



WORKING GROUP PAPER ON INFRASTRUCTURE
(ENERGY, MINES AND TRANSPORT)

Table of Contents

1- Introduction	4
2- Regional cooperation and international partner support	5
3- The Afghan-regional resource corridor initiative	6
4- Transport infrastructure	7
5- Civil Aviation	
a. Roads	8
b. Railway	8
c. Mining	10
d. Energy	12

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ANDS	Afghanistan National Development Strategy
APTTA	Afghanistan Pakistan Trade & Transit Agreement
ARR	Advanced Reform and Restructuring
ARTF	Afghanistan Reconstruction Trust Fund
ASEAN	Association of South East Asian Nations
ASYCUDA	Automated System for Customs Data
CAREC	Central Asia Regional Economic Cooperation
DC	Development Corridor
DFID	Department for International Development
ECO	Economic Cooperation Organizations
EITI	Extractive Industries Transparency Initiative
ERR	Economic Rate of Return
EU	European Union
GCC	Gulf Cooperation Council
GDP	Gross Domestic Production
GoIRA	Government of Islamic Republic of Afghanistan
IDLG	Independent Directorate of Local Governance
IMF	International Monetary Fund
LTEFM	Long-Term Extractive Industries Fiscal Model
LTFE	Long Term Fiscal Framework
MCC	Metallurgical Construction Corporation (China)
MoCI	Ministry of Commerce and Industries
MoEW	Ministry of Energy and Water
MoF	Ministry of Finance
MoM	Ministry of Mines
MoPW	Ministry of Public works
MoTCA	Ministry of Transportation and Civil Aviation
MTBF	Medium Term Budget Framework
MTEF	Medium Term Expenditure Framework
MTFF	Medium Term Fiscal Framework
NEPS	North East Power System
PRGF	Poverty Reduction and Growth Facility
PRR	Priority Reform and Restructuring
PRT	Provincial Reconstruction Team
SAARC	South Asian Association for Regional Cooperation
SCO	Shanghai Cooperation Organization
SDI	Spatial Development Initiative
SNG	Sub-National Governance
SPECA	Special Program for Economies of Central Asia
TAP	Turkmenistan Afghanistan Pakistan Agreement
TAPI	Turkmenistan Afghanistan Pakistan India (Agreement)
UN	United Nations
UNCAC	United Nations Convention against Corruption
UNDP	United Nation Development Program
WB	World Bank
WTO	World Trade Organization

A) INTRODUCTION

- i. This paper builds on (i) the infrastructure development work undertaken for the Kabul Conference, held in Kabul in July 2010 (ii) the Afghanistan Regional Resource Corridor Initiative (AR-RCI) and (iii) the Regional Cooperation Concept Paper presented at the Kabul Conference. Central to this work is the importance of regional economic integration and cooperation. Regional cooperation provides the enabling environment; and economic integration demands a clear focus on trade-based infrastructure development and institutional harmonization.
- ii. Afghanistan's strategic market position between Central and South Asia and as a potential land bridge linking an expanding Chinese economy with the Middle East and beyond, means that Afghanistan's infrastructural endowment will heavily shape the future of regional trade relations for decades to come, particularly given the expansion of the important CAREC network and improved multilateral trading through SAARC and ECO member nations.
- iii. When viewed in a strategic market context within an emerging regional growth framework, Afghanistan remains the weakest link in an otherwise growth oriented region, which implies that both regional and private/corporate resources could be mobilized better in the interests of the region as a whole. Therefore a long-term economic perspective is required to determine the costs and benefits of the proposed initiative.
- iv. Infrastructure development is a core contributor to the Afghanistan Development Strategy (ANDS). The ANDS objectives for the three themes of this infrastructure working group paper are:
 - **Transport:** To have a safe, integrated transportation network that ensures connectivity and that enables low-cost and reliable movement of people and goods domestically as well as to and from foreign destinations;
 - **Mining:** To establish Afghanistan as an attractive destination for investment in survey, exploration and development of mineral resources; and
 - **Energy:** To deliver long term reliable, affordable energy based on market-based private sector investment and public sector oversight to drive growth
- v. Development of infrastructure to support the transport, energy and mining sectors will enhance trade opportunities and increase prosperity and stability in the region. It will support Afghanistan's transition to financial independence and develop a business climate that enables private investment. Under the integrated plan for economic development the Government of Afghanistan has developed three development clusters which include Economic and Infrastructure Development with a fund ceiling of \$3.8bn.

