAP committed in the ESIA that the project will follow applicable Turkish labor legislation and the IFC Performance Standards (IFC PS), which include PS2 on Labor and Working Conditions.

108. TANAP has an adequate system of policies and procedures dealing with labor relations management including issues such as hiring, training, compensation, benefits, work hours and grievance mechanism. Project contractors' HR policies and procedures are reviewed and approved by TANAP. Turkey has ratified the core ILO Conventions on freedom of association, non-discrimination, child labor and forced labor. TANAP's and construction contractors' labor policies for its direct and contracted workforce are designed to be aligned with Turkish Labor Law 4857. TANAP supervises compliance with core labor standards as defined by the International Labor Organization (ILO), and all applicable law and international standards on behalf of construction contractors. The working conditions are communicated to employees during hiring process and are included in the labor contracts. There is an established grievance mechanism for TANAP employees and contractors.

109. As of September 2016, there were around 7,300 construction workers engaged through contractors and sub-contractors. TANAP has a policy of hiring local labor workforce from project-affected districts and provinces. They constitute an estimated 40 percent of the construction workforce. A large majority of other workers are also Turkish. The construction work camps provide adequate accommodation, medical and recreational facilities for workers. Construction contractors have in place Employment and Training Plans which among other issues include TANAP's local hiring procedure and TANAP's Code of Conduct (construction work camp site rules) for the contractors' workforce. Workers are informed about the Code of

Conduct during hiring procedure, and during induction trainings. Social induction and HSE trainings also include components of cultural awareness, interacting with local communities and prevention of communicable diseases.

110. TANAP carries out periodic reviews of project contactors which cover ESIA commitments including local employment issues. In addition, TANAP contracted a third party consultant to carry out monthly labor audits of project contractors workforce on issues covered by the Turkish Labor Law No. 4857, and Social security Law No. 5510. While TANAP has adequate set of human resources polices in place, the identified area for improvement relates to the overtime work hours performed by the construction workers. The third-party labor and earlier EPCM audit reports indicated that there are cases of overtime work hours exceeding the legally permitted limit of 270 hours annually, as prescribed by the Turkish Labor Law No. 4857. The documents indicate that this overtime work was agreed with workers and compensated as required by regulation. An Action Plan was agreed TANAP to reach and maintain legal compliance with overtime work requirements. TANAP will provide documented evidence acceptable to the Bank that construction contractors and sub-contractors are in compliance with national labor law requirements on overtime work.

111. TANAP treats environmental safeguards documents (such as BAP, construction contractors' environmental sub-management plans, etc.) as living documents and has the flexibility to ask contractors to undertake additional mitigation measures or remedies resulting from environmental assessment documents prepared during route changes, construction technique changes, etc. TANAP and Bank agreed on the project implementation phase prior/post review arrangements for the environmental safeguards documents. TANAP will send proposed revisions to safeguard documents for the Bank's prior review and no-objection if they are expected to have a substantial or material impact on TANAP's commitments under the ESIA Package most recently approved by the Bank. TANAP and Bank also agreed the methods for reflecting future revisions in the safeguard documents in construction contractors' contracts.

112. TANAP has a Social and Environment Investment Program (SEIP). US$23 million has been earmarked to support these investment programs. The aim of this program is to create sustainable development for local population and improve quality of life. The key activities planned under this program includes: capacity building on local development, increasing economic opportunities for income and employment; supporting women and vulnerable groups. The proposed activities will have direct investments, direct grants and contribute to on-going development works in the project area. TANAP and its shareholders have set up an expert commission to evaluate and endorse SEIP-related projects. The first year program has US$6 million and monitoring and implementation services of awarded projects, and also technical assistance to TANAP for the implementation of the program will be provided by an outsourced consultant company that was mobilized in October 2016. Upon the approval and award of related project proposals, TANAP will monitor and the Bank will contribute to the monitoring of selected projects during their implementations. The Bank regards this SEIP as a good practice for a project of this scale.

G. Safeguard Policies in Associated Projects

113. No waiver of the Bank's environmental and social safeguard policies is sought for the Project. Instead, waivers of certain safeguard policies[14] are proposed with respect to their application to the three Associated Projects – SD2, SCPx and TAP - as the Bank has little to no reasonable expectation that it will: (a) be able to have access to all of the project documentation of the Associated Projects; (b) be allowed to take part in the supervision of the Associated Projects; or (c) be able to negotiate a legal framework that would allow the Bank to exercise remedies in the case of non-compliance with safeguard instruments under the Associated Projects, all of which are necessary for the proper application of the Bank's environmental and safeguard policies.

114. The conclusions noted above result from the following considerations:

(a) The ownership structures for the Associated Projects differ from that of TANAP. BOTAŞ is not a shareholder in any of the three Associated Projects. SGC is a minority shareholder, with 6.7 percent in SD2 and SCPx and 20 percent in TAP;

(b) The Bank has no participation in the financing of any of the Associated Projects;

(c) Two of the three Associated Projects are in advanced stages of implementation, and the third Associated Project has started construction; and

(d) While the Bank has had some success in getting access to safeguard information about the Associated Projects, the Bank has been told that unlimited access would not be possible due to the confidentiality considerations of the other projects.

115. However, recognizing the functional and perceptual linkage between TANAP and these other investments, the Bank team has carried out due diligence measures to assess their potential risk levels and management systems. This includes reviewing the publicly available ESIAs for SD2, SCPx and TAP as well as additional information made available to the Bank by BP and SGC and by other IFIs supporting the Associated Projects. For SD2, SCPx, and TAP the ESIAs were prepared and disclosed for in Azerbaijan and Georgia (SD2, SCPx) and Greece, Albania and Italy (TAP). The ESIAs of associated projects generally comply with the Bank's safeguards procedures and are of high quality. The respective Host Government Agreements also require the projects to follow all applicable environmental and land acquisition laws. In addition, SD2 and TAP fall within the requirements of IFI's environmental and social standards in that: (a) EBRD and ADB have approved financing for one of the shareholders of SD2; and (b) EBRD and EIB intend to provide financing for TAP.

116. The Bank's review of the available documents and information identified no significant compliance issues, and concluded that the SD2, SCPx and TAP projects are of moderate risk,

[14] OPs/BPs 4.01 (Environmental Assessment), 4.04 (Natural Habitats), 4.36 (Forests), 4.09 (Pest Management), 4.11 (Physical and Cultural Resources), 4.12 (Involuntary Resettlement) and 4.37 (Safety of Dams). No waiver is sought for OP/BP 4.10 (Indigenous Peoples) or OP/BP 7.60 (Disputed Territories) as these policies are not triggered by those operations for any of the countries or the project area in question.

well planned, and executed with documentation and procedures comparable to the Bank's environmental and social safeguard policy requirements. In all these projects there is no physical displacement and most of the expropriation is for a temporary period of three years for the duration of the construction period. Permanent land acquisition is very limited and a "Guide to Land Acquisition Implementation" is made available to all land owners. In the case of TAP, in view of the significant share of EBRD and EIB financing (US$2.5 billion of the total US$6 billion), it is reasonable to expect compliance with the requirements of these IFIs and therefore material consistency with the Bank's safeguard policies. The Bank has made an effort to obtain additional information from BP and SGC about the preparation and implementation of the Associated Projects. However, the Bank's due diligence was largely based on publicly available information. While the review did not find any significant issues, the team noted that land acquisition and compensation payments have progressed substantially in all Associated Projects and livelihood restoration plans have been initiated where required. Paragraph 117 provides additional details. Going forward, the team will request updates on the progress of the Associated Projects, including their environmental and social safeguard monitoring results and any significant issues that might arise. Notably, SGC has confirmed that it supports IFI collaboration, and ADB, EBRD and EIB have indicated their willingness to collaborate with the Bank during the implementation of the Project and the Associated Projects. The Bank team will seek to coordinate with the other IFIs on opportunities to collaborate and share information in this respect.

117. *Land Acquisition and Social Impacts in Associated Projects*. SD2, SCPx and TAP have followed the applicable land acquisition laws in accordance with respective Host Government Agreements, and in some cases, in accordance with IFIs policies in the case of projects supported by IFIs. These project policies also indicate that they pay crop compensation damages to all informal users who use to cultivate the public lands. All projects have put in place a "Guide to Land Acquisition Implementation" which spells out the process, procedures, compensation, and grievance mechanism details is made available to all land owners. All these project have carried out ESIAs and in the process engage with stakeholders on an ongoing basis. No physical displacement is involved in any of these associated projects. In the case of SD2, an audit was carried out on the implementation of land acquisition and compensation payment and also a "Livelihood Management Plan for 45 affected Fishermen" was prepared and under implementation. The audit confirmed that the project has reached an agreement with the fishermen on the proposed measures under the plan. The implementation of land acquisition and payment of compensation is substantially progressed in all associated projects. In case of SCPx, all land owners affected due to AGIs are compensated in both Azerbaijan and Georgia (39 in all) and about 98 percent of 4,877 land owners affected due to pipeline route are compensated to date both in Azerbaijan and Georgia. Within land acquisition process, vulnerable people are being identified to provide assistance through social program such as timber distribution. The number of land owners affected in case of SD2 is only five and those have been paid compensation. In case of TAP, 60 percent of about 16,000 land owners have received compensation and TAP is preparing a Livelihood Assistance and Transitional support program (LATS). All projects have internal grievances mechanisms in place. In case of SCPx the grievances received both verbally and written will be investigated to provide a fair treatment. The complaints mostly related to crop compensation and orphan lands. In case of TAP all grievance are stored within electronic database, which manages communications related to grievances.

118. That said, as noted above, and based on discussions with SGC, it is clear that the different shareholders of the Associated Projects will not agree to: (a) apply the Bank's environmental and social safeguard policies to the respective Associated Projects; (b) allow the Bank to supervise those projects; or (c) provide the Bank with the right to exercise remedies should the Bank make a determination of non-compliance. For these reasons, a formal waiver of environmental and social safeguard policies is recommended.

H. Climate Impacts

119. Natural gas is a transition fuel that could play an important role in decarbonizing electricity systems because it helps compensate for the intermittence of renewable energy, emits half the carbon of coal, and allows for storage. For the purpose of illustrating the climate mitigation benefits of gas in supporting the replacement of coal-fired power generation in Europe projected by IEA (discussed in Annex 3), one bcm/annum of gas would help reduce emissions by about 2.4 million tons of carbon-dioxide equivalent (mtCO2-eq)/annum and 16 bcm/annum would reduce emissions by about 37.9 mtCO2-eq/annum.

120. GHG emissions in the Southern Gas Corridor pipeline system and for TANAP are lower than the expected GHG emissions in their LNG and pipeline alternatives. Emissions caused by the TANAP pipeline system were assessed in the ESIA and were determined to be minor during the construction period of the project. In contrast, significant emissions will be generated during the operational period, mostly from the natural gas-fired compressor stations (the "pumps" which move the gas through the pipeline system). At the 16 bcm/annum throughput, TANAP estimates gas consumption at about 0.2 bcm/annum. Resulting emissions are estimated at about 0.4 mtCO2-eq/annum, 97 percent of which will originate from the compressor stations. Total emissions in the Corridor are estimated at about 0.7 mtCO2-eq/annum. However, emissions would triple if the alternative was LNG as liquefaction plants would consume about 6 percent of the raw gas feed to turn it into LNG. In modern tankers, around 1 percent of the cargo would be lost if consumed as ship fuel. Emissions would amount to about 7 percent – or approximately 2.2 mtCO2-eq/annum – three times more than from the Program. In the absence of the Program, if the same volume were imported from Russia, given the much longer gas transmission distances from the gas production sites to Southern Europe and Turkey, emissions from the compressor stations would be higher.

121. Apart from the lower emissions in gas transmission, the supply of 16 bcm/annum SD2 gas from Azerbaijan is expected to result in zero "net GHG emissions", in Europe and Turkey because without the development of the Southern Gas Corridor Program, Turkey and Europe are likely to import similar quantities of natural gas from other sources. The Program is designed to improve the security and diversity of Turkey's and South Eastern Europe's energy supply and is part of Turkey's and Europe's broader energy strategies, including the development of renewable energy and improvements in energy efficiency.

122. Gas demand growth in Turkey has been rapid since its introduction into Turkey's energy mix in 1987, growing almost 40 percent since 2009. Demand growth is expected to slow down. However, the Project does not change the role of gas in Turkey's energy supply mix. In the absence of additional supplies from Azerbaijan, the same 6 bcm/annum would be imported from other sources of supply.

123. The production of gas in Europe peaked and started to decline about 10 years ago. This decline is projected to continue and reach about 100 bcm/annum by 2040 and gas imports will continue to meet the gap between demand and declining production. The 10 bcm/annum from the Program will form a part of Europe's gas imports that would otherwise be imported from other sources of supply.

124. The Program helps Europe improve the security and diversity of its gas imports as it provides an option to secure more gas from a new source (the Caspian region) through a new route ("the Corridor"). However, the Corridor does not lock-in gas imports beyond the currently contracted supply of 10 bcm/annum from 2020 to 2036. If needed, Europe can source more gas (including by doubling the capacity of the Project) and/or continue to import gas beyond 2036; if gas is not needed there is no lock-in beyond 2036 – there are no contractual obligations to purchase gas and use the Corridor.

125. Gas can also have an adaptation/resilience benefit by helping countries deal with hydro vulnerability. Climate change is a threat to hydropower generation. A World Bank study completed a few years ago, concluded that Turkey is one of the three countries in the ECA region most likely to experience the greatest increases in climate extremes. Turkey is already experiencing considerable variability in hydro generation and gas (gas-fired power generation) helps Turkey deal with hydro variations now and in the future. Apart from Italy, gas-fired power generation is still limited in South Eastern Europe. The Southern Gas Corridor has offtake points in Albania and Greece which could be used to help gasify these countries especially in the Western Balkans which continue to rely heavily on lignite for power generation.

I. World Bank Grievance Redress

126. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

Project Development Objectives

PDO Statement

The Project's Development Objective is to diversify Azerbaijan's gas export markets and improve the security of Turkey's and South East Europe's energy supply.

These results are at | Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values							
		2016	2017	2018	2019	**2020**	2021	2022[15]	End (1/2021) Target
Diversifying Azerbaijan's Gas Export Markets (bcm/annum)	0.0	n/a	n/a	n/a	n/a	4.0	7.0	10.0	4.0
Improving the Security of Turkey's Energy Supply (bcm/annum)	0.0	n/a	n/a	1.0	2.5	4.5	5.0	5.5	4.5
Improving the Security of South East	0.0	n/a	n/a	n/a	n/a	4.0	7.0	10.0	4.0

[15] Project closing date is January 31, 2021, and the End Targets are therefore set for year 2020. SD2 gas field is expected to reach full production capacity by 2022, enabling gas flow through TANAP to reach 16 bcm/annum.

