



March 2013

Comprehensive Information on Complex Crises

*Report Update*

# The Rise of the Afghan Rails: Regional Railway Linkages and Economic Growth in Afghanistan

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*This document provides an update to the November 2010 CFC thematic report "[The Rise of the Afghan Rails: Regional Railway Linkages and Economic Growth in Afghanistan](#)." It discusses new developments in Afghanistan's plans to develop a cross-country railway network and its relevance to Afghanistan's economic development, covering a period from November 2010 to March 2013. Related information is available at [www.cimicweb.org](http://www.cimicweb.org). **Hyperlinks to source material are highlighted in blue and underlined in the text.***

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Transportation infrastructure in general, and a reliable railway network in particular, are indispensable to Afghanistan's [economic development](#) and its ability to participate in intra-regional trade. Despite this need and notable improvements in the last years, Afghan railway infrastructure remains significantly [underdeveloped](#) with less than 100 km of track built to date. A discovery of massive mineral deposits in Afghanistan adds to the immediate relevance of the railway system, given that rails are necessary to transport the minerals out of the country. Consequently, the [lack of railroads](#) may complicate a long-term goal to harness Afghanistan's mineral endowment as a key driver of Afghanistan's economic growth when foreign aid diminishes in the coming years.

## Existing Rails

Afghanistan has a very limited railway network, with only [two railway links](#) currently administered by the Afghan Ministry of Transport and Civil Aviation (MoTCA). The first link extends from the city of Mazar-e Sharif to the border town of Hairatan in the northern province of [Balkh](#); from Hairatan the railway continues to Termez in Uzbekistan, and from there onwards to other destinations in Central Asia and Europe. The second link commences in the city of Turghundi at the Afghan-Turkmen border in [Herat](#) province; from the border crossing the railway

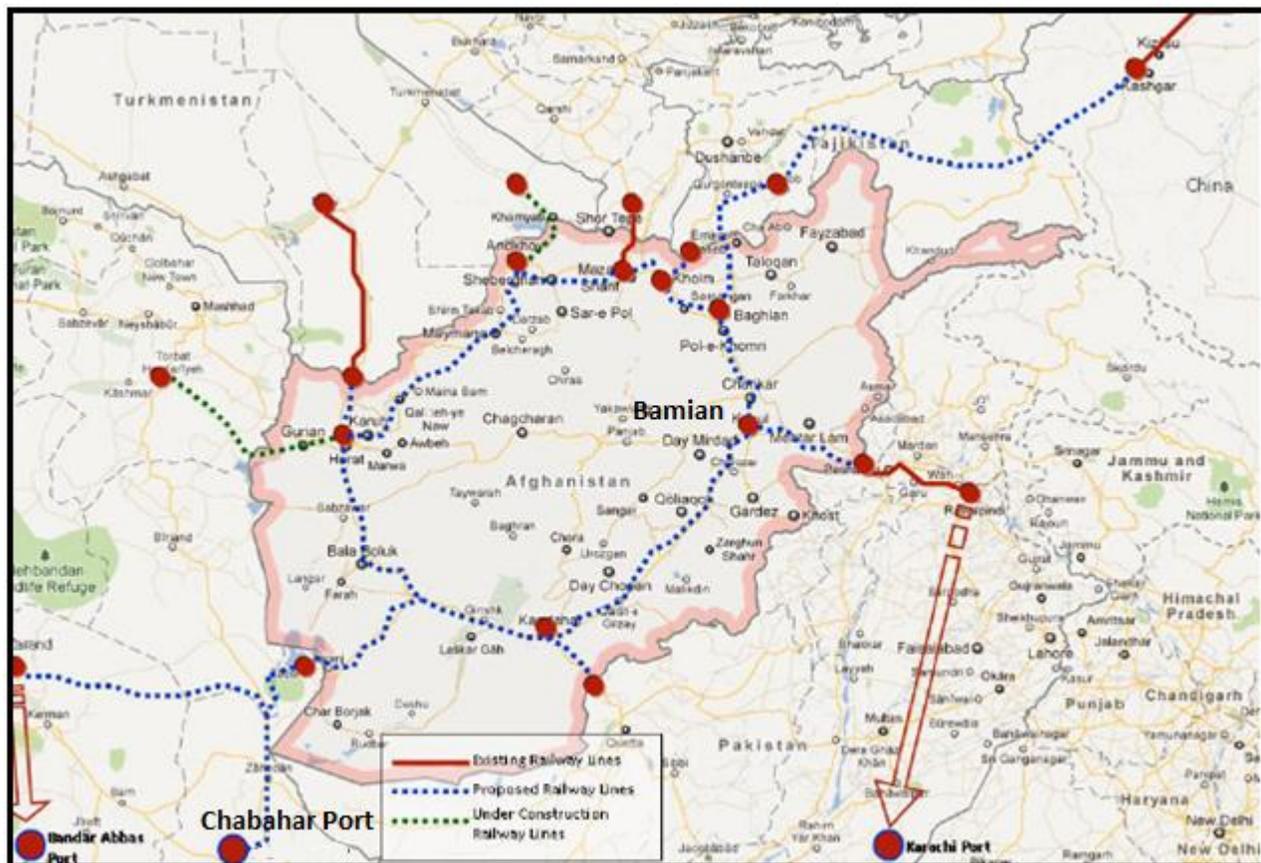
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runs to Turkmenistan through the city of Serhetabad (Figure I).