- vi. Delivering on formal growth requires regional and global market integration as integrated economies perform better than those dependent on domestic markets alone. Formal growth, in Afghanistan's strategic and institutional market context, is best achieved along well-governed trade corridors around which energy; mining and extraction processing can be developed. The progressive expansion of the transport corridors linking China to the Middle East and Central Asia to South Asia represent a major opportunity for Afghanistan to become a 'land-bridge' for domestic, regional and global trade
- vii. Our vision is to connect Afghanistan to the region and the rest of the world through the promotion of inter-state resource corridors as a means of realizing Afghanistan's natural resource, growth, revenue and employment potential. To achieve this, large-scale infrastructure development will need to be integrated along extraction routes and trade and transit (resource) corridors, around which customs, tax compliance and enforcement capacities will need to be reinforced and strengthened. National roads, railroad and civil aviation investments will therefore underpin what might best be viewed as an integrated economic initiative linking infrastructure investments with corridors of high export potential on the extractive industry side.
- viii. Our vision cannot be achieved without the close cooperation of our regional and international partners. It will involve improved connectivity with our neighbors through the constructions and rehabilitation of rail and road networks, thereby improving trade relations and access to wider markets; cooperation with regional governments to establish a resource corridor enabling environment; and will involve increased investment in resource corridors through public-private partnerships, to name a few examples.
- ix. Infrastructure development has a direct impact on the success of the mining, energy and transport sectors. The Regional Economic Cooperation Conference on Afghanistan (RECCA) provides a practical forum to progress the Regional Corridor Initiative. This paper will elaborate on five key priorities in the mining, energy and transport sectors, which will be integral to the development of the Afghanistan Regional Resource Corridor Initiative. Each priority area will have specific regional deliverables for action, which will be followed up through the RECCA process.

B) REGIONAL COOPERATION AND INTERNATIONAL SUPPORT

- i. Expediting regional economic integration and cooperation is best achieved through the closer alignment and harmonization of governance systems, right-financing and collaborative infrastructure development.
- ii. Investments made at the national level will need to be mapped to a wider regional infrastructure development framework, at the sectoral level (roads, mining, energy etc.) and cross-sectoral levels (trade policy, trading systems and standards,

institutional collaboration etc.). Linking regional economies together through existing institutional arrangements demands a focus strengthening regional cooperation with ECO, TRACECA, CAREC and SAARC in particular.

- iii. The role of the international community, in particular, multi-lateral investment banks such as the Asian Development Bank, World Bank, Islamic Development Bank and the provision of regional technical assistance to meet the long-term vision is vital.

C) THE AFGHAN-REGIONAL RESOURCE CORRIDOR INITIATIVE

- i. The Afghanistan-Regional Resource Corridor Initiative comes at a critical juncture in Afghanistan's economic transition and is central to our plans for wider regional economic integration and cooperation. This initiative lays the foundation for what will amount to a 'spatial development initiative' potentially leading to significant returns on economic growth, revenue mobilization and medium to long-term employment generation across large parts of rural Afghanistan. The 'phased' initiative, would aim to transform Afghanistan's natural 'comparative' advantage into a 'competitive' advantage based on progressive and incremental improvements in productivity, and targeted economic governance reforms.
- ii. Strengthening Afghanistan's resource governance and institutional capacity, in compliance with international protocols such as the Extractive Industries Transparency Initiative (EITI), alongside the formal adoption of an industrial development policy, would provide a strong framework to support the Initiative.
- iii. AR-RCI will support Afghanistan's transition to financial independence whilst developing a business climate that enables private investment. Phase I, presented in this paper, covers a two-year period, and will involve continuing appraisal, feasibility and design across the component structures prior to implementation of Phase II.
- iv. It will require close coordination with the Extractive Industry Excellence Program, the Integrated Trade and Small to Medium Enterprise Support Facility, and Advanced Reform and Restructuring (ARR) Program. The potential impact of the initiative will be significant in both social and economic terms. By 2025, assuming the execution of this Phase, the contribution to GDP from related components of the services sector and industry could represent an increase from 18 per cent to almost 50 per cent of GDP. Revenue effects could include increasing net revenue earning potential to US\$1 billion by 2017 and US\$3 billion by 2025 with second round tax revenues increase exponentially up to 2025 followed by diminishing increases thereafter.
- v. With the burden of development shared with regional neighbors, the international community and the private sector, clear public private partnerships arrangements are a necessity. In addition the Afghan Government will need to work closely with

international and regional partners once detailed programs are developed so that recommendations are open to independent peer review to ensure projected returns are as robust as possible.