Europe's Energy Supply (bcm/annum)									

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values							
		2016	2017	2018	2019	**2020**	2021	2022	End (1/2021) Target
Availability of TANAP for Gas Supply to Turkey (bcm/annum)	0.0	n/a	n/a	5.4[16]	5.4	5.4	5.4	5.4	5.4
Turkish Gas Consumers benefitting from gas supply (million)	11	11	12	13	14	15			15
Registered grievances addressed within the stipulated time frame (%)[17]	91%	90%	90%	91%	92%	93%			93%
Number of community consultations held as of the total number of communities	100%	100%	100%	100%	100%	100%			100%

[16] 5.4 bcm at 90% availability. TANAP expects the actual availability of its pipeline system to be higher.
[17] Except those subject to seasonality and third party assessments and decisions.

along the actively worked sections of the pipeline (%)									
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)	18%	25%	30%	35%	40%	40%			40%
Progress in registration of affected private land parcels (Number and %)	6,072 (32.0%)	6,572 (35%)	11,267 (60%)	16,900 (90%)	18,590 (99%)	18,778 (100.0%)			18,778 (100.0%)
Share of women employed by construction contractors out of total employee number (%).	5%	5%	5%	5%	5%	5%			5%

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Diversifying Azerbaijan's Gas Exports	Azerbaijan's natural gas exports are diversified by the supply of 10 bcm/annum to a new market in Europe.	Annual	Azerbaijan Gas Supply Company (AGSC)	Southern Gas Corridor Closed Joint Stock Company (SGC)
Improving the Security of Turkey's Energy Supply	The security of Turkey's energy supply is improved by the additional supply of 6 bcm/annum to its gas market from one of its current minor supply countries.	Annual	AGSC	SGC
Improving the Security of South East Europe's Energy Supply	The security of South East Europe's energy supply is improved by the supply of 10 bcm/annum to its gas market by opening the Southern Gas Corridor to bring Caspian gas to the European gas market.	Annual	AGSC	SGC

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Gas Supply to Turkey Through TANAP	The 1,334 km 56" section of TANAP to be completed by July 2018 to enable gas flow to Turkey ahead of the full completion of TANAP in 2020.	Quarterly	TANAP Monthly Progress Reports	TANAP
Turkish Gas Consumers receiving gas supply	Number of gas consumers in Turkey benefiting from this gas supply.	Annual	The National Gas Distribution Companies Association of Turkey (GAZBIR).	The World Bank

Citizen Engagement	Local Villagers along pipeline route are consulted annually on a variety of topics to ensure citizen feedback is received and considered, a system for responding to specific concerns is established. Indicator is for communities with active construction and/or other TANAP activities.	Semi-annual	TANAP Monthly Progress Reports	TANAP
Gender	Proportion of consultations held separately for women only in order to ensure the female villagers have an opportunity to provide feedback (25% of total annual consultations) and also gender breakdown for locally employed. Indicator is for communities with active construction and/or other TANAP activities.	Semi-annual	TANAP Monthly Progress Reports	TANAP
Registration of Private Land Parcels	Tracking of progress in land acquisition through registration indicates that land owners have received full and final compensation and land ownership has been transferred in favor of BOTAŞ.	Quarterly	RAP Monitoring Report	TANAP
Female Employment [18]	Share of women employed by construction contractors out of total employee number (%).	Annual	TANAP Monthly Progress Reports	TANAP
Grievance resolved	Mechanism in place for fair treatment to the complaints from local people.	Monthly	TANAP Monthly Progress Reports	TANAP

[18] TANAP encourages female employment and will continue to monitor the share of female employment by its contractors.

Annex 2: Detailed Project Description

Overview

Trans-Anatolian Natural Gas Pipeline and the Southern Gas Corridor

1. The Trans-Anatolian Natural Gas Pipeline (TANAP) is part of the Southern Gas Corridor - a program of gas development in Azerbaijan and gas transmission from Azerbaijan through Georgia, Turkey, Greece and Albania to Italy. The SD2 gas field in Azerbaijan is being developed to produce 16 bcm/annum. A 3,500 km pipeline system is being developed to carry the Shah Deniz gas from Azerbaijan to Turkish and European gas markets.

2. The Program from Azerbaijan to Italy consists of three projects:

   a. The existing South Caucasus Pipeline will be expanded by looping with a new parallel pipeline called SCPx, across Azerbaijan and Georgia to Turkey;

   b. TANAP will transport SD2 gas across Turkey; and

   c. TAP will carry the gas through Greece and Albania and under the Adriatic Sea before coming ashore in Southern Italy to connect to the Italian natural gas network operated by Snam Rete Gas, from which all Italian gas exit points to European destinations can be reached.

3. At 1,850 km TANAP accounts for over one half of the 3,500 km Southern Gas Corridor pipeline system from Azerbaijan to Italy. TANAP will start from the Turkish border with Georgia, beginning in the Turkish village of Türkgözü in the Posof district of Ardahan, will run through 20 provinces - Ardahan, Kars, Erzurum, Erzincan, Bayburt, Gümüşhane, Giresun, Sivas, Yozgat, Kırşehir, Kırıkkale, Ankara, Eskişehir, Bilecik, Kütahya, Bursa, Balıkesir, Çanakkale, Tekirdağ and Edirne - and will end at the Greek border in the İpsala district of Edirne. At this point, TANAP will connect to TAP which will convey the gas to European gas markets. TANAP will connect to the Turkish natural gas network in two locations, at Eskişehir and Thrace, for the delivery of 6 bcm for the Turkish gas market. The pipeline up to Eskişehir will have a diameter of 56 inches; from Eskişehir to the Greek border the diameter will be 48 inches except for two parallel 36 inch pipeline for the 18 km section crossing the Marmara Sea.

4. The transmission capacities of TANAP and TAP are designed to be expandable to 31 bcm and 20 bcm, respectively. These provisions envision that, *inter alia* subject to the availability of additional gas, transit to Europe could double to 20 bcm and offtake by Turkey could increase to 11 bcm (or a higher volume of gas could be delivered to the Turkish market with less transit). Initially two compressor stations are included in TANAP. In the future, the throughput could be increased from 16 bcm to 23 bcm by 2024 and to TANAP's full 31 bcm pipeline capacity by 2026 with the addition compressor stations (for a total of seven). The capacity of the TAP pipeline can be doubled from 10 bcm to 20 bcm with the addition of compressor stations. TAP pipeline will also have the so-called "physical reverse flow" feature, allowing gas from Italy to be transported to South East Europe if energy supplies are disrupted or more pipeline capacity is required to bring additional gas into the region.

5. TAP will have two gas off-take points in South East Europe, one each in Greece and Albania. TAP can facilitate connections to a number of existing and proposed pipelines, ensuring that the Southern Gas Corridor opens up to gas markets throughout South Eastern, Central and Western Europe. TAP's routing facilitates gas supply to several other South Eastern European countries, including Bulgaria (from Greece), Montenegro, Bosnia and Herzegovina and Croatia (from Albania through the proposed Ionian-Adriatic Pipeline) and others.

6. Furthermore, TAP's landfall in Italy provides multiple opportunities for further transport of gas to other large European markets in Central and Western Europe and even to the United Kingdom (UK). Gas transported via TAP can reach: (a) Austria and Central Europe via the Trans Austria Gas pipeline and the Central European gas hub in Baumgarten, Austria; (b) France and Germany through the Transitgas pipeline and Switzerland; and (c) even the UK - the Italian gas grid operator Snam Rete Gas and European gas infrastructure group Fluxys have agreed to develop physical reverse flow capabilities between Italy and the UK by interconnecting the gas markets of Italy, Switzerland, Germany, the Netherlands and Belgium, enabling Caspian gas to reach the UK.

Detailed Description of the TANAP Pipeline System

7. The TANAP Pipeline System comprises:

a. Onshore Pipeline Section:

iv. A main natural gas pipeline from the Turkey-Georgia Border to the Turkey-Greece border.
v. Diameter: 56 inch from Turkey-Georgia Border to Eskişehir off-take and 48 inch from Eskişehir to Turkey/Greece border.
vi. Total Length: 1,334 km of 56 inch and 468 km of 48 inch, (approximate).

b. Offshore Pipeline Section:

i. Diameter: 2 x 36 inch.
ii. Length: 2 x 18 km (approximate).

c. Compressor Stations:

i. Two compressor stations included in the 16 bcm Project.
ii. Possible gas throughput expansion (not part of the 16 bcm Project) to 24/31 bcm (31 bcm is the maximum capacity of the pipeline) through the addition of five compressor stations to achieve higher pipeline pressure requirements.

d. Gas Off-take Points

i. Eskişehir
ii. Thrace

e. Metering Stations:

i. Custody receiving border metering station at the entry point on the Georgian border.
ii. Metering station at Eskişehir off-take point.
iii. Metering station at Thrace off-take point.
iv. Custody delivery border metering station at the exit point at Edirne on the Greek border.

f. Pig Launcher and Receiver Facilities (Pigging stations are installed to allow cleaning of the pipeline and prevent corrosion):

i. At each compressor station.
ii. At the custody receiving border metering station at the entry point.
iii. At the custody receiving border metering station at the exit point.
iv. At Eskişehir off-take point.
v. At each side of Dardanelle strait crossing.
vi. At three intermediate points along the pipeline route.

g. Block Valve Stations

i. 49 block valves

h. Communication and Control

i. Supervisory Control and Data Acquisition (SCADA) system.
ii. Main Control Centre in Ankara.

8. The Project will finance land acquisition[19] that is required for the TANAP Pipeline System covering: (a) cash compensation for private land acquisition (i.e. compensation for permanent, exclusive and temporary land rights basis; damages to crops and assets; and legal administrative expenses); (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 payment of other costs not payable under the Turkish law, but required to meet OP 4.12 provisions; (c) expenses for the forestry lands (i.e. entry costs and annual leases); and (d) design, implementation and monitoring of RAPs.

9. The Project will also finance consulting services for studies, design, engineering, procurement, construction management, supervision and monitoring.

[19] The proceeds of the Bank loans to BOTAŞ and SGC will not be used for land acquisition.

Annex 3: Implementation Arrangements

Project Institutional and Implementation Arrangements

1. The legal basis of the Trans-Anatolian Natural Gas Pipeline (TANAP) was established under “The Intergovernmental Agreement Between the Government of the Republic of Turkey and the Government of the Republic of Azerbaijan Concerning The Trans-Anatolian Natural Gas Pipeline System" and its attachment "The Host Government Agreement between the Government of the Republic of Turkey and The Trans Anatolian Gas Pipeline Company B.V Concerning Trans-Anatolian Natural Gas Pipeline System". These Agreements were signed on June 26, 2012 and approved by Law no 6375 dated January 2, 2013. The Law was published in the Official Gazette on January 17, 2013 and the Agreements were published in the Official Gazette on March 19, 2013. The two Agreements provide for TANAP to offer capacity up to 31 bcm/annum – the maximum volume the pipeline could carry with the addition of five compressors stations.

2. The entire 16 bcm/annum production of SD2 gas field and gas transmission capacity of the pipelines including TANAP have been contracted under long-term gas sale and transportation agreements. Buyers/shippers include BOTAŞ, Georgian Oil & Gas Corporation, Axpo Trading AG, Bulgargaz EAD, DEPA Public Gas Corporation of Greece S.A., ENEL Trade SpA, Uniper SE, Gas Natural Aprovisionamientos SDG SA, Engie S.A. (ex-GDF Suez S.A.), HERA Trading srl and Shell Energy Europe Limited. Two shippers have contracted the entire capacity of TANAP: BOTAŞ for the supply to the Turkish market and the Azerbaijan Gas Supply Company (AGSC) for the entire gas flow for Europe up to the Greek border.

3. TANAP Doğalgaz İletim A.Ş., i.e. TANAP Natural Gas Transmission Company, is a special purpose company to implement, own and operate the Trans-Anatolian Natural Gas Pipeline. One of the shareholders is Turkey’s national gas company Boru Hatlari Ile Petrol Taşima A.Ş. (BOTAŞ), which holds 30 percent. BP holds 12 percent. The 58 percent majority share is held by the Southern Gas Corridor Closed Joint Stock Company (SGC). SGC is owned by the Ministry of Economy of Azerbaijan and the State Oil Company of Azerbaijan (SOCAR) with shares of 51 percent and 49 percent, respectively. The cooperation of Azerbaijan, Turkey and BP in the TANAP project builds upon the successful Baku-Tbilisi-Ceyhan Oil Pipeline and the Baku-Tbilisi-Erzurum Natural Gas Pipeline projects. The three shareholders have set a policy for TANAP to “effectively ship Azerbaijani gas to Turkey and Europe through a natural gas pipeline system which uses the best practices and exceeds industry standards”.

Project administration mechanisms

4. TANAP’s shareholders established TANAP as a commercial private company under the Turkish Commercial Code. The shareholders set a conservative capital structure and committed to provide TANAP all necessary financing in proportion of their shares in the company. TANAP is responsible for the overall management and overseeing the realization of the Project to ensure the pipeline system is realized per the required standard, within time, budget and safety requirements. Front end engineering design of the pipeline system was carried out for TANAP in 2013-14 by a major engineering firm. In May 2014 TANAP employed an engineering,

procurement and construction management contractor (EPCM) under a very large multi-year contract to provide detailed engineering; engineering, procurement and construction management; logistics and materials management; and project management services through project completion and initial operation. EPCM contractor's main office in London, support is being provided from their Mumbai office, and all personnel required for project management, construction management and for liaison and coordination activities with governmental authorities, land acquisition etc. are located in Ankara.

5. TANAP has the following governance and organization structure:

a. Board of Directors: The business and affairs of the Company are managed and supervised by the Board of Directors ("Board") consisting of 10 directors elected by the general assembly. One of the Directors acts as the chairman of the Board (President);

b. Chief Executive Officer: The Chief Executive Officer is appointed and removed by the Board. The powers and authorities of the Chief Executive Officer are delegated by the Board and are set out in the signature circular;

c. Compliance Officer: A Compliance Officer is appointed by the Board in accordance with the Anti-Bribery and Corruption Policy of the Company;

d. Technical Advisory Committee: The Technical Advisory Committee assists and advises the Board in relation to technical matters pertaining to the Project activities;

e. Audit Committee: The Audit Committee established for the supervision of the Company's internal audit mechanism;

f. Finance Committee: Finance Committee provides the Board and the management team with access to finance, banking, cash management, use of financial derivatives, budgeting and forecasting, accounting, performance management and taxation expertise from all Shareholders;

g. TANAP Contract Committee (TCC): The TCC reviews any updates or changes to the Master Procurement Plan or an Annual Procurement Plan before its submission to the Board of Directors. TCC's role in procurement is elaborated in the procurement section below; and

h. Implementation Departments: Following Departments are involved in the implementation of the Project: Project Directorate (involving Engineering, Construction, Quality Control and Quality Assurance), Land Acquisition, Project Controls, Pre-Operations, Document Controls, Health and Safety (including Environmental and Social functions) and Security departments (total number of staff 156); Procurement and Contracts Directorate (19 staff); Finance Directorate (11 staff); Human Resources Directorate (6 staff); Legal Affairs Directorate (4 staff); Quality Directorate (3 staff); Corporate Communication Directorate (3 staff); IT Department (8 staff); Administrative Department (9 staff).

Financial Management, Disbursements and Procurement

6. The financial management arrangements relating to the Project are satisfactory to the Bank. BOTAŞ and SGC are the borrowers for the proposed Bank loans. BOTAŞ is a State Owned Enterprise with 100 percent of its shares belonging to the Turkish Treasury and is an existing Bank client since 2005 (Gas Sector Development Project). SGC is a special purpose vehicle established for the Southern Gas Corridor Program in February 2014 for consolidating, managing and financing the Republic of Azerbaijan's interests in the full-field development of the Shah Deniz gas-condensate field (SD2), the expansion of the South Caucasus Pipeline (SCPx), and the implementation of TANAP and TAP projects. SGC does not have prior experience with the Bank.

7. The shareholders agreement between TANAP and its shareholders regulates the flow of funds to TANAP. BOTAŞ, SGC and BP transfer funds to TANAP on a monthly basis based on "cash calls" submitted by TANAP. Projections for such cash flows are made with a 12 month horizon and sent monthly to the shareholders. TANAP's annual cash requirements are reviewed by TANAP's Finance Committee, which consists of TANAP staff and representatives of the three shareholders. The cash calls include investment expenditures as well as the current expenditures of TANAP. Only the investment costs incurred under the contracts that are reviewed and found acceptable by the Bank will be eligible for funding from the World Bank loans to BOTAŞ and SGC. Payments made by TANAP to its contractors under contracts eligible for Bank financing will form the basis of disbursements from the World Bank.

8. BOTAŞ and SGC have highlighted that a substantive part of the investment expenditures will be made by the time the project becomes effective and requested retroactive financing for payments made since July 2015 and up to 60 percent of the BOTAŞ and SGC loan amounts. The Bank normally provides for retroactive financing up to 20 percent of the loan amount for eligible expenditures up to 12 months prior to the date of the loan agreement. Between July 2015 and November 2016, BOTAŞ has provided about US$565 million to TANAP. Amounts transferred by SGC to TANAP are twice as high. SGC's shareholding in TANAP is 58 percent compared to BOTAŞ' 30 percent. SGC also provides its 5 percent financing to BOTAŞ directly to TANAP. Contracts and expenditures determined to be eligible for retroactive financing have been identified and a waiver to exceed the Bank's standard terms for retroactive financing have been approved by management in accordance with OP/BP 10.00 and Bank Procedures: Operational Policy Waivers and Waivers of Operational Requirements.