Opened in [August 2011](#), the Mazar-e Sharif – Hairatan railway is the longest and most important Afghan railway, according to *Railway Gazette International*. This [USD 170 million](#) project funded by the Asian Development Bank (ADB) constitutes [the first stage](#) of a larger rail cross-country network planned to bolster “internal, regional and ultimately international connectivity” which would facilitate cross-border commerce, according to a report by the US Department of Defence (DoD). The construction of the railway was agreed in 2008 as a part of the ADB-sponsored Central Asian Regional Economic Cooperation (CAREC)<sup>1</sup> programme. This programme has envisioned [interconnecting Central Asia](#) with South Asia and Europe through a network of highways and railways to stimulate trans-regional trade in addition to facilitating the access of landlocked Central Asian countries to sea ports, notes *Asia Times*. Despite becoming nominally operational since mid-2011, the first test train reached Mazar-e Sharif in late December 2011. Subsequently in February 2012, *Railway Gazette International* reported that this 75 km-rail commenced its limited operation by carrying [commercial cargo for the first time](#), including flour from Kazakhstan and timber from Siberia.

Figure I. Major Railway Developments in Afghanistan



Source: United Nations Economic Commission for Europe ([UNECE](#)), 2012.

The railway is critical because it will help release a bottleneck at Hairatan dry port at the Uzbek-Afghan border. This serves as a major hub for almost fifty per cent of Afghanistan’s total imports, including essential

<sup>1</sup> Created in 2001, [CAREC brings together](#) Afghanistan, Azerbaijan, China, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan, according to the ADB.



commodities such as oil, fuel, wheat, flour, fertilizers, construction materials, agricultural equipment and products, and consumer goods as well as humanitarian relief, according to the Afghan Ministry of Public Works (MoPW) and ADB's "[Railway Development Study](#)." In addition to markedly increasing the dry port's capacity by enabling it to handle up to ten times [more cargo](#), or 30,000-40,000 tonnes per month, the new railway will also help reduce transport costs, increase operation savings, and create job opportunities in the area, reports *The Guardian*. Containers will no longer be held on the Uzbek side of the border to await loading onto trucks as they were prior to the construction of the new rail.

An offshoot of Uzbekistan's State Railways Company (USRC) will operate the Mazar-e Sharif - Hairatan railway line for the [first three years](#), during which time it will assist Afghan counterparts in servicing and maintaining the rail and trains, notes an ADB study. While Afghan government-run company ASTRAS has assumed responsibility for loading and unloading operations, the usage of the railway is expected to remain constrained due to the [limited capacity](#) of the company, concludes a December 2012 DoD report. Furthermore, concerns remain that the new northern route through Mazar-e Sharif could be subject to insurgents' attacks.

### Prospective Railways