D) TRANSPORT INFRASTRUCTURE

- i. Development of regional transport infrastructure, to allow trade, transit and resource extraction to take place is vital to the collective interests of the regional community. Furthermore, infrastructure is vital to lowering the costs of transport and is therefore a direct contribution to increased competition. Given the difficulties in private sector development in the absence of public infrastructures, leadership by regional governments will be critical to enabling the private sector to play its roll in wider regional economic growth.
- ii. Strong public private partnerships will need to be developed to release the latent potential of private equity. This section, outlines the core investments required covering (i) roads (ii) railway (iii) civil aviation (iv) mining and (v) energy.

I. ROADS

- I. Connectivity represents a vital support network to other sectors, which are unable to perform well without an up-graded transport and logistics infrastructure. Afghanistan offers new and expanding trade routes between Central and South Asia. The rehabilitation and upgrading of national and regional trade and transport links (rail and road) between Afghanistan, Pakistan and Iran as well as upstream linkages with China and Central Asia will be essential for the transportation of freight, cargo and services. Roads and civil aviation programs need to focus investments around supporting the corridor concept, in its linkage with the extractive industry and other national programs (energy and water), with a focus on removing bottlenecks.
- iii. The following list of potential investments would therefore be conditioned around meeting the goals of the corridor concept. The completion of the following projects will provide immediate and essential support to the corridor initiative: (i) Second two-lane Kabul and Jalalabad (Border Province with Pakistan) (ii) Second two-lane of Kabul – Jabal Saraj (iii) Faizabad – Eshkashim (Border Province with Tajikistan) and Anjuman Pass (Panjsher) to Ishkashim (Afghan – Tajik border) (iv) Jabal Saraj – Nijrab (v) North - South Corridor (Balkh to Uruzgan Provinces) to (vi) East - West Corridor (Herat to Bamyan Provinces) (vi) Afghanistan Ring Road, to be completed by 2012.
- iv. Key recommendations for road sector development, relevant to RECCA include:
 - Agreement on prioritization of major collaborative regional road investments with support from international and regional partners;

- Agreement to establish a framework for national and regional Public Private Partnerships;
- Agreement on a trans-boundary policy and institutional investment priorities;
- Establishment of a regional road transport master plan and integration benchmarks to support the Resource Corridor Initiative and regional cooperation;

II. RAILWAY

- i. Establishing an integrated regional railway system would provide the foundation for significant investments, all of which are essential for diversifying growth and creating sustainable employment. Such an approach would also strengthen market competitiveness across the entire region lowering import and export costs, whilst also opening up new markets.
- ii. A railway program provides the most significant transport related investment and is critical to the success of the Resource Corridor. To make the selected resource corridor(s) effective, existing plans for railway development will need to be re-developed within the resource corridor framework in relation to corridor viability.
- iii. Current railway investments (ongoing and planned) include: (i) Kunduz –Herat Railway (Sher Khan Bandar - Herat) (ii) Kunduz- Logar – Kabul - Jalalabad Railway (Kunduz –Jalalabad) (iii) Jalalabad Railway (Jalalabad- Torkham) (iv) Kandahar Railway (Chaman - Spin Boldak - Kandahar) (v) provincial railway projects (Herat – Farah – Lash Kargah – Qalat - Kandahar); and (vi) Nimroz Railway (Delaram-Zaranj) to be completed by 2013.
- iv. Key recommendations for railway sector development, relevant to RECCA discussions include to:
 - Agree on which technical and logistical issues need to be resolved – such as gauges – to allow greater integration to occur;
 - Discuss and secure financing arrangements for a more holistic approach to regional railway development; and
 - Develop a clearer understanding of the linkages with other vital sectors such as mineral resources and SME development.
 - Establish a Regional Railway Working Group to implement the above and ensure the alignment and harmonization of regional efforts, within six months;

iii. CIVIL AVIATION

Afghanistan is a landlocked country located in South-Central Asia. The country is 249,935 Square miles in area (647,500 Square kilometers), Afghanistan is bordered by Iran in the west, Pakistan in the south and east, Turkmenistan, Uzbekistan, and Tajikistan in the north, and China in the far northeast. The country is mountainous, with plains in the north and southwest. This geography makes robust civil aviation development a vital part of Afghanistan's economic strategy in the region and internationally.