9. BOTAŞ has been implementing the Gas Sector Development Project (GSDP) and its additional financing since 2006 when the original loan became effective. BOTAŞ has a dedicated technical team for the implementation of the biggest contract under the project (at an amount of US$607 million) and the Financial Affairs Department (FAD) is responsible for accounting and registering the payments. The work flow is well defined and the current arrangements are satisfactory to the Bank. Relations with TANAP are currently monitored by the International Projects Department of BOTAŞ. BOTAŞ owns 30 percent of the shares of TANAP and is represented in its Audit and Finance Committees. BOTAŞ has assigned staff specifically for the TANAP project who are responsible for liaising with TANAP to facilitate project implementation. The FAD department of BOTAŞ is highly experienced in managing the financial management of World Bank funded projects.

10. The project transactions will be integrated into BOTAŞ' and SGC's daily operations and the control procedures for the project will be aligned with BOTAŞ' and SGC's internal control procedures. BOTAŞ and SGC will coordinate with TANAP to ensure that coordination is maintained through implementation. The disbursements from the World Bank to borrowers will be on the basis of the quarterly IFRs. The format and content of IFRs has been agreed together with the borrowers and TANAP. Based on the quarterly IFRs, BOTAŞ and SGC will have an option to withdraw advances on a quarterly or monthly basis, or even more frequently, if needed. The information included in the IFRs will reflect the actual payments made by TANAP to contractors for the eligible contracts that are already financed by the borrowers The disbursements from the World Bank will be based on BOTAŞ' and SGC's shares in TANAP: 25 percent of each eligible payment to BOTAŞ[20] and 58 percent to SGC[21]. TANAP's ownership and financing is discussed in paragraph 38 of the main text. The supporting documents in sufficient detail will be made available by TANAP to BOTAŞ, SGC and project auditors. TANAP is a private company established in Turkey, employs highly qualified staff in its financial management department and has the accounting systems to support detailed accounting and reporting. BOTAŞ and SGC will be responsible for the management of their designated accounts and making replenishments by using the documents submitted by TANAP.

Internal Controls and Internal Audit

11. Internal control procedures relating to the GSDP in BOTAŞ are satisfactory to the Bank. Internal control procedures for the project however would be different than GSDP as the payments from the project will be based on the investment expenditures incurred by TANAP. TANAP's internal control procedures relating to the processing of investment expenditures are very comprehensive. TANAP has comprehensive financial management procedures relating to accruals management, budgeting and forecasting, cash calls and cash management, payments procedures, financial authority limits, cash advances and business expenses, accounts payable procedures and company credit card procedures. These procedures have been reviewed for a sample of payments under the eligible contracts.

12. The Undersecretariat of Treasury issues the "General Regulation for Investment and Financing Program" of SOEs every year and defines the rules and regulations relating to the investments and financing programs as well as some general administrative functions. The most recent regulation requires all SOEs to establish an Internal Audit department and assign staffs to this department with relevant detailed qualifications. Accordingly BOTAŞ is in the process of establishing its internal audit department. TANAP does not have its own internal audit department; instead TANAP outsources its internal audit function to SOCAR Turkey. TANAP's shareholders also have a right to conduct shareholder audits once a year. Two shareholder audits have been carried out up to now. TANAP confirmed that there were no serious findings in these audits. TANAP has a Compliance Officer appointed by the Board.

13. An assessment of SGC's financial management system has shown reliable internal control system related to the authorization of financial transactions. SGC's finance department

[20] Adjusted down from 30 percent for the purpose of disbursements because SGC is financing 5 percentage points of BOTAŞ' 30 percent share in TANAP, leaving 25 percent to other financiers.

[21] This percentage will be reduced to 51 percent once the forthcoming 7 percent share sale to SOCAR Turkey has become effective.

director and his subordinates are responsible for financial management and disbursement arrangements of the project and have relevant knowledge and skills despite SGC's lack of prior experience with IFI-funded projects and operations. SGC's organizational structure also includes an internal audit department.

External Audit

14. BOTAŞ financial statements as well as the project financial statements for the Gas Sector Development Project have been audited by external auditors in line with International Standards on Auditing (ISAs). The audited entity and project financial statements have been received on time and auditors have issued a clean opinion on these project financial statements. However, as in previous years, the auditors issued a qualified audit opinion on BOTAŞ entity financial statements for the year 2015. These qualifications are mainly due to differences between the Turkish Accounting Standards (TAS) applied by BOTAŞ and IFRS according to which the audited financial statements were prepared. Audit qualifications relate to non-consolidation of some subsidiaries, lack of audit evidence about the inventories, insufficient audit evidence about BOTAŞ' tangible and intangible assets as well as insufficient audit evidence about trade receivables, payables and bank accounts. BOTAŞ prepares financial reports in accordance with the new IFRS-compliant Turkish Accounting Standards with support from their auditors. TAS became mandatory for all SOEs including BOTAŞ beginning January 1, 2015 in accordance with the Commercial Code and the supporting Council of Minister`s decision. BOTAŞ is currently strengthening its capacity in the application of TAS/IFRS. BOTAŞ will receive technical assistance under the EU/IPA Energy Sector Technical Assistance – Phase 1 Project aiming at fulfilling transparency and disclosure requirements of the State Economic Enterprise Decree Law and the Commercial Code in the financial reporting and auditing areas. If needed, further technical assistance can be financed under the technical assistance component of the ongoing Gas Sector Development Project.

15. SGC's consolidated financial statements, prepared in accordance with IFRS, have been audited by an independent auditor from the company's inception. The auditor has issued unmodified audit opinion for 2014 and 2015.

16. BOTAŞ and SGC will submit their audited entity and project financial statements annually to the Bank. Continued financial viability of the borrowers will be monitored through the review of entity financial statements. The entity financial statements will be prepared in accordance with IFRS and the content and format of the project financial statements will adequately reflect project operations. BOTAŞ' audit will be conducted by an independent audit company included in the Public Oversight Authority`s acceptable audit firms and which has conducted at least three external audit assignments from companies included in BIST 100 index in the three years prior to the submission of their proposal. SGC will continue to have its consolidated financial statements audited by a competitively selected independent private audit company.

17. TANAP's financial statements are prepared in accordance with IFRS and were audited by Ernst and Young for 2015. The auditors have issued unqualified (clean) audit opinion on TANAP financial statements.

18. The basis of the disbursements from the project will be the investment expenditures of TANAP. BOTAŞ' and SGC's payments to TANAP (which will partially be financed from the World Bank loans) will be reflected in BOTAŞ' and SGC's subsidiary and loans receivable accounts. All investments incurred under the contracts will be in TANAP financial statements and the sustained value of BOTAŞ' and SGC's investment in TANAP will depend on the financial soundness of TANAP. Accordingly, the loan agreements with BOTAŞ and SGC include a clause for TANAP's financial statements prepared in accordance with IFRS to be audited on an annual basis in accordance with ISA and ensure their submission to the World Bank within 6 months following the end of the year. BOTAŞ and SGC will also make any in-year financial statements of TANAP available to the Bank during the life of the project. The Project audit will also include a review of the information included in the IFRs that would form the basis of disbursements from the World Bank. The suggested terms of reference for the project audits have been made available to the borrowers and TANAP.

19. The abridged audited project financial statements will be publicly disclosed in a manner acceptable to the Bank. The project financial statements will be detailed and would provide information on the contracts for which financing has been provided. It is understood that some of that information would be sensitive commercial information and TANAP would prefer not to make that information publicly available. Following Bank's approval of disclosure of an abridged version of the audited project financial statements the implementing entities would (a) specifically instruct the Bank not to disclose the full set of financial statements on the grounds that they contain proprietary or commercially sensitive information; (b) classify and mark the audited financial statements accordingly; and (c) provide an abridged version of the audited financial statements in a form acceptable to the Bank, which the borrowers have disclosed in-country, for the Bank's disclosure (Table 2).

Table 2: Submission of Audited Financial Statements

Audit Report	**Due Date**
BOTAŞ and SGC Entity financial statements	Within six months for BOTAŞ and seven months for SGC after the end of each calendar year.
TANAP Entity Financial Statements	Within six months after the end of each calendar year.
Project financial statements	Within six months after the end of each calendar year.
Abridged Project Financial Statements	Within six months after the end of each calendar year.

Reporting and Monitoring

20. BOTAŞ and SGC will be responsible for the preparation of IFRs for the project. The IFRs will be submitted to the Bank on a quarterly basis and within 45 days following the end of the quarter. The IFRs will provide information on the use of funds by component and contract financed. Additional information will include reconciliation of the disbursements. The format of the IFRs has been agreed upon with BOTAŞ, SGC and TANAP.

Impact of Procurement Arrangements

21. The proposed Bank loans will finance BOTAŞ' and SGC's investments in TANAP and disbursements from the World Bank loans will be based on the investment expenditures made by TANAP for the Trans-Anatolian Natural Gas pipeline. Most of these expenditures would be under contracts that would have been already awarded by the time of project effectiveness and they would have been procured under the TANAP's Procurement policy (discussed below). The replenishments to the designated accounts will be made by BOTAŞ and SGC and will include payment documents relating to these contracts. TANAP will provide documents in sufficient detail to demonstrate that the payments indeed relate to the contracts already evaluated by the World Bank.

Financial Covenants

22. Existing covenants agreed with BOTAŞ under the GSDP will be retained. The following financial covenants are proposed for the project:

a. Annual IFRS-based audit of BOTAŞ, SGC and TANAP financial statements; and
b. Annual audit of the full and abridged project financial statements.

Funds Flow and Disbursement Arrangements

23. BOTAŞ and SGC will open Designated Accounts for the project. Payments made by TANAP to its contractors under contracts eligible for Bank financing will form the basis of disbursements from the World Bank. The project will utilize an IFR-based disbursement method and BOTAŞ and SGC will be responsible for submitting the withdrawal applications to the World Bank. Applications documenting funds utilized from the Designated Accounts will be submitted to the Bank on a quarterly basis and will include supporting documents specified in the Disbursement Letter.

Procurement

The Bank's New Procurement Framework

24. The Bank's new Procurement Framework was approved by the Bank's Board of Executive Directors on July 21, 2015. It became effective from July 1, 2016. The new Procurement Framework will apply to all operations with Concept Notes on or after its date of effectiveness. The Board also authorized Bank management to determine whether a project under preparation can adopt the new Procurement Framework, or features thereof, prior to its effectiveness, as an Early Adopter. The new Framework permits Borrowers to proceed with the

initial steps of the procurement before signing the Legal Agreement. In such cases, the new Framework does not require the Borrowers to conduct the procurement in accordance with the "Approved selection Methods" specified in the *World Bank Procurement Regulations for IPF Borrowers* and also gives flexibility to apply new procurement procedures which are better positioned to deliver fit-for-purpose solutions. However, provisions for Advance Contracting and Retroactive Financing (Paragraphs 5.1 and 5.2) in the *World Bank Procurement Regulations for IPF Borrowers* require that *if the eventual contracts are to be eligible for Bank IPF the procurement procedures, including advertising, shall be consistent with Sections I, II and III of the Procurement Regulations* which basically include the Bank's Core Procurement Principles of economy, efficiency, transparency, fairness, fit-for-purpose, value-for-money and integrity. TANAP is a special purpose private (commercial) company and it has been considered as an Early Adopter of the new Procurement Framework as the Project preparation initiated immediately after Board approval of the new Framework. The Project was appraised and negotiated after the effectiveness of the new Procurement Framework. The World Bank's "*Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 (Anti-Corruption Guidelines)*" will apply to the Project activities financed in whole or in part by the proceeds of the Loans. Contracts for goods, works, non-consulting services and consulting services (a) that are included in the Procurement Plan, dated November 3, 2016 (as they have been determined by the Bank to be directly related to the Project, and procured by TANAP in accordance with Section V, paragraphs 5.1 and 5.2, *Advance Contracting and Retroactive Financing*, of the Procurement Regulations), and (b) whose related contractors, suppliers and consultants have agreed to comply with the Anti-Corruption Guidelines, are eligible for Bank financing. As no future Bank-financed procurement is expected and all contracts agreed be financed by the Bank have already been signed and under implementation, there will be no need to publish a General Procurement Notice for the Project.

The Bank's Due Diligence

25. In line with the above, the Bank's due diligence was carried to establish that TANAP procurement procedures with regard to procurement of goods, works, non-consulting and consulting services meet the World Bank Core Procurement Principles. Furthermore, the Bank's due diligence assessed whether (a) procedures used by TANAP provide reasonable assurance that the Project is carried out diligently and efficiently by TANAP; and (b) procurement is carried out by TANAP in compliance with their written procurement policy. Minor areas which require improvement in the TANAP procurement process were identified and agreed (see Table 5). The Due Diligence Report will be available in the Project database as a confidential document as it includes confidential commercial information.

TANAP's Procurement Policy and Practices

26. TANAP has established a comprehensive procurement system, including a procurement policy and a procurement and contracting manual. The procurement policy specifies that:

a. TANAP maintains a Master Procurement Plan consistent with TANAP procurement strategy for the full life of the TANAP Project from pre-construction to one year after the commencement of commercial operations and Annual Procurement Plans for each year;

b. Any draft budget submitted to TANAP's Board of Directors for adoption as an Approved Budget must be submitted with (a) an updated Master Procurement Plan; and (b) the relevant Annual Procurement Plan;

c. All procurement carried out by TANAP must be in accordance with the Master Procurement Plan and applicable Annual Procurement Plan, with the exception of Emergency Procurement (and that TANAP shall ensure its maximum readiness to deal with emergency situations through putting in place emergency response contracts for goods, works and services which shall also form part of Master Procurement and Annual Procurement Plans); and

d. The terms and conditions of the contracts are developed fit for purpose with appropriate allocation of risks, liabilities, roles and responsibilities of the parties.

27. TANAP's Procurement Policy specifies that procurement of all services, works, goods and equipment (including for pre-construction, construction, installation, commissioning and decommissioning of the pipeline system) shall be in compliance with internationally accepted competitive procurement practices. Such internationally accepted competitive procurement practices are specified to include: (i) competitive bidding, including the development of contract strategies; (ii) non-discrimination; (iii) approved bidder lists; (iv) transparency, including objective pre-agreed technical and commercial criteria for the selection and award of bidders and contracts; (v) anti-corruption measures (summarized below); and (vi) pre-agreed key performance indicators for the contracts.

Project Procurement Strategy for Development

28. The Bank's new Procurement Framework requires the Borrower to develop a Project Procurement Strategy for Development (PPSD) for the Project. TANAP's Project Procurement and Contracting Strategy is available (document reference no. ILF-STR-PCP-GEN-001 in TANAP's archive system). The initial study was done by Hill International in June 2012 and then the Procurement and Contracting Strategy was prepared based upon the Hill study, and is updated to incorporate subsequent considerations and development of the project.

29. The Procurement and Contracting Strategy for the project describes the strategies for the preparation and execution of supply, construction/EPC packages and service contracts. The Strategy proposes three (3) Long Lead Items (LLI) supply packages for turbo Compressors, Mainline Block Valves and Line Pipes (including factory bends) as well as Construction Contract(s) for the onshore Pipeline and EPC Contracts for Offshore Pipeline (Sea crossing), Stations and SCADA/Telecom System and service Contracts.

30. TANAP's Procurement and Contracting Strategy requires different strategic approaches regarding the respective markets, resulting in alternative solutions for lot fragmentation and supplier selection depending on availability of all relevant resources. In order to achieve the project objectives, TANAP's Procurement and Contracting Strategy recommends to divide the project into the following packages listed in Table 3:

Table 3: Procurement Packaging

Package Type	Package Description
LLI Supply – Line Pipe	Manufacturing and delivery of mainline pipes and factory bends
LLI Supply – Mainline Block Valves	Manufacturing and delivery of mainline block valves including actuators
LLI Supply – Turbo Compressor Units	Manufacturing and delivery of turbo compressor units (gas turbine driven, in the base case)
Early Works Contract(s)	Site preparation, access roads, fencing
Construction package 1	Onshore pipeline construction; sub-divided into lots
Construction package 2	EPC of stations
Construction package 3	EPC of off-shore pipeline
Construction package 4	EPC of SCADA/Telecom System
Service Contracts	Engineering Contract, Emergency Procurement Agreements, Logistic Contract, Third Part Inspection, Operation & Maintenance Contracts

31. In deciding on the above packages, the magnitude of the Project and the planned simultaneous implementation of other large projects which may influence the availability of goods, services and work capacities were also considered. The Strategy documents also discusses the advantages and disadvantages (risks) of the proposed procurement and contracting strategy. During the course of the project implementation, due to changing circumstances, TANAP made updates in its strategy for example the supply of Turbo Compressor Units and Stations (Compressor and Metering) separated and procured as different contracts.

32. Pursuant to TANAP's Procurement policy specific (activity) procurement strategies were developed for contracts above certain threshold. Specific (Activity) procurement strategies further address how each activity will support the development objectives of TANAP and deliver best value of money under risk-managed approach. The specific procurement strategy document contains inter alia:

a. project needs and country/regional context;
b. description of the market situation;
c. marketing research and pre-qualification activities, including screening, the use of potential prequalification systems and potential screening matrices covering generic

pre-determined variable on technical and financial matters as well as integrity assessment;

d. risk assessment, Health, Safety, Social and Environment and mitigation plan;
e. proposed type of procurement;
f. potential bidders list;
g. recommended bidders list;
h. proposed contract and compensation format;
i. evaluation criteria;
j. estimated contract value; and
k. plan for the process up to contract award.

Procurement Plan and Procurement Tracking

33. The Master Procurement Plan has been prepared by TANAP pursuant to TANAP's Procurement policy and also taking into account the proposals in TANAP's Procurement and Contracting Strategy. The Master Procurement Plan covers the full life of the Project, from pre-construction through to one year after commercial operations (i.e. June 2019). The plan includes the estimated cost/approved budget, contract duration, contract type, market approach, budget use (Capital Expenditure or Operational Expenditure), and schedule for contract award.

34. The World Bank's Procurement Regulations for IPF Borrowers require the Borrower to use the Bank's online procurement tracking tool (STEP) to prepare, clear and update its procurement plans, and conduct all procurement transactions. The contracts to be financed by the Bank should be recorded in STEP for their disbursement, as the Bank's electronic disbursement system is linked to STEP. However, as of October 2016, the majority of the large tenders have already been completed and contracts signed. Therefore, all contracts which were found appropriate for Bank financing shall be recorded in STEP as "post review" contracts as agreed with STEP team before the Loan negotiations.

35. As provided above and further details provided in the Bank's procurement due diligence report, TANAP's procurement practices are considered to be broadly consistent with the World Bank's Core Procurement Principles (economy, efficiency, value for money, fairness, fit for purpose, transparency and integrity). Also, most of TANAP's procurement implementations of TANAP are also broadly consistent with the Bank's Procurement Policy.

36. Table 4 lists contracts which have been reviewed and found suitable for World Bank financing in the Bank's due diligence process.

Table 4: Contracts for World Bank Financing

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
C10	Pipeline Construction (56" Lot-1) Fernas Insaat (Turkey)	Works		International Open -RFP	23 December 2014	28 June 2018
C11	Pipeline Construction (56" Lot-3) Sicim (Italy) +Yuksel (Turkey)+ Akkord (Azerbaijan) JV	Works		International Open –RFP	23 December 2014	28 June 2018
C12	Pipeline Construction (56" Lot-3) Tekfen Insaat (Turkey)	Works		International Open -RFP	23 December 2014	28 June 2018
C14	Stations EPC (Metering and Compressor Stations) Tekfen Insaat (Turkey)	Works		International Open –RFP	17 February 2016	25 May 2019

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
C16	EPC Contract for Off-shore Pipelines and Fiber Optic Cables Sapurakencana TL Offshore SDN BHD "SKTLO" (Malaysia)	Works		International Open -RFP	27 July 2016	18 Feb 2018
C18[22]	Engineering, Procurement and Construction Management (EPCM) WorleyParsons Proje Yonetimi ve Muhendislik Ltd. Sti.(Turkey)	Consulting Services		International Limited –RFP QCBS	16 May 2014	30 June 2019
C18-2	Framework Agreement for Integrated Project Management and Supervision Services WorleyParsons Proje Yonetimi ve Muhendislik Ltd. Sti.(Turkey)	Consulting Services		Direct Selection	26 August 2016	26 August 2018

[22] Amounts of contracts C18, C18-2 and C18-3 are base values for framework contracts under which TANAP can request and receive additional services on-demand.

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
C18-3	Framework Agreement for Integrated Project Management and Supervision Services Su-Yapı (Turkey)	Consulting Services		Direct Selection	29 August 2016	29 August 2018
P3	Supply of Line Pipes and Hot Bends Toscelik Profil ve Sac Endustrisi AS (Turkey)	Goods		International Open -RFP	14 October 2014	31 May 2017
P4	Supply of Line Pipes and Hot Bends Baosteel Europe GmbH (Germany)	Goods		International Open -RFP	14 October 2014	31 May 2017
P6	Mainline Valves Valvitalia S.p.A. (Italy)	Goods		International Limited –RFP	26 February 2015	31 April 2017
P7-A	Turbo Compressors Mainline Contract Nuovo Pignone SPA (GE Oil &Gas -Italy)	Goods		International Limited –RFP	01 July 2015	31 July 2017

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
P7-B	Turbo Compressors Mainline Contract (Site Services) General Elektrik Ticaret ve Servis AS (Turkey)	Non-Consulting Services		International Limited –RFP	01 July 2015	31 December 2018
P8-A	Turbo Compressors Eskisehir Off-take Solar Turbines Europe S.A. (Belgium)	Goods		International Limited –RFP	15 September 2015	28 February 2017
P8-B	Turbo Compressors Eskisehir Off-take (Site Services) Turbomach Endustriel Gaz Turbinleri Sanayi. Tic. A.S. (Turkey)	Non-Consulting Services		International Limited – RFP	22 July 2015	31 December 2018
P13	Standby Diesel Generator Sets IML Impianti S.R.L. (Italy)	Goods		International Limited –RFP	08 February 2016	30 December 2017

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
P14	Supply of Gas Engine Generator Set Iltekno Ileri Teknoloji Muhendislik ve Ticaret AS (Turkey)	Goods		International Limited –RFP	01 February 2016	30 December 2017
P17	Supply of Filters and Filter Separators Valvitalia S.p.A. (Italy)	Goods		International Limited –RFP	20 January 2016	31 January 2018
P19	Integrated Control and Safety System Honeywell Teknoloji A.S. (Turkey)	Goods		International Limited –RFP	25 January 2016	31 March 2018
P26	The Supply of AC UPS, Battery and ACDB+DC DB Emerson Network Power Guc Sistemleri Ltd. Sti. (Turkey)	Goods		International Limited –RFP	25 March 2016	31 May 2018

Contract Package	Contract Description	Category	Contract Amount (USD)	Selection Method	Contract Signing Date	Estimated Contract Completion Date (Excluding supervision and warranty duration)
P27	The Supply of HV Switchgear, LV Switchgear, Bus Duct, Power Distribution Boards and Power Factor Correction Panels ABB Elektrik Sanayi A.S. (Turkey)	Goods		International Limited -RFP	13 May 2016	31 May 2018
P28	Valves (Manual Ball & Isolation Valves, Actuated Valves, Plug Valves) Valvitalia S.p.A. (Italy)	Goods		International Limited –RFP	21 April 2016	30 September 2017
	Total Contract Amount	**3.4 billion[23]**				

Consistency of TANAP's Procurement Practices with Bank's Core Procurement Principles

37. The Bank's Procurement Policy contains two references to eligibility, the first under the fairness core principle (stating that "whenever possible, the Bank requires that eligible individuals and firms be given the same opportunities to compete for Bank-financed activities,"), and the second as a Governance principle (stating that "the Bank permits firms and individuals from all countries to offer goods, works, non-consulting services, and consulting services for Bank-financed projects, subject to other Bank rules on eligibility and participation").

[23] Contract values are regarded to be confidential by TANAP and are therefore not included in Table 4. With 15-20% contingencies, the Total Contract Amount would amount to about $3.9-4.1 billion. TANAP's cost estimate includes a 20% unallocated contingency provision.

38. TANAP's eligibility requirements in its Procurement policy are wider than the Bank's as it requires TANAP to exercise due care with respect to awards of contracts, receipts, payments, and accounting of funds and internal controls. Procurement must also be in accordance with TANAP's Anti-Bribery and Corruption Policy, and all relevant anti-corruption legislation, including but not limited to: (a) the UK Bribery Act 2010; (b) the US Foreign Corrupt Practices Act (FCPA); (c) legislation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or the United Nations Convention Against Corruption; (d) the anti-corruption or anti-money laundering laws of any country in which project activities are to be undertaken; and (e) good and prudent practices generally followed by the international gas pipeline industry under similar circumstances. The Procurement policy further requires TANAP to include, to the extent practically possible, in its contracts with independent contractors, provisions which constitute a statement/warranty from the contractor confirming that it will comply with all relevant anti-corruption legislation, including those listed in (a)-(e) above. This is a broader application than the practice of the World Bank, as TANAP includes Legislative/Regulatory requirements for eligibility beyond those of the Borrowers or the United Nations (e.g. United Kingdom, USA etc.).

39. TANAP applied its eligibility requirements in the prequalification of very large pipeline construction contracts, and in the procurement of other contracts. The majority of procurements were carried out based on the firms' expression of interest following an international advertisement, and the applicants' technical, financial and managerial capacities were evaluated. The selection process included multi-stage contract negotiations and finally concluded with best and final offers from the bidders.

40. The Bank's Procurement Policy core principle of transparency also requires appropriate public reporting of procurement activity, which covers the requirement of publication of contract awards. In the current practices of TANAP there is no procedure defined for the publication of all contract awards, although relevant procurement information is made publicly available to all interested parties when competitive procurement methods are used. The existing integrity measures are limited with the requirements specified in the TANAP Procurement policy including contract provisions with regard to audit right of TANAP or its authorized representatives. TANAP's procurement procedures also include eligibility restrictions that are not based on any primary commercial boycott imposed as a matter of law or official regulation by Turkey or by Azerbaijan and do not result from an act of compliance with a decision of the UN Security Council as permitted under Sections 3.23.a and 3.23.b, respectively, of the Procurement Regulations or the United Nations. In particular, due to EU sanctions that were applicable at the time of procurement, there was a specific exclusion from TANAP's procurements. While in practice this exclusion is unlikely to have affected project procurement, TANAP's ineligibility grounds are broader than the narrowly drawn exceptions in paragraph 3.23 of Section III of the Procurement Regulations to the eligibility principle in the Bank's Procurement Policy, and so a Board waiver is required.

41. Signed Contract(s) conditions provide an appropriate allocation of responsibilities of the contract parties, risks and liabilities. The contracts include good industry practice provisions with regard to performance security, defaults, force majeure, liquidated damages, value engineering, change management, payments, insurance, warranties and guarantees, sub-contractors, applicable law and settlement of disputes. Contract management plans are prepared for each

contract at the time of contract signing. Where required, especially in large contracts, key performance indicators have been set to ensure that contractor/consultant performance is satisfactory and contract requirements have been met. The contracts also refers to applicability of the fraud and corruption principles in the TANAP procurement policy and gives audit right to TANAP to audit contractors'/ suppliers' accounts. While TANAP has agreed that the World Bank's Anti-Corruption Guidelines will apply to the contracts financed out of the proceeds of the two loans, there are practical limits to its application to unsuccessful bidders under the project. Paragraph 6 of the ACGs require that the guidelines be applied to procurement, and paragraphs 9(d) and 10 require agreement by bidders and contractors to comply with the guidelines. Application of this requirement is confirmed in the Procurement Regulations in paragraph 3.32 of Section III and paragraph 2.2.e of Annex IV. To bring TANAP into compliance to the extent that is practicably possible, project legal agreements will include appropriate provisions for the applicability of the Bank's ACGs, sanctions and the audit rights to successful bidders (see agreed actions no 2 and 3 below). However, because procurement has already been completed and contracts awarded, it is not practically possible to secure the agreement to such application from unsuccessful bidders in TANAP's procurement processes, and so a Board waiver is required.

42. As per the Operational Waiver Policy of the Bank, and Accountability and Decision Matrix Framework, Bank Management has given its concurrence for the above-mentioned policy waivers in paragraphs 40 and 41 above, prior to their submission to the Board for consideration. In addition, the Project legal documents include appropriate provisions for the applicability of the Bank's Anti-Corruption Guidelines.

Procurement Implementation Capacity

43. BOTAŞ and SGC have demonstrated adequate capacity to oversee the procurement activities implemented by TANAP. BOTAŞ is familiar with World Bank procurement procedures through its experience of implementing the Gas Sector Development Project. However, TANAP shareholders have limited knowledge about the Bank's new Procurement Framework.

44. Bank's due diligence further reviewed the organizational structure and staff capacity of TANAP and it has been found that overall TANAP has adequate procurement and technical capacity to implement the proposed Project efficiently. Some highlights from the Bank's findings in the due diligence report are given below, supplementing the description of TANAP's governance and organization structure in paragraph 5 above.

45. Procurement for the Project is carried out by the Procurement and Contracts Department with the support from other Departments especially in drafting the bidding documents and technical evaluation of the bids. TANAP has contracted a major engineering firm (WorleyParsons, UK) to carry out design, engineering, procurement, and construction management (EPCM) for the Project. They established a local firm WorleyParsons Proje Yonetimi ve Muhendislik Ltd. Sti. to support the work with local input, and further assigned the Contract to the local firm for local legislative operational reasons. Procurement was one of the core tasks of the EPCM contractor and it provided support to the Procurement and Contracts Department.

46. TANAP and the EPCM contractor have recently executed a major change order to reflect the higher volume of engineering and procurement work since 2014. They have negotiated and agreed two new framework contracts under which the EPCM contractor and its main sub-contractor will provide project management services to TANAP as part of an Integrated Project Management Structure, where contractor staff work embedded in the TANAP organization.

47. Shareholders are involved both at the level of the Board of Directors and through the TCC. The TCC reviews any updates or changes to the Master Procurement Plan or an Annual Procurement Plan before its submission to the Board of Directors. TCC endorsement is required for all tender strategies; bidder's lists; contract awards; and variations/extensions of the contracts above certain threshold. Decisions within the TCC are made by majority and submitted to the General Manager and/or the Board. TCC meets regularly every month. In the case of agenda with "high business impact" or "urgent items" TCC may meet earlier than its regular scheduled.

48. Given the complexity of the Project and large size of the contracts the overall procurement risk is assessed as "substantial" for the Project. The risk rating can be lowered to "moderate" when below agreed action no.2 (see Table 5) has been put in place, and it can be further lowered to "low" when the contract monitoring reports mentioned in agreed action no. 5 demonstrate that both contracting parties are complying with contractual provisions and value for money is achieved in the Bank financed contracts.

Agreed Action Plan

49. As indicated above TANAP's established procurement procedures are considered to be generally consistent with the World Bank' Core Procurement Principles. However, the Bank has identified a set of actions for further improvement of TANAP procedures and processes to ensure that the Bank's fiduciary requirements are met (see Table 5).

Table 5: Agreed Principles for Action Plan with BOTAŞ, SGC and TANAP

Action No.	Recommendation and Agreed Action	Responsible Party	Time Frame
1.	TANAP shall publish the contract award notices for all contracts to be financed by the Bank loan.	BOTAŞ/SGC /TANAP	Completed
2.	Subsidiary agreements between BOTAŞ and TANAP and between SGC and TANAP shall set out the Bank's integrity requirements including without limitation the Bank's right to sanction and Bank's inspection and audit rights. (The World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 (Anti-	BOTAŞ/SGC /TANAP	Before effectiveness and throughout the Project

Action No.	Recommendation and Agreed Action	Responsible Party	Time Frame
	Corruption Guidelines) (Anti-Corruption Guidelines) will apply to this Project.)		
3.	TANAP shall submit letters to its contractors/consultants/suppliers to confirm (by counter signing the letter) that the Bank's Anti-Corruption Guidelines will apply throughout the Project.	BOTAŞ/SGC /TANAP	Completed
4.	Bank financing will be limited to contracts for which the counter-signed letters have been received from the contractors/consultants/suppliers.	BOTAŞ/SGC /TANAP	Completed for all but two of the contracts, 99% in total value / the remaining two prior to disbursement
5.	TANAP shall submit to the Bank a contract monitoring report for the contracts financed by the Bank including the following: • contract information (name, amount, supplier, agreed price, completion time etc.) • requirements of agreed contract management plan are met; • risks are managed or mitigated before they materialize; • the contract is progressing on agreed work plan/completed on time and budget; • contract variations are properly justified; • the outcome of the contract meets the objectives set at the start; and • TANAP's technical and commercial requirements are met or exceeded within the budget.	BOTAŞ/SGC /TANAP	The first report shall be submitted three months after the Loan effectiveness. Subsequent reports shall be submitted semi-annually throughout the Project.