Civil aviation is part of the regional resource corridor initiative underpinning an economic initiative linking infrastructure investments with corridors of high export potential on the extractive industry side. From these major resource corridors infrastructure and services will be built allowing for an integrated approach to national development that positively impacts growth, employment and market-making opportunities in all provinces. Additionally, civil aviation provides an avenue toward the establishment of an aerial silk road. With continued investment it would allow greater connectivity into the regional and global economy.

Afghanistan has the potential to be a hub of civil aviation in the region however considerable effort is required to accomplish this goal. A significant amount of emphasis is being placed on future aviation improvements to include building management capacity, developing policy/regulations, increasing safety, personnel training, and proper planning and funding of airport infrastructure projects. The airports in Afghanistan are currently divided into three categories:

- 1) International Airports – Key gateways for bridging travel to the Middle East, Europe, and other continents.
 - Kabul
 - Kandahar
 - Mazar e Sharif
 - Herat
2. Regional Airports – Ideal for helping facilitate travel to the Hajj and frequent flights to places such as United Arab Emirates and Pakistan. Bamyan; Farah; Nimroz; Paktika; Jalalabad; Khost; Kunduz; Faizabad; Qala e Now; Sarwa; Terin Kot
3. Access Airports – Important links to domestic travel. A majority of these airports were constructed in the 1960s and require a dirt access road, control tower, and facilities for staff and passengers, Darwaz; Sheghnan; Wakhan; Nili; Lal Sarjantal; Nooristan; Rustaq

Key recommendations for civil aviation sector development, relevant to the RECCA discussions include:

In particular, Herat Airport is expected to be one of the first airfields currently in use by International Security Assistance Forces that will transfer to GIRoA. Additionally, making Herat an international airport will provide increased opportunities in Dubai.

MINING

- i. Afghanistan possesses significant mineral resources, including known deposits of copper, iron, barite, sulphur, talc, chromium, magnesium, salt, mica, marble, emeralds, lapis lazuli, asbestos, nickel, mercury, gold, silver, lead, zinc, fluor spar, bauxite, beryllium and lithium (US Geological Survey, 2007). Significant deposits exist across the region covering various mineral deposits from oil, to iron, coal and gold. Clearly, there are considerable advantages for all regional neighbors to develop a more coordinated approach to development of the regional extractive industries.
- ii. In Afghanistan, world-class copper and iron deposits are also located at Aynak in Logar province and at Hajigak in Bamyan province. A substantial semi-precious stone industry also exists in Afghanistan, but is largely informal, with stones passing into Pakistan for cutting and polishing (World Bank, 2004). There are active marble quarries at various locations, including Balkh, Helmand, Herat, Kabul and Kandahar, but as with semi-precious stones, marble is cut and polished in Pakistan.
- III. Coal was historically mined in Afghanistan at 180,000 tons per year and could be a significant energy source. Oil and gas reserves may be far greater than previously believed: The US Geological Survey estimates that two northern regions, the Afghan-Tajik basin and the Amu Darya basin, could contain up to 1.6 billion barrels of oil and 15.7 trillion cubic feet of natural gas (Export Promotion Agency minerals information).
- iv. Support for the establishment of an enabling environment for the Resource Corridor Initiative should focus on the establishment of a Regional Heads of State multilateral structure which would appoint Ministers to the Regional Resource Corridor Technical Committee (RRC-TC), to be comprised of relevant Afghan and regional governments and leading experts, as well as the establishment of a dedicated AR-RCI Commission, within six months.
- v. The Afghan Ministry of Foreign Affairs should facilitate regional relations, co-led by the Ministry of Commerce, Ministry of Mines and Ministry of Economy. The Commission, to be led by a Commissioner appointed by the President, with the rank