Bank review of procurement transactions

50. The Bank will carry out post reviews of the procurement process undertaken by TANAP. The first review of the Bank will be done at the end of third month following effectiveness. If needed, quarterly reviews will continue until the Bank is satisfied with the implemented

procedures and the reviews will be carried out semi-annually thereafter. The Bank's review shall also include the above agreed action plan. The Bank's review shall be undertaken either by Bank staff or by a consultant employed by the Bank.

Environmental and Social (including safeguards)

51. TANAP has an ESMS in place which describes the process of implementation of environmental and social safeguards documents of TANAP itself, its EPCM contractor, project contractors and also the environmental and social monitoring company. TANAP also has an Integrated Management System which is a process based system, fully compliant with and cover all aspects of ISO 9001; ISO 14001 and OHSAS 18001 standards. OHS is an integral part of TANATP's strategy, and one of its' key objective. OHS is also responsibility of the construction contractors and OHSAS requirements were one of the main aspects of the bidding process. During the construction stage, OHSAS management is mainly based on construction contractors' plans and procedures in addition to TANAP's internal system. According to due diligence findings, the ESMS and TANAP's integrated Project Management Structure (which consists of TANAP and external consulting staff) provides TANAP an effective compliance monitoring system on construction contractors' performance. The local environmental and social monitoring consultancy firm (third party environmental monitoring company) hired by TANAP also provides quarterly monitoring reports to TANAP and the Ministry of Environment and Urbanization. TANAP and the Bank agreed to improve the quality and content of these environmental and social monitoring reports and also establish a direct reporting line between the consultants and the Bank. The Bank will receive the quarterly ESIA monitoring reports from the third party environmental monitoring company simultaneously as they submit to TANAP.

52. The due diligence identified that TANAP's ESMS has references to too many fragmented reports, which may result in difficulties during implementation of the project. In addition, TANAP has an Environmental Management of Change Process which is implemented in case of re-routing and/or deviations in environmental actions from the actions listed in the ESIA package. The process of keeping the environmental and social safeguards documents up-to-date and fully consistent with the outcomes of re-routing or other critical deviations was not clearly documented in the reports reviewed by the Bank during the due diligence.

53. During the appraisal stage, ESMS of TANAP was revised to include the sub-management plans prepared by construction contracts. These plans are related to pollution prevention, waste management, erosion control, reinstatement, traffic management, etc. which are mainly under the responsibility of the construction contractor. The compliance with these plans is monitored by (i) construction contractors' environmental personnel (ii) third party environmental monitoring company – TPMC and (iii) TANAP environmental team. Further, the revised ESMS now includes an organogram and it also describes the roles and responsibilities of each party (TANAP, TPMC, construction contractors) regarding environmental and social monitoring and reporting arrangements.

54. Regarding cultural heritage management, TANAP has a contract with a company named REGIO who is responsible for conducting the salvage excavations under the guidance and supervision of the Ministry of Culture and Tourism of Turkey. The due diligence confirmed that

construction activities are being conducted and the chance find procedures are implemented successfully and in compliance with the ESIA and the Cultural Heritage Management Plan.

55. *Labor*: TANAP has an adequate system of policies and procedures that deal with issues such as work hours, hiring, training, compensation, benefits and grievance mechanism. Construction contractors prepared Employment and Training Plans that, among other issues, describe local hiring procedures and include a Code of Conduct – construction camp site rules that are applicable to its employees. Workers are informed about the Code of Conduct during the hiring procedure and induction trainings. Social induction and the health, safety and environment (HSE) training also include components on cultural awareness, interacting with local communities and communicable diseases. The identified area for improvement relates to the overtime work hours performed by the construction workers. TANAP prepared an Action Plan to reach legal compliance with overtime work requirements. This Action Plan became a part of the general Environmental and Social Monitoring Plan. The Action Plan includes mechanisms to monitor overtime work hours and ensure it is maintained during the life of the project. TANAP will provide documented evidence acceptable to the Bank that the construction contractors and their sub-contractors are in compliance with national labor law requirements on overtime work.

56. TANAP has established an integrated Department of Environment, Social and Health and Safety. Safeguards due-diligence related to OHS identified that TANAP and project contractors have effective labor and OHS policies and procedures in place to manage the construction of the project and so the OHS policies of the project are deemed to be comprehensive and coherent. The contractor's OHS Manager and the Site OHS Manager are responsible for implementation of and compliance with OHS management procedures. Contractor's OHS advisors monitor activities at the site on a daily basis. The OHS advisors shall ensure people are trained and competent for their assigned work. The contractor is also responsible to arrange weekly inspections and monthly OHS audits.

57. Land acquisition is carried out by BOTAŞ which has established a dedicated TANAP Land Acquisition Directorate for this purpose. Unlike TANAP, BOTAŞ has prior experience with World Bank and is familiar with the Bank's environmental and social safeguards policies. BOTAŞ will be in charge of implementing the land acquisition in accordance with the RAP published by TANAP. RAP funds are managed by TANAP. Since TANAP is the main implementing private company, monitoring and supervision measures of RAP will need to be taken under TANAP's capacity. Land acquisition process is discussed under the Social Impacts section.

58. Pipeline Route determination process narrowed down the corridor step by step. In each step, more detailed environmental and social constraints mapping and site surveys were conducted:

a. Pre-feasibility (Regional);
b. Feasibility (Determination of 2 km corridor);
c. Basic Engineering (2 km corridor to 500 meter corridor);
d. Intermediate Route Determination (500 meter corridor); and
e. Detailed engineering (Construction corridor within the 500 meter corridor).

59. ESIA studies for the TANAP project were conducted from December 2012 to April 2014, following a series of phases including:

a. Scoping;
b. Stakeholder engagement;
c. Alternative analysis;
d. Baseline;
e. Impact assessment; and
f. Management and monitoring plans.

60. Mitigation plans have been formulated with available information and can be expected to evolve through successive stages of the project. The ESIA includes the following ESMPs:

a. Environmental and social management system;
b. Construction impacts management plan;
c. Community safety management plan;
d. Community relations plan;
e. Procurement and supply plan;
f. Land acquisition plan;
g. Resettlement action plan (prepared before construction);
h. Aggregate management plan;
i. Traffic management plan;
j. Transportation management plan (prepared before construction);
k. Erosion control, reinstatement and landscaping plan;
l. Pollution prevention plan;
m. Waste management plan; and
n. Emergency response plan.

61. As a part of the ESIA, an ESMS was developed for the Engineering and ESIA phase, defining the roles and responsibilities to deliver the engineering and permitting of the TANAP system. As the Project moved towards the delivery of the actual pipeline system, the organization changed in 2014 with the introduction of Engineering, Procurement, and Construction Management (EPCM) contractor. As discussed in paragraph 46, the EPCM contractor and its main sub-contractor will provide external consulting services to TANAP as part on an Integrated Project Management Structure, where consulting staff work embedded in the TANAP organization.

Due Diligence on the Application of the Bank's Operational Policies

62. Documents forming and disclosed as the ESIA package form the basis for the environmental and social management of the TANAP Project. They aim at ensuring compliance with the Turkish legislation, the Host Government Agreement, TANAP policies and the Bank's operational policy on environment and social safeguards The Bank's due diligence covered all environmental assessment documents (ESIA, BAP, ESMPs and social safeguard documents.) The following paragraphs summarize the Bank's observations. It should also be noted that the construction for the project is underway. The Bank's due diligence included several site visits.

63. Four main issues arising from the ESIA were identified in the due diligence and addressed by TANAP:

a. Widespread presence of species of conservation concern along the pipeline route and the ecologically sensitive areas;
b. Cultural heritage sites on the route and in the vicinity;
c. The significant level of potential cumulative impacts that the project may generate through other similar future projects; and
d. The disproportion between the impacts and benefits for the local communities.

Environmental Impacts

64. The project passes through ecologically sensitive and protected areas. In particular, the pipeline crosses Sarıkamış Allahuekber Mountains National Park and the Saros Special Environmental Protection Area. Permits for pipeline construction have been obtained. TANAP prepared an Ecosystem Evaluation Report for Posof Wildlife Development Area (WDA) and presented to the Ministry of Forestry and Water Affairs. In addition a biologist and a forest engineer have been recruited in Ardahan-Posof upon request of Ministry since February 2016 to monitor the construction activitites at Posof WDA. In several provinces, the route crosses near or within protected wetlands.The most important one among these is Lake Manyas in Balıkesir province, and the pipeline axis passes around 4 km to the south of Lake Manyas. The Lake is a Ramsar site and houses many bird species. Pipeline route was accepted by relevant authorities in the scope of National EIA Process. A total of 53 flora taxa and 38 fauna of conservation concern (SCC), defined as threatened species according to the IUCN Red List and the Turkish Red Data Book, were detected during BAP studies (During the construction activities, route change occurred on certain critical habitats where some SCC species are present.

65. During routing and base line studies, a total of 161 archaeological areas have been identified within the 500 meter corridor. 55 of these identified 161 archaeological and cultural heritage sites were registered as Protection Sites by the Ministry of Culture and Tourism, 106 were not previously known or registered. In addition, until appraisal completion stage, 35 chance finds were discovered during the construction activities, some of which are small settlements, some are ancient cemeteries/graves and/or terra cotta, waterline etc. Along the TANAP pipeline route, there is no above ground structure as Cultural Assets. Within the archaeological sites that could not be avoided during routing studies, either test pit and salvage excavations were conducted and permission were received, or test pit and salvage excavation were conducted and route changes were done. The Cultural Heritage Management Plan of TANAP was prepared including chance find requirements within the ESMS of TANAP. Corrective actions implemented during this process were as; stopping the site activities, informing relevant museum authority, taking the actions upon their advice, route change if required upon the evaluation of the relevant Regional Protection Board decision.

66. Cumulative impact analysis in the ESIA considered two potential projects, represented by the Iran-Turkey-Europe (ITE) gas pipeline and the Turkey section of the original Nabucco pipeline, as competing projects and potentially using part of the same corridor as the TANAP Project. A scenario in which both projects are built (either concurrently or subsequently) was found to very likely generate unsustainable impacts on some local communities and potentially

on some ecosystems and protected areas, particularly in the eastern part of the route. The ESIA states that an in-depth cumulative impact assessment should be carried out in case these projects are to be pursued.

67. The ESIA has very specific and significant mitigation actions and monitoring arrangements for this large-scale infrastructure project. The monitoring and reporting arrangements will be a critical issue for the execution of the project. The Bank's due diligence includes an assessment of the monitoring and reporting arrangements and will put forward recommendations for improvement if necessary.

Social Impacts

68. *Implementation arrangements*. In accordance with the Host Government Agreement, the designated public authority to carry out land acquisition and expropriation is BOTAŞ who has set up a TANAP Land Acquisition Directorate. BOTAŞ has previous experience with World Bank-financed projects to carry out the land acquisition and it has created a Land Acquisition Directorate to acquire the land. However, TANAP has no previous experience of working with the Bank, but it follows the guidelines and practices of IFIs (i.e. IFC Performance Standards) and has its own social policy and Integrated Management system Policy which outlines its commitment to mitigate adverse social impacts and delivers positive benefits through sustainable investment programs along the pipeline route. The Land Acquisition Directorate headed by a Director and assisted by two Deputy Directors (Technical and Administrative), six Managers with nine Exportation Units are in place. On the other hand, TANAP's Social Unit, which deals with the RAP management and manages the social component of the ESIA, is headed by a Social Impact Manager who reports to the Group Manager of Health, Social, Safety and Environment and is assisted by three Social Impact Experts at headquarters and additional staff at field level for each pipeline construction contract. TANAP's integrated management system includes Social Policy, Social Action Plan and Monitoring, and grievance redress mechanism and protocols for community health and safety. Recently, TANAP has further strengthened its Social unit with an additional Social Development Specialist (RAP Specialist) familiar with social impact and livelihood issues.

69. *Guide to Land Acquisition and Compensation (GLAC)* has been provided to the land owners to understand the process for land acquisition. TANAP also identifies non-legal 'users of land and commits to compensate them. The compensation for the crops and assets will be paid for the 36 meter pipeline corridor. The land acquisition in this project is complex since the impacts will be felt among the land owners, tenants, users, squatters, encroachers and will also experience loss of grazing, forest and community lands as well as severance of lands. The impacts will be in the form of permanent, temporary and restrictions on use of land. In addition, lands owned by multiple agencies and used in various ways will also be affected.[24]. Some of the difficulties encountered in the land acquisition process are additional land acquisition requirements during construction due to adjustments in alignment, modifications in the routing proposed by the contractors, unanticipated impacts, etc. However, safeguards are taken for handing over land parcels to contractors since working sites will be handed over only after the

[24] The various agencies involves in form or other includes, TANAP Management, Engineering contractors,, Land Rights Entity, Authority Liaison Mapping, Land Acquisition and Ground Investigation services, MENR, etc.

compensation is paid to the land owners and Land Entry protocol is signed. Similarly, a Land exit protocol will be signed with land owner at the time returning the land to the original land owners/occupiers. Some of the difficulties and challenges with land acquisition include but are not limited to: non-registration of land, outdated title register due to change in owners or deceased, joint ownership, absentee land owners, land consolidation, and limited capacity of the court to deal with court cases.

70. *RAP for Pipeline Route.* A RAP has been prepared and is under implementation for the pipeline route. The RAP presents the overall impacts, policy and legislative framework, land acquisition process, consultations and disclosure details and implementation arrangements, indicative implementation schedules and budgets with supporting details in the attachments. The household survey has been carried out among a sample 876 households over 481 km (about 25 percent of the pipeline route). Additional socio-economic survey among people affected by AGIs was also carried out among 182 households. The RAP also includes the socio-economic characteristics of affected populations and an outcome of consultations and focus group discussions. The compensation provided is expected to take care of the temporary livelihood impacts during the temporary 3 year period. Some of the potential adverse social impacts in the project as expressed by the local people during the initial public consultations include: livelihood impacts due to loss of lands (in most cases for a temporary period), impacts to irrigation channels and ponds, damage to crops, disturbance to cultivation, injuries to livestock due to falling into trenches, movement of vehicles, disturbances to be keeping, impact on fishing activities due to restrictions to navigation enforced within buffer zone of 100-200 meters around pipe laying vessels, etc. Another concern raised was unfair distribution of project benefits and the promises made by the contractors in the previous projects were not kept. . TANAP has also adopted and published an Information Disclosure Policy in their website related to disclosure of safeguard documents, monitoring reports and provide information to stakeholders when required a specific information regard to implementation of Safeguard documents.

71. *RAP for AGIs.* A separate RAP was prepared for land acquisition impacts associated with AGIs, where permanent land acquisitions is involved (263 hectares) with no physical displacement. The RAP covers the land acquisition process and compensation payment and includes an Entitlement Matrix outlining the compensation and support for different impact categories In addition to compensation, the entitlement matrix provides payment of costs related to registration charges to be incurred for purchase of alternative lands, transitional support to those who lose more than 20 percent of their land and proposes Livelihood Restoration Plan for those losing more than 20 percent of their land, informal users and vulnerable groups. The RAP covers census and socio-economic survey results to capture the base line socio economic charters tics in terms of income and expenditure, employment, indebtedness, asset ownership, perception of PAPs on their economic condition, demographic details, etc. The RAP also outlines the institutional and implementation arrangements such as roles and responsibilities of various agencies in land acquisition, monitoring and evaluation arrangements, grievance redress mechanism, time table, budget, consultations and disclosure arrangements. The draft RAP has been disclosed by TANAP on September 22, 2016 and the Bank on September 23, 2016 and the final version will be re-disclosed after TANAP approval. The overall budget available for implementation of land acquisition and related impacts including administrative expenditures for both pipeline route and AGIs is about TL 1,040 Million (about US$350 Million).

72. *Field visits by World Bank Team.* The three field visits carried out by the Bank revealed that most of the people expressed satisfaction with compensation and expect support from TANAP for improving local infrastructure related to access roads, drinking water, villages meeting rooms and increased employment opportunities. Women also expect vocational training and opportunities to sell their homemade products (e.g. dairy) along with some benefit sharing mechanism during the operational phase of the project. It is also reported by the contractors that more than 90 percent of unskilled labor and about half of the goods and one third of the services required by the contractors are met from local areas, and contractors have come forward to provide some goodwill gestures to the local people especially for improving and repairing access roads to the villages. The Social Impact specialists of the project contractors are carrying out regular consultations with the villagers on community safety training and dealing with day-to-day grievances. As of September 2016, 80 percent of 731 grievances were closed, mostly related to crop damage compensation and damages to properties.

73. *Outcome of due diligence of RAP implementation for pipeline route.* The Bank's social safeguards due diligence has identified the need for: (i) updating Entitlement Matrix for compensation cost involved with purchase of alternative land out of compensation money, acquisition of unviable land parcel and livelihood improvement of affected families especially those affected occupiers (informal/illegal users) on public lands; (ii) strengthening grievance redress mechanism with independent members (grievance appeal committee) who are not related to project implementation; (iii) putting a disclosure policy –both English and Turkish – out in public; (iv) initiating external monitoring arrangements for RAP implementation progress including land acquisition process and compensation payment; (v) assessing impacts on fishing community in Marmara sea; and (vi) strengthening reporting on ESIA commitments related to social impacts. TANAP has proposed suitable remedial measures to address the above gaps in the "Addendum to RAP for Pipeline route.

74. *Independent assessment of RAP Implementation for pipeline route (RAP Audit).* Since land acquisition is substantially completed, an independent RAP implementation assessment was carried out to assess whether implementation is progressing in accordance with policy provisions outlined in the RAP and reveal any shortcoming that need to be adjusted during the remaining implementation period. The findings indicate that the land acquisition process is being carried out in a transparent manner by providing a copy of the "Guide to land acquisition and compensation" to land owners at the time of compensation offer and "agreement or disagreement" protocols are signed at end of each of the compensation offer meetings. As of date, about 32 percent of private land parcels were acquired with a transfer of deed and the remaining 68 percent of private land parcels are being acquired using urgent expropriation process due to either a lack of clear titles, non-availability of land owners to participate in the compensation offer meetings or disagreement with compensation rates offered by BOTAŞ. The report also mentions that TANAP has put in place a dynamic risk register for monitoring land acquisition issues to track and minimize time and cost overruns due to the land acquisition related process. The report confirms that the villages along the pipeline construction route did not experience an influx of workers or migrants, which is one of the main issues encountered in other pipeline projects.

75. Some of the concerns/issues highlighted in the report include: (i) difficulties in cultivation of unviable land parcels of less than 1,000 m^2; (ii) incremental land acquisition

impacts due to presence of other ongoing projects along the pipeline route; (iii) delays in accessing compensation amounts due to delays in updating of ownership records; (iv) return of compensation due to realignment or rerouting of already acquired land parcels; and (v) reduction in compensation amounts by court against the rates offered by BOTAŞ. The report points out that support to vulnerable people and those who are in need of livelihood support were yet to be initiated in line with RAP commitments and the people are not fully aware of how the RAP Fund established by TANAP will be used. Though TANAP has set a target of 90 percent employment of unskilled jobs under construction contractors to come from local villagers, most of the people are not fully aware of the process of seeking employment from construction contractors. Some of the key suggestions from the report include: (i) developing a RAP commitment monitoring plan; (ii) putting in place a mechanism to identity and assist vulnerable people (i.e. poor, single women, elderly and the disabled) and provide livelihood support, especially to informal users of public lands who are affected and those in need among the people impacted by land acquisition; (iii) support to unviable land parcel owners who cannot cultivate such plots; (iv) assess possible impacts among fishermen and develop mitigation plan once the construction plan is finalized for the Marmara sea crossing; and (v) strengthen consultations and the disclosure mechanism especially for Lot-4 where construction has just commenced. TANAP has proposed suitable remedial measures to address the above gaps in the "Addendum to RAP for Pipeline route.

76. *Implementation Monitoring*. TANAP has an internal monitoring process for tracking implementation progress of land acquisition including external consulting staff support and independent third party monitoring. However, monitoring consultants mostly confine their work to impacts related to contractors' obligations and responsibilities, which do not include land acquisition and resettlement. Thus, there is a need to expand the scope of the monitoring consultants to cover involuntary resettlement, progress of land acquisition, meeting stakeholders through regular field visits and providing advice to deal with issues that emerge during implementation. TANAP is in the process of setting up external monitoring through consultants experienced in land acquisition and compensation payment progress and issues in implementation. Since the land acquisition is substantially completed, the focus will be on finalization and implementation of livelihood improvement/restoration plans, livelihood restoration measure for affected fishermen across Marmara Sea, follow-up on pending court cases on compensation payments, land registrations, and execution of land exist protocols. The remedial measures proposed under Addendum to RAP for pipeline route and RAP AGIs will form the basis for Bank's supervision and monitoring. At the end of RAP implementation including actions under the Addendum to pipeline RAP. At completion TANAP will undertake an Impact Evaluation through independent consultants to evaluate the achievement of the objectives of RAP and draw lessons for future operations and identify measures for corrections, if needed.

Climate Impacts

77. Natural gas has significant environmental advantages compared with other fossil fuels given that it has half the carbon emissions as coal. For the purpose of illustrating the climate mitigation benefits of gas in supporting the projected replacement of coal-fired power generation, one bcm/annum of gas would help reduce emissions by about 2.4 mtCO2-eq/annum and 16 bcm/annum would reduce emissions by about 37.9 mtCO2-eq/annum. Supporting investments in gas at this time in Turkey's and Europe's energy sector development can help

reduce future reliance on coal as baseload power generation, which will be enhanced by the introduction of carbon pricing.

78. The Southern Gas Corridor Program is not expected to increase or decrease GHG levels in Europe or Turkey because without the development of the Program, Turkey and Europe are likely to import similar quantities of natural gas from other sources. The Program is designed to improve the security and diversity of Turkey's and Europe's energy supply and is part of Turkey's and Azerbaijan's broader energy strategies, including the development of renewable energy and improvements in energy efficiency. However, the Program is not expected to change the role of gas in the energy supply mix of Turkey or Europe. Although natural gas emits half the carbon emissions of coal, the utilization of 16 bcm of gas will generate significant GHG emissions. The carbon content of 16 bcm of natural gas is about 30.7 million tons of carbon-dioxide equivalent (mtCO2-eq). However, the program is not expected to increase or decrease greenhouse gas emissions given that its purpose is to diversify gas supply.

79. Gas demand growth in Turkey has been rapid since its introduction into Turkey's energy mix in 1987, growing almost 40 percent since 2009. Demand growth is expected to slow down. However, the Project does not change the role of gas in Turkey's energy supply mix. In the absence of additional supplies from Azerbaijan, the same 6 bcm/annum would be imported from other sources.

80. Gas consumption in Europe peaked in 2008 and has since declined by almost 25 percent. Projections of gas consumption and views about the role of gas as a transition fuel vary widely. The production of gas in Europe also peaked and started to decline about 10 years ago; this decline is projected to continue by about 100 bcm/annum by 2040 and gas imports will continue to meet the gap between demand and declining production. The 10 bcm/annum from the Program will form a part of this projected increase in Europe's gas imports.

81. In terms of carbon emissions, transit, and flexibility as a fuel source, gas has advantages compared with other fossil fuels which make it an important component of decarbonizing electricity and energy systems. Turkey provides a striking example of the advantage of gas compared with other fossil fuels. It made a strategic choice to diversify its energy mix into natural gas with imports starting in 1987. In less than two decades, gas became the most important fuel in Turkey's energy supply mix ahead of oil, resulting in commensurate reduction in carbon emissions. Although coal power would be less expensive in Turkey, gas power is preferred due to its lower investment cost, operational flexibility and environmental advantages. Coal continued to be used for power generation but gas became the most important fuel by far and has accounted for almost 50 percent of power generation in recent years. The Program substitutes for the same volume of gas that would have been delivered from other sources and therefore is not expected to increase or decrease GHG emissions in Europe or Turkey. The Government of Turkey's climate actions are focused on energy efficiency, renewable energy and the introduction and large-scale application of nuclear energy. Turkey's INDC is discussed below.

82. The large-scale entry of renewable energy into electricity markets across Europe has resulted in excess capacity and dramatic fluctuations in wholesale markets. Although wholesale prices have fallen and even become negative at times of renewable energy surpluses, the retail

prices of renewable energy have increased to recover the cost of subsidizing renewable energy. Natural gas is a transition fuel that plays an important role in decarbonizing electricity systems because it helps compensate for the intermittence of renewable energy, emits half the carbon of coal, and allows for storage. However, given the declining price of oil, coal, and gas in recent years, the expected reduction of coal-fired generation has not materialized. Coal and carbon emissions permits are inexpensive and in the absence of effective carbon pricing, coal power remains competitive against gas power, resulting in renewables primarily displacing gas-fired generation and leading to closures of gas-fired power plants. If these market trends and the generation of coal power continue, the overall demand for gas could continue to decline. The Program supports climate action goals and commitments made at COP-21 in Paris in part because it diversifies gas supply routes and sources. Supporting investments in gas at this time can help increase the competitiveness of gas compared to coal for meeting baseload electricity demand.

83. The Program helps Europe improve the security and diversity of its gas imports as it provides an option to secure more gas from a new source (the Caspian region) through a new route ("the Corridor"). However, the Corridor does not lock-in gas imports beyond the currently contracted supply of 10 bcm/annum from 2020 to 2036. If needed, Europe can source more gas (including by doubling the capacity of the Project) and/or continue to import gas beyond 2036; if gas is not needed there is no lock-in beyond 2036 – there are no contractual obligations to purchase gas and use the Corridor.

84. Gas will need to remain competitive compared to coal in the short-to-medium term while it acts as a transition fuel for Europe's energy systems if climate action goals are to be met. Projections of gas consumption and views about the role of gas as a transition fuel vary widely, primarily depending on the projected/desired pace of decarbonizing Europe's energy system. The IEA, in its 2015 World Energy Outlook (WEO-2015) New Policies Scenario, projects no gas demand growth in the EU and 0.1 percent average annual growth for Europe in the 2013-2040 period. IEA's 450 Scenario illustrates the significant potential to reduce the consumption of both coal and gas in Europe in the 2030s compared to the New Policies Scenario. In the 450S Scenario, Europe could start reducing its gas imports before 2040.

85. The IEA's WEO-2015's three core scenarios are differentiated primarily by their underlying assumptions about the evolution of energy-related government policies:

a. **The Current Policies Scenario (CPS)** takes into consideration only those policies for which implementing measures had been formally adopted as of mid-2015 and makes the assumption that these policies persist unchanged. For the EU, the primary cross-cutting policy is the 2020 Climate and Energy Package. EU's Emissions Trading System (EU ETS) is assumed to reduce GHG emissions in 2020 by 21 percent below the 2005 level, covering power, industry and aviation sectors;

b. **The New Policies Scenario (NPS)** is the central scenario of the WEO-2015. In addition to incorporating the policies and measures that affect energy markets and that had been adopted as of mid-2015, it also takes account of other relevant intentions that have been announced, even when the precise implementing measures have yet to be fully defined. This includes the energy-related components of the

Intended Nationally Determined Contributions (INDCs), submitted by national governments by October 2015 as pledges in the run-up to the United Nations Framework Convention on Climate Change Conference of the Parties (COP21). For the EU, the primary cross-cutting policy is the 2030 Climate and Energy Framework. ETS is assumed to reduce GHG emissions in 2030 by 43 percent below the 2005 level and incorporate a structural change by establishing a market stability reserve from 2019;

c. **The 450 Scenario (450S)** assumes a set of policies that bring about a trajectory of greenhouse-gas (GHG) emissions from the energy sector that is consistent with the international goal to limit the rise in the long-term average global temperature to two degrees Celsius (2 °C), compared with pre-industrial levels. The policies collectively ensure an emissions trajectory consistent with stabilization of the GHG concentration after 2100 at around 450 parts per million. For the EU, EU ETS is assumed to be strengthened in line with EU's 2050 roadmap; and

d. **Policies in the three scenarios are cumulative**: measures listed under the New Policies Scenario supplement those under the Current Policies Scenario and measures listed under the 450 Scenario supplement those under the New Policies Scenario. In addition to the cross-cutting policies, assumptions about sectoral policies in power, transport, industry and buildings sectors are reflected in each scenario.

86. IEA's New Policies Scenario projects a striking shift in Europe's energy mix from coal to renewable energy sources by 2040. Coal consumption goes down by two-thirds, from about 18 percent to 7 percent, and renewables double, from about 13 percent to 27 percent. The share of gas increases slightly, from about 24 percent to about 28 percent. The shift is even more pronounced in Europe's electricity mix. Coal goes down from about 28 percent to 6 percent, and renewables doubles and reach 50 percent. Again the share of gas increases slightly, from about 16 percent to about 20 percent. As expected the shift from coal to renewables is even more pronounced in IEA's 450 Scenario. Renewable sources would exceed one-third of energy supply and reach 60 percent of electricity supply by 2040. Natural gas is seen as a transition fuel towards a carbon-free electricity system, to help deal with the intermittent renewable energy flows along with electricity storage applications. The Current Policies Scenario implies a long transition period as both the volume of gas consumption and its share in the energy mix are projected to increase through 2040. The New Policies Scenario shows flat demand and a slight increase in the share of gas through 2040. In the 450 Scenario gas consumption declines, slowly and then more rapidly in the 2030s, resulting in a slight reduction in the share of gas by 2040. These transition trends are stronger in electricity generation and clearly visible in the 450 Scenario where both the volume and share of gas power decline significantly in the 2030s and renewables reach 60 percent of electricity supply by 2040. Part of the coal and gas replacement in the 450 Scenario is accounted by the volume of nuclear energy being sustained at about the current level through 2040 instead of the decline in the other two scenarios.

87. The realization of the EU's climate objectives requires a significant reduction in the consumption of coal. IEA projects a significant reduction in the absolute volume and share of coal in Europe's electricity generation mix by 2040 - even in the Current Policies Scenario by

well over 40 percent and the share from about 28 percent to about 13 percent. In the New Policies and 450 scenarios, the share of coal power in 2040 is projected to decline to about 6 percent and 4 percent, respectively. For the purpose of illustrating the climate mitigation benefit of gas in supporting the projected replacement of coal-fired power generation, one bcm/annum of gas would help reduce emissions by about 2.4 mtCO2-eq/annum and 16 bcm/annum would reduce emissions by about 37.9 mtCO2-eq/annum. However, the climate mitigation co-benefits of the Program are limited to benefits realized in the transmission of gas compared to its pipeline and LNG alternatives.

88. GHG emissions in the Southern Gas Corridor pipeline system and TANAP are lower than in their LNG and pipeline alternatives. Emissions caused by the TANAP pipeline system were assessed in the ESIA and were determined to be minor during the construction period of the project. In contrast, significant emissions will be generated during the operational period, mostly from the natural gas-fired compressor stations (the "pumps" which move the gas through the pipeline system). At the 16 bcm/annum throughput, TANAP estimates gas consumption at about 0.2 bcm/annum. Resulting emissions are estimated at about 0.4 mtCO2-eq/annum, 97 percent of which will originate from the compressor stations. Total emissions in the Corridor are estimated at about 0.7 mtCO2-eq/annum. However, emissions would triple if the alternative was LNG as liquefaction plants would consume about 6 percent of the raw gas feed to turn it into LNG. In modern tankers, around 1 percent of the cargo would be lost if consumed as ship fuel. Emissions would amount to about 7 percent – or approximately 2.2 mtCO2-eq/annum – three times more than from the Program. In the absence of the Program, if the same volume were imported from Russia, given the much longer gas transmission distances from the gas production sites to Southern Europe and Turkey, emissions from the compressor stations would also be higher.