- of Minister without portfolio, would be established on a temporary basis for Phases I and II to provide cross-ministerial coordination and coordination with regional ministries. Further elements of the enabling environment include the appointment of a World Class Project Manager, the establishment of an International Cooperation Partner's Support Group to include relevant IFIs, and the identification of donors in a position to mobilize technical support alongside relevant representatives from regional organizations, within one year.
- vi. The Resource Corridor could commence with the signature of a Memorandum of Understanding between all government entities and the Resource Corridor Commission, as the basis for establishing a whole-of-government approach, within six months.
 - vii. Regional public-private partnerships and investment are vital. Outside of establishing regional trade corridors, a regional financing framework and strategy will be key to both rail and transport investments. The Afghan Ministry of Finance will need to develop public-private partnership arrangements to create the framework for partnership between the Afghan Government, regional governments and trans-national corporations. This framework should be completed within one year.
 - viii. The Ministry of Finance should attain Afghan membership of the Extractive Industries Transparency Initiative (EITI) and other bodies as required, within one year.
 - ix. Key issues include identifying which 'anchor' projects makes the entire initiative feasible from an economic point of view, what policy, institutional and governance reforms are going to be required across the life of the initiative, and the optimal resource corridor location: (i) Sheberghan - Kabul-Kandahar - Reko Diq – Gwadar RC (ii) the Sheberghan-Herat-Torbat-Bafiq-Bandar RC or (iii) corridors and feeder corridors linking north into Turkmenistan, Uzbekistan and Tajikistan or (iv) just enclave type developments linking single mines to regional markets. Potential risks (even if successful) include political instability, insecurity, the 'resource-curse,' transparency, accountability and equity. A decision will have to be reached within three months.
 - x. Given improved trade relations with Pakistan there is a pre-requisite for opening corridor based trading agreements. Assuming all other factors (financial, economic, security and market viability) meet the minimum set of requirements to safeguard both public and private investments, execution of Phase I will need to include the resolution of certain technical and design issues, whilst also addressing several high-level risks.
 - xi. Key issues include identifying which 'anchor' projects makes the entire initiative feasible from an economic point of view, what policy, institutional and governance reforms are going to be required across the life of the initiative, and the optimal

resource corridor location: (i) Sheberghan - Kabul-Kandahar - Reko Diq - Gwadar Resource Corridor (called the Sheberghan-Kabul-Gwadar RC) (ii) the Sheberghan – Heart – Torbat – Bafiq - Bandar Resource Corridor or (iii) Corridors and Feeder Corridors linking north into Turkmenistan, Uzbekistan and Tajikistan – through Central Asia and reaching into Turkey and Eastern Europe.

ENERGY

- i. To address financing constraints the Kabul Conference on Afghanistan in July 2010 agreed that a special Infrastructure Trust Fund Support should be established leveraging the support and the capabilities of the Asian Development Bank and the World Bank, within six months.
- ii. The Central Asia - South Asia (CASA) 1000 electricity transmission initiative member countries (Kyrgyzstan, Tajikistan, Afghanistan, Pakistan) with support from the World Bank, is designed to provide Afghanistan with 300 MW and a further 1000 MW of power to Pakistan. Since RECCA III, the feasibility study has been completed. CASA member countries met in October 2010 to agree the findings of the feasibility study. The next step will be for the World Bank, Islamic Development Bank and the Asia Development Bank to agree funding in order to start the design phase, within six months.
- iii. Significant progress has been made on the Turkmenistan – Afghanistan – Pakistan – India gas pipeline (TAPI). The TAPI technical working group consisting of the above four countries and the Asia Development Bank (ADB) met in August 2010, after a two-year absence. The Heads of Agreement has been finalized and signed and the Gas Pipeline Framework Agreement initialed by the four countries. It also took account of the provision of a new gas field in Gunorta Yoloten-Osman, Turkmenistan as the energy source for the trans-regional pipeline.
- iv. The seventh Working Group deliberated and achieved progress on the text of the Inter-Governmental Agreement, and the Gas Sales and Purchase Agreement. Both documents will be signed by Heads of State of relevant countries in December 2010.
- v. Key recommendations for energy sector development in support of the Resource Corridor Initiative are:
 - Establishment of a Regional Energy Working Group to identify alignment and harmonization of efforts to support closer economic integration through addressing regional energy planning needs, within one year. Areas for cooperation include: Identification of regional energy policies and priorities to support road, rail and mining investments; Identification of how the proposed Infrastructure Facility and investment priorities can be best mapped into a regional investment framework.