Table 6: EU's Energy and Electricity Mix and Emissions, 2013-2040[25]

	Energy Demand (Mtoe)				**Share (%)**		**Electricity Gen (TWh)**				**Share (%)**	
	2013	**2020**	**2030**	**2040**	**2013**	**2040**	**2013**	**2020**	**2030**	**2040**	**2013**	**2040**
Coal												
CPS	286	256	209	168	18	11	905	786	642	511	28	13
NPS	**286**	**245**	**155**	**101**	**18**	**7**	**905**	**742**	**400**	**205**	**28**	**6**
450S	286	222	103	76	18	6	905	654	183	125	28	4
Gas												
CPS	387	386	445	478	24	31	507	537	882	1079	16	28
NPS	**387**	**371**	**392**	**382**	**24**	**28**	**507**	**497**	**683**	**693**	**16**	**20**
450S	387	365	349	280	24	22	507	502	578	292	16	9
Renewable												

[25] Source: IEA WEO-2015

	Energy Demand (Mtoe)				Share (%)		Electricity Gen (TWh)				Share (%)	
	2013	**2020**	**2030**	**2040**	**2013**	**2040**	**2013**	**2020**	**2030**	**2040**	**2013**	**2040**
CPS	209	254	299	342	13	22	875	1113	1349	1547	27	41
NPS	**209**	**259**	**325**	**379**	**13**	**27**	**875**	**1130**	**1461**	**1691**	**27**	**50**
450S	209	259	364	457	13	37	875	1134	1566	1926	27	60
Nuclear												
CPS	229	225	181	171	14	11	877	863	695	656	27	17
NPS	**229**	**225**	**205**	**203**	**14**	**15**	**877**	**863**	**785**	**777**	**27**	**23**
450S	229	227	224	233	14	19	877	872	861	895	27	27
Emissions	**Total Emissions (mtCO2-eq)**				**Reduction (%)**		**Power Sector Emissions (mtCO2-eq)**				**Reduction (%)**	
CPS	3291	3063	2863	2615		-21%	1216	1084	1021	913		-25%
NPS	**3291**	**2945**	**2390**	**1950**		-41%	**1216**	**1025**	**736**	**531**		-56%
450S	3291	2811	1835	1153		-65%	1216	940	467	241		-80%
	2013	**2020**	**2030**	**2040**	**2013**	**2040**	**2013**	**2020**	**2030**	**2040**	**2013**	**2040**

89. The Government of Turkey's climate change mitigation efforts are focused on energy efficiency, renewable energy and the introduction and large-scale application of nuclear energy. Turkey's effort to promote the development of renewable energy has already yielded significant results: about 16 GW generation capacity additions have come from renewable energy (mostly hydro and wind, some geothermal; solar is only just starting). This 16 GW accounts for over a half of the 31 GW capacity additions since 2001. Depending on hydro conditions, the share of renewable energy in the electricity generation mix has varied in the 25-30 per cent range in recent years. Going forward, Turkey's energy strategy aims at reducing the share of gas in the generation mix to contain the growth of gas consumption and imports. Coal continues to be used for power generation. Its replacement by gas would require carbon pricing. Turkey is participating in the Program for (carbon) Market Readiness but has made no decisions about carbon prices/markets. Turkey's Intended Nationally Determined Contribution (INDC), submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in September 2015, includes the following measures in the energy sector:

a. Increasing capacity of production of electricity from solar power to 10 GW by 2030 (currently solar power capacity is still very low, less 0.1 GW);
b. Increasing capacity of production of electricity from wind power to 16 GW by 2030 (from about 5 GW currently);
c. Tapping the full hydroelectric potential;
d. Commissioning of a nuclear power plant by 2030 (two plants for a total of close to 10 GW are expected to be operational by 2030);

e. Reducing electricity transmission and distribution losses to 15 percent by 2030;
f. Rehabilitation of public electricity generation power plant; and
g. Establishment of micro-generation, co-generation systems and production on site at electricity production.

90. Turkey supports its INDC through a national climate change policy which includes:

a. The 10th National Development Plan;
b. National Strategy on Climate Change and National Climate Change Action Plan;
c. National Strategy on Industry;
d. Strategy on Energy Efficiency;
e. National Strategy and Action Plan on Recycling;
f. National Legislation on Monitoring, Reporting and Verification of GHG emissions;
g. National Smart Transportation Systems Strategy Document (2014-2023) and its Action Plan (2014-2016).

91. Turkey has been experiencing rapid demand growth in all segments of energy sector over the last decade. After a temporary slowdown during the global crisis, energy demand is again growing more rapidly, particularly electricity demand, energizing the rebound in economic growth. This rapid growth in energy demand has required Turkey to take concrete actions in order to increase energy efficiency, decrease GHG emissions, foster security of supply and to create a sustainable energy sector and efficiently functioning liberal energy market. For this purpose, comprehensive legal and institutional reforms were launched in early 2000s and implementation continues. In this context, enhancement of energy efficiency and renewable energy sectors are among the highest priorities of Turkey's energy policy.

92. Turkey has put in place a well-developed legislative framework for energy efficiency, including relevant secondary legislation. A specific EE Law was put into force in 2007. To establish a road map for the implementation, the MENR prepared an EE strategy, approved by the High Planning Council on February 20, 2012. A reduction of energy intensity by 20 percent per GDP until 2023, energy losses in industry and service sectors, decreasing energy demand and carbon emissions of buildings, providing 30 percent of total electricity production from RE, efficient use of energy in the public sector, strengthening of institutional structures, capacities and cooperation, employing advanced technologies and increasing awareness raising activities and creating other financing sources than public sources are highlighted as strategic goals of the strategy. Currently, a new EE Law and an amendment to National Purchasing Law are being discussed in the Energy Commission of the National Assembly of Turkey.

93. In addition, Turkey pursues policies aimed at securing energy transport routes and geographic diversification of resources to reduce the possible risks to energy security. Turkey aims at increasing the integration of Turkish Natural Gas Market to the European Gas Market. In this context, BOTAŞ is investing in the extension and strengthening of transmission system infrastructure focusing on the security of supply, as well as strengthening the capacity of gas network for operation of the network in line with the EU network codes for gas in order to improve reliability, efficiency and operational performance of the natural gas infrastructure.

Monitoring & Evaluation

94. TANAP reports on its activities. Furthermore, EMRA reports on Turkey natural gas imports and Eurostat reports on natural gas imports into the EU. Progress of project implementation, towards completion and commissioning to be able to start gas transmission to Turkish and European markets, is reported and evaluated at a number of different levels. TANAP's engineering, procurement and construction management contractor and the environmental and social monitoring consultant report to TANAP. TANAP reports to its shareholders, including BOTAŞ and SGC as well as to the Ministry of Energy and Natural Resources and the Ministry of Environment and Urbanization. TANAP, BOTAŞ and SGC will start reporting to the Bank under project and loan agreements as soon as they have been executed. In addition, the Bank will supervise project implementation. Project co-task team leader and financial management, procurement, environment and social specialists are all located in the World Bank Ankara office, which facilities close interaction also in-between formal supervision missions.

95. The RAP provides comprehensive environmental and social M&E arrangements including setting up of a data base management system, external monitoring, Panel of Experts, use of NGOs services, completion audit and end-term impact evaluation. "Performance Standard for Land Acquisition and Involuntary Resettlement" for projects with significant involuntary resettlement risks provides for the client to retain independent professionals to advise on compliance and verify the clients' monitoring information including consultations with affected people. TANAP has engaged environmental and social monitoring consultants under a US$9 million contract, partly supported by the EU. M&E arrangements will be discussed and agreed with TANAP. Similarly, the adequacy of institutional arrangements will be reviewed.

Role of Partners

96. The European Commission's 2008 "Second Strategic Energy Review - An EU Energy Security and Solidarity Action Plan", stated that: "A southern gas corridor must be developed for the supply of gas from Caspian and Middle Eastern sources, which could potentially supply a significant part of the EU's future needs. This is one of the EU's highest energy security priorities. The Commission and Member States need to work with the countries concerned, notably with partners such as Azerbaijan and Turkmenistan, Iraq and Mashreq countries, amongst others, with the joint objective of rapidly securing firm commitments for the supply of gas and the construction of the pipelines necessary for all stages of its development. In the longer term, when political conditions permit, supplies from other countries in the region, such as Uzbekistan and Iran, should represent a further significant supply source for the EU." Political agreement followed in May 2009 at the Southern Corridor Summit in Prague and a declaration was signed by the Presidents of the European Council and the European Commission for the EU, the Presidents of Azerbaijan, Georgia and Turkey and the Energy Minister of Egypt, in the presence of the representatives of Kazakhstan, Turkmenistan and Uzbekistan. Representatives of EIB, EBRD and the World Bank also attended the Summit.

97. The role of the Governments of Azerbaijan and Turkey has been critical in turning the Southern Gas Corridor concept into reality. Throughout most of the previous decade the Nabucco gas pipeline project dominated development efforts, discussions and negotiations. Its

sponsors envisioned a 30 bcm/annum gas pipeline system bringing gas from the Caspian and Middle East to Europe. Uncertainties about gas supplies, the scale and complexity of the project and its commercial and financial requirements ultimately proved overwhelming, in spite of strong support from the European Commission and expected financing from IFIs. Azerbaijan (one of the envisioned sources of gas to Nabucco) and Turkey (country with a large and fast growing gas demand) stepped in and negotiated and entered into gas sale and transit, intergovernmental and host country agreements in 2011-2013. The Shah Deniz consortium then selected TAP to link TANAP to the European market. The result is a gas development and pipeline program of 16 bcm (about one-half the size of Nabucco), being executed as three separate projects, for the transmission of gas originating from only one source, in fact from only one project, namely SD2.

98. The entire Program is a public-private partnership between Azerbaijan and its public and private sector partners, the most important of which are Turkey and BP, respectively. TANAP is a partnership between Turkey, Azerbaijan and BP. Turkey is the host country, 30 percent minority investor in TANAP and purchaser of 6 bcm of the 16 bcm annual gas production from SD2 gas field. Azerbaijan is the host country of SD2, 58 percent majority investor in TANAP and will become a major gas exporter doubling its exports to Turkey and opening the Southern Gas Corridor for the supply of gas to Europe. BP is the lead developer and operator of the Shah Deniz gas field and a 12 percent minority investor in TANAP.

99. An Advisory Council on the Southern Gas Corridor has been set up as a joint initiative of the European Commission and Azerbaijan. The Council brings together all the countries and stakeholders involved to steer the implementation of the Southern Gas Corridor at the political level in order to have the Corridor operational by 2019-2020. The Council has met twice, in February 2015 and again in February 2016 and issued each time a joint statement expressing strong support for the implementation of the Southern Gas Corridor. The February 2015 statement was signed by the authorized representatives of Azerbaijan, Albania, Bulgaria, Georgia, Greece, Italy, Turkey, United Kingdom and United States, as well as the Commission. In February 2016, representatives of Croatia and Montenegro also attended and signed the declaration. Among other things, the participants declared that they are “determined to continue and deepen the long-term strategic relationship among the stakeholder countries to the Southern Gas Corridor and between transporters, suppliers, and consumer of energy resources, particularly in securing reliable and sustainable supply of energy from Azerbaijan to Georgia, Turkey and European markets”; and that they will “promote the expansion of the Corridor to further markets, including outside the European Union, such as Energy Community countries in the Balkans” and “welcome additional potential suppliers to Europe and other countries to utilize the Corridor to further diversify natural gas supplies to Europe and other countries”.

Annex 4: Economic and Financial Analysis

1. Economic and financial analysis covers the proposed Project (the TANAP Pipeline System) and financial analysis of TANAP (the company), BOTAŞ and SGC. The Bank has entered into Confidentiality and Non-Disclosure Agreements with TANAP and SGC. In line with these agreements, TANAP and SGC have provided the Bank access to some information for the Bank's due diligence including carrying out the analysis that is summarized below. However, some information including the gas transportation agreements could not be released to the Bank due to commercially sensitive information and SGC's and TANAP's confidentiality undertakings to other concerned parties including shippers and shareholders in Associated Projects of the Southern Gas Corridor. Where specific information was not available, the analysis uses Bank staff estimates. Considerable amount of information was also drawn from public sources and documents including the IGA, HGA, and SGC's audited financial statements. Figures are rounded off.

Economic and Financial Viability of the Project

2. **Economic Viability**. The approach used in the quantitative economic analysis of the project is to use estimated gas transmission revenues as a proxy for economic benefit and compare this conservative measure of benefits against TANAP's investment and estimated operational costs excluding VAT and tax payments to the Government drawn from the HGA. The ERR and economic NPV (using a discount rate of 6 percent in accordance with World Bank guidelines[26]) are estimated at about 10 percent and about US$2.56 billion, respectively. The estimated economic benefits and costs are presented in Table 11.

3. **Financial Viability**. The entire 16 bcm/annum production of SD2 and gas transmission capacity of the pipelines including TANAP have been contracted under long-term agreements. The Project's financial viability was assessed by comparing TANAP's estimated revenues from transmission services against TANAP's investment and operational costs (including VAT and tax payments to the Government). The FRR is estimated at 9 percent which exceeds the estimated cost of capital of both BOTAŞ and SGC. The financial NPV for the project is estimated to be US$1.81 billion at a financial discount rate of 6 percent. The estimated financial benefits and costs are presented in Table 12.

4. **Sensitivity Analysis**. The financial and economic viability of the project is robust. Full capacity of the pipeline has been contracted under long-term agreements. Estimated FRRs and ERR are sensitive to changes in the capital cost of the project: 10 percent increase in the capital cost would reduce FRR and ERR by about 1 percent and 1.5 percent, respectively, with the resulting Financial and Economic NPVs dropping by US$656 million, at the same 6 percent discount rate. On the other hand, such an increase is highly unlikely as all main contracts have been awarded and the total US$9.2 billion cost estimate has been revised to US$8.6 billion (while still retaining a conservative US$1.4 billion contingency provision.) The capital cost estimate was in fact reduced by about US$0.5 billion in the comprehensive bottom-up contract-by-contract review that TANAP carried out in early 2016 and a further reduction of US$0.6 billion brought it down to the current US$8.6 billion. The analysis also simulated an unlikely

[26] "Guidelines for Economic Analysis of Power Sector Projects", World Bank, September 2016.

delay in construction activities of 1 year and another scenario of a 20 percent increase in O&M costs to assess the impact on ERRs and FRRs. Results of the sensitivity analysis are summarized in Table 7.

Table 7: Summary of the Estimated ERR, FRR and NPVs

	Scenario	**ERR (%)**	**NPV (US$bn)**	**FRR (%)**	**NPV (US$bn)**
	Base Case	10%	2.56	9%	1.81
(a)	10% increase in capital cost	8.5%	1.90	8%	1.15
(b)	20% increase in O&M cost	9%	2.23	8%	1.48
(c)	1 year delay in commissioning	9.5%	2.48	9%	1.74
(d)	Combination of (a), (b) and (c)	8%	1.51	7%	0.77

5. If additional gas supplies are available the throughput of the TANAP Pipeline System could be raised to 23 bcm/annum (e.g. by 2023 as currently envisioned) and 31 bcm/annum (e.g. by 2026) with relatively small investments in additional compressor stations. These would be highly attractive incremental investment projects for TANAP and its shareholders.

Financial Analysis of TANAP

6. TANAP's shareholders have decided to pursue shareholder finance instead of project finance to reduce time requirements, complexity and cost of financing. Each shareholder is responsible in line with its share in TANAP: SGC (58 percent), BP (12 percent) and BOTAŞ (30 percent). This structure means that while TANAP is responsible for the overall management and overseeing the realization of the Project to ensure the pipeline system is realized per the required standard, within time, budget and safety requirements, the shareholders will provide TANAP all necessary financing and will recover their debt and equity investments at the pace which TANAP's revenues exceed its investment, operational costs and working capital requirements. Calculation of self-financing and debt-service coverage ratios for TANAP is not meaningful for such a company. Shareholders provide financing, as needed, until 2019. From 2020 onwards, TANAP will start generating distributable cash surpluses and shareholders will start recovering their debt and equity investments. The shareholders have set a conservative capital structure. Based on Bank estimates TANAP is projected to be able to repay the debt and return shareholders' original equity investment in less than 10 years by 2029.

Financial Analysis of BOTAŞ

7. Key financial indicators for 2014-15 (actual), and 2016-2020 (projections) are provided in Table 8. The depreciation of the Turkish Lira (TL) against the US dollar since the beginning of 2014 cost BOTAŞ more up to mid-2015 than it gained from the fall in its gas import prices in US dollar terms. A full and timely pass-through of BOTAŞ' gas import costs in TL was not applied, BOTAŞ profits in 2013 turned into losses for 2014 (TL 600 million) and into 2015 (TL 1 billion in the first half of 2015) and resulted in an increase in BOTAŞ import duty arrears

to the Government and related delayed payment penalties. After complying with the financial covenants agreed with the Bank (including debt service cover of 1.2) for 2013, BOTAŞ could not comply for 2014. Due to the significant recovery in the last quarter of 2015, partially due to the full impact of the fall in gas import prices, BOTAŞ realized a significant profit for 2015 and projects an even higher profit for 2016, achieving compliance with the financial covenants for 2015 and beyond notwithstanding 10 percent sale price reduction from October 2016. Past experience has shown that at the time of cash shortfalls BOTAŞ meets all of its payment obligations except for the payment of customs duties and taxes to the Government. Such arrears and related delayed payment penalties had reached US$2 billion by mid-2015. The financial turnaround since mid-2015 enabled BOTAŞ to make significant payments which reduced this amount to below US$1 billion. BOTAŞ expects to be able to eliminate its arrears by end-2016. However, the gas price risk remains, in particular the impact of the depreciation of the TL on BOTAŞ gas import costs. The risk of this issue affecting BOTAŞ' ability to finance its shareholder obligations to TANAP is nevertheless rated as low.

Table 8: BOTAŞ Key Financial Indicators[27]

Financial Summary	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Net Income (TL billion)	-0.6	0.6	5.9	9.5	6.8	3.6	2.2
Annual Investments (TL billion)	0.5	0.5	0.8	1.3	0.5	2.2	0.1
Gross Profit Margin (TL billion, %)	-5%	7%	30%	19%	13%	9%	8%
Return on Assets (%)	-3%	2%	25%	27%	16%	8%	5%
Return on Equity	-7%	5%	37%	38%	21%	10%	6%
Financial Covenants							
Debt Service Ratio (>1.2)	Negative	11	>20	>20	>20	>20	>20

Financial Analysis of SGC

8. SGC CJSC was established by the Presidential Decree No. 287 dated 25 February 2014. It was incorporated on 31 March 2014 in accordance with Azerbaijani legislation. 51 percent of the company is owned by the Republic of Azerbaijan, represented by the Ministry of Economy and 49 percent by SOCAR. The company is domiciled in the Republic of Azerbaijan. SGC was established for consolidating, managing and financing Azerbaijan's interests in the full field development of Shah Deniz gas-condensate field, the expansion of the South Caucasus Pipeline (SCPx) and the implementation of TANAP and TAP. Through direct shareholding or subsidiary's participation, SGC holds a 58 percent interest in TANAP, 6.67 percent in both SD2 and SCPx (to be increased to 16.67 percent in both projects in 2023 from the purchase of SOCAR's 10 percent shares) and 20 percent in TAP.

9. SGC is expected to operate on the basis of a going concern. Its management, verified by the auditor letter, believes the company will continue its operations for the foreseeable future and will be able to realize its assets and discharge its labilities and commitment in the normal course of the business. The key for SGC to continue on a going concern basis is its ability to generate

27 Audited information for 2014 and 2015, BOTAŞ projections for 2016-20.

cash through its shareholding in the various projects while meeting its funding obligations and servicing its debt.

10. The primary source of revenue for SGC is the TANAP project given its majority shareholding in the project company compared to the rest of the Program. Starting in mid-2018 when first gas is expected to flow through the TANAP pipeline system, SGC is expected to receive a reliable revenue stream from TANAP. Before the start of commercial operations of the Program, SGC is receiving revenues through its 6.67 percent share[28] of the existing Shah Deniz field cash flows through cost recovery and profit sharing. SGC has no other material revenue sources prior to the start of production from SD2, except for some other non-cash revenue, mainly in recognition of government grant and other deferred revenue.

11. SGC also receives revenues through its 6.67 percent shares in upstream SD2 project. The revenue is shared between the government and joint venture partners on the basis of a Production Sharing Agreement (PSA). The revenue sharing arrangement in the PSA includes proceeds from both gas and condensate sales. Sensitivity analysis was performed to assess the impact of low oil price on the revenue for SGC from Shah Deniz field. In a US$40/bbl flat oil price scenario, the revenue loss would be about 9 percent of the total annual project revenue, whereas under a US$30/bbl flat scenario, the revenue loss is about 17 percent. According to the Bank's Commodities Price forecast, oil prices are expected to gradually rebound, reaching US$82.6/bbl in 2025 (see Table 9).

Table 9: World Bank Commodities Price Forecast in Nominal US$ (Released: July 26, 2016)

Commodity	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Energy														
Coal, Australia	$/mt	84.6	70.1	57.5	51.0	51.9	52.9	53.8	54.8	55.8	56.8	57.9	58.9	60.0
Crude oil, avg, spot	$/bbl	104.1	96.2	50.8	43.0	53.2	59.9	62.7	65.6	68.6	71.9	75.3	78.8	82.6
Natural gas, Europe	$/mmbtu	11.8	10.1	7.3	4.5	4.8	5.1	5.5	5.8	6.2	6.6	7.0	7.5	8.0
Natural gas, US	$/mmbtu	3.7	4.4	2.6	2.3	3.0	3.5	3.7	3.9	4.1	4.3	4.5	4.8	5.0
Natural gas LNG, Japan	$/mmbtu	16.0	16.0	10.4	7.0	7.3	7.6	7.9	8.2	8.5	8.9	9.2	9.6	10.0

12. In light of a significant funding requirement in the next three years to meet the cash calls for the various projects of the Program, SGC has developed a robust financing plan with support of international financial advisors. In addition to equity contributions by its shareholders, SGC is focused on securing debt financing through a mix of commercial borrowing and bond issuance, blended with longer-term financing from IFIs that reduces the overall cost of financing. More specifically, SGC's gross funding requirements are about US$12 billion (or US$11.3 billion net of SGC's revenue from Shah Deniz from its gas and condensate sales), out of which US$1.7 billion has been invested by shareholders (i.e. Government of Azerbaijan and SOCAR); US$2.5 billion financed through a bond offer placed to SOFAZ and US$1 billion debt has been arranged through a Eurobond issuance in March 2016. The remaining US$6.1 billion is expected to be financed through public debt, long term loans from IFIs, commercial banks, and future bond

[28] SGC's share of cash flows for SD2 will increase to 16.67 percent when it acquires an additional 10 percent of shares through a Deferred Share Purchase Agreement that materializes around 2023.

issuance. The Government of Azerbaijan is committed to finance any residual balance through budget allocations. In addition, SGC is also perusing credit enhancement instruments such as MIGA NHSFO guarantee cover, to leverage commercial debt at improved terms.

13. SGC's investment requirements for TANAP are approximately US$5.0 billion. After accounting for equity and loan contributions, share divestment to SOCAR Turkey Enerji A.Ş. (expected to be concluded in 2017) and a reduction in the capital cost of the Project, the net financing requirement (2016-2019) is US$3.5 billion. In addition to the proposed IBRD loan of US$400 million and AIIB loan of US$600 million, SGC is in discussions with EIB and EBRD for loans of US$500 million and expects to raise US$1 billion of commercial lending for the Project (proposed to be largely backed by MIGA). The balance of financing needs will be met from the proceeds of the Eurobond, SOFAZ bond and the Azerbaijan state budget.

14. Between the years 2014-2019 is when construction work takes place and the bulk of capital investments are being made. By 2020 (when TAP is expected to be commissioned and gas starts flowing to European customers), SGC becomes net cash positive with a significant proportion of its annual income from that year onwards estimated to be derived from gas transportation. From 2021 to 2024, SGC has a challenging net cash position as well as a low debt service coverage ratio due to large amount of repayment on the SOFAZ bond. SGC has several options to maintain its financial sustainability, including restructuring of the SOFAZ bonds, additional equity injections by shareholders. With the overall prospect of success of the Program as well as the full support of the Government, the above-mentioned risks should not be significant.

15. SGC is a single purpose vehicle that relies on the underlining projects to generate and distribute cash to repay debt and distribute dividend. Up to 2016, SGC financed its investments entirely from its equity and through bonds purchased by SOFAZ, in recognition of the highest priority of the Program to Azerbaijan. It is reasonable to expect such financing would also be available in case of cash shortfalls to help ensure uninterrupted production and debt service to lenders. Table 10 provides a summary of SGCs' estimated key financial indicators. Certain data during the construction period is not presented as revenues from the Program are yet to build up.

Table 10: SGC's Estimated Key Financial Indicators

Financial Summary	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Current Ratio	-	-	-	-	1.7	1.5	3.0	4.8	6.81	2.1
Leverage Ratio (Total Liability / Total Assets	73%	82%	86%	89%	88%	89%	88%	82%	76%	71%
Return on Assets (Net Income/Total Assets)	-	-	-	-	1.9%	-1.4%	0.1%	6.6%	6.4%	6.3%
Return on Equity (Net Income /Total Equity)	-	-	-	-	15.5%	-13.1%	1.0%	36.9%	27.1%	18.4%

Table 11: Estimated Economic Costs and Benefits (US$ billion) (Bank staff estimates)

	2013	2014	2015	2016	2017	2018	2019	2020	2022	2024	2026	2028	2030	2032	2034	2036
Economic Costs																
Estimated Capital costs	-0.1	-0.3	-0.9	-2.4	-2.9	-1.4	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estimated Operating costs	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Economic Benefits																
Estimated Revenues	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0	1.6	1.6	1.6	1.7	1.7	1.7	1.2	1.3
Cash Flows	**-0.1**	**-0.3**	**-0.9**	**-2.4**	**-2.9**	**-1.4**	**-0.6**	**0.8**	**1.4**	**1.4**	**1.4**	**1.4**	**1.5**	**1.5**	**1.0**	**1.0**
ERR	**10%**															
NPV	**US$2.56 billion**															

Table 12: Estimated Financial Costs and Benefits (US$ billion) (Bank staff estimates)

	2013	2014	2015	2016	2017	2018	2019	2020	2022	2024	2026	2028	2030	2032	2034	2036
Financial Costs																
Estimated Capital costs	-0.1	-0.3	-0.9	-2.4	-2.9	-1.4	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estimated Operating costs	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Financial Benefits																
Estimated Revenues	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0	1.6	1.6	1.6	1.7	1.7	1.7	1.2	1.3
Cash Flows	**-0.1**	**-0.3**	**-0.9**	**-2.4**	**-2.9**	**-1.4**	**-0.6**	**0.8**	**1.3**	**1.3**	**1.3**	**1.3**	**1.3**	**1.4**	**0.9**	**1.0**
FRR	**9%**															
NPV	**US$1.81 billion**															

Annex 5: Implementation Support Plan

Strategy and Approach for Implementation Support

1. The implementation support plan ensures that the Bank mobilizes the required resources to provide TANAP, BOTAŞ and SGC with the necessary support to implement the project.

2. TANAP Natural Gas Transmission Company is a special purpose private company established for the purpose of constructing and operating the TANAP Pipeline System. As a commercially oriented company, it operates with a high degree of efficiency and is staffed with experienced personnel in both management and professional ranks.

3. While the project infrastructure activities crosses the entire territory of Turkey from East to West with a distance of about 1,850 km, TANAP construction activities are already underway and are moving at rapid speed. TANAP is also supported by an EPCM contractor whose responsibilities primarily involve project management of construction activities but also extend to ensuring compliance with environment and social safeguards, etc. EPCM tasks are described in detail in Section VI. B. of the PAD.

4. Close monitoring and supervision of construction activities and implementation of ESMPs will be critical. The project would be a high supervision cost project given its' scale and Bank management will allocate a supervision budget based on the premise that it spans a large territory, is highly visible by many stakeholders and has clients in two countries (Turkey and Azerbaijan) in addition to several IFIs and partners with whom coordination will be necessary.

5. The plan will be undertaken by Bank staff and is based on three major principles: (i) consistent review of fiduciary procedures and controls within the implementing agencies; (ii) frequent field-based supervision of project activities; and iii) continual high-level policy dialogue on improving institutional capacity of the implementing agencies.

a. *Procurement:* all major contracts have been awarded and the few remaining will be completed by end-2016. The EPCM is assisting TANAP with managing the procurement processes. The Bank will review progress on each of the contracts to be financed by the loan and monitor the progress during the implementation period against Procurement Plan agreed with TANAP.

b. *Financial management:* the Bank would review the project's financial management systems, including but not limited to accounting, reporting, internal controls. The Bank will also review withdrawal applications for disbursements against eligible expenditures for SGC and BOTAŞ to streamline the fund flow process to TANAP.

c. *Environmental and Social Safeguards:* the Bank will supervise and provide support to TANAP for the implementation of the ESMP and RAP and other plans. This will require significant level of effort given the scope and depth of

documentation and processes to ensure compliance with all agreed management plans and actions.

d. *Citizen Engagement and Outreach:* Considering the extent to which the project will engage communities along the ROW, the Bank will continue to support TANAP with its outreach to local villagers including on consultations carried out during project implementation.

Implementation Support Plan

6. The Bank team would consist of staff located in Headquarters in Washington, DC, Ankara, and Baku amongst other possible locations. Fiduciary and safeguards staff are located in Ankara in order to ensure timely, efficient and effective implementation support to the TANAP. Formal supervision and field trips, as required, would be carried out semi-annually or as often as rendered necessary by implementation needs.

a. *Technical inputs:* Gas transmission expertise. The Bank team will provide in-house expertise or contract individual external experts to bring in the required expertise, primarily on gas transmission. Although given the depth of expertise on the client side this may not be necessary. During construction and until commissioning, supervision will be carried out to ensure contractual obligations are met. Fields visits will be carried out to project sites as needed.

b. *Fiduciary requirements and inputs:* The Bank team will support TANAP and both borrowers in Turkey and Azerbaijan.

c. *Safeguards:* The project's environmental and social impacts management plans are extensive and TANAP will be responsible for ensuring that the ESMP and RAP are properly implemented. TANAP is supported by third-party monitoring company for the environmental and social performance of project implementation and conducts audits of contractor compliance with environment and social safeguards requirements. Environment and social specialists will provide guidance and inputs TANAP and monitor the progress of implementation of the ESMP, RAP and other action plans.

d. *Operations:* Task Team Leaders will provide day-to-day supervision of all operational aspects and coordination with the client and among the Bank team members.

7. The budget for this Implementation Support Plan is estimated at US$450,000 per annum. The following tables list the skills required and an estimate of resources to support project implementation. A list of project partners is also provided:

Time	***Focus***	***Skills Needed***	***Resource Estimate***	***Partner Role***
First twelve months	*Technical supervision of infrastructure works and contract management*	*TTLs;* *Procurement Specialist*	*2x6 Staff Weeks* *2x6 Staff Weeks*	-
	Environmental and Social Monitoring	*Senior Environmental Specialist* *Environmental Specialist* *Senior Social Development Specialist* *Social Specialist Development*	*1x6 Weeks* *1x4 Staff Weeks* *1x6 Staff Weeks* *1x4 Staff Weeks*	-
	Financial Management, Disbursement, Reports	*Financial Management Specialist*	*2x2 Staff Weeks*	-
12-48 months	*Environmental and Social Monitoring*	*Senior Environmental Specialist* *Environmental Specialist* *Senior Social Development Specialist* *Social Specialist Development*	*1x4 Weeks* *1x2 Staff Weeks* *1x4 Staff Weeks* *1x2 Staff Weeks*	-
	Financial Management, Disbursement, Reports	*Financial Management Specialist*	*2x2 Staff Weeks*	-
	Task Team Leadership	*TTLs*	*2x6 Staff Weeks*	-

Skills Mix Required

Skills Needed	***Number of Staff Weeks***	***Number of Trips***	***Comments***
Task Team Leaders	*2x6 Annually*	*Field trips as required*	*International and Country Office based*
Senior Environmental Specialist	*6 Annually*	*Field trips as required*	*Country office based*
Environmental Specialist	*4 Annually the first 18 months then 2 Annually*	*Field trips as required*	*Country office based*
Senior Social Development Specialist	*6 Annually*	*Field trips as required*	*International*
Social Development Specialist	*4 Annually the first 18 months then 2 Annually*	*Field trips as required*	*Country office based*
Senior Procurement Specialist	*6 Annually*	*Field trips as required*	*Country office based*
Senior Financial Management Specialist	*2 Annually*	*Field trips as required*	*Country office based*
Financial Management Specialist	*2 Annually*	*Field trips as required*	*Country office based*
Senior Finance Officer	*1 Annually*	*Field trips as required*	*N/A*
Senior Communications Specialist	*2 Annually*	*Field trips as required*	*International*
Administrative and Client Support Staff	*2x6 Annually*	*Not required*	*N/A*

Partners

Name	***Institution/Country***	***Role***
AIIB	*IFI*	*Partner financier*
EIB	*IFI*	*Partner financier*
EBRD	*IFI*	*Partner financier*
MIGA	*IFI*	*Partner financier*

Map – IBRD 42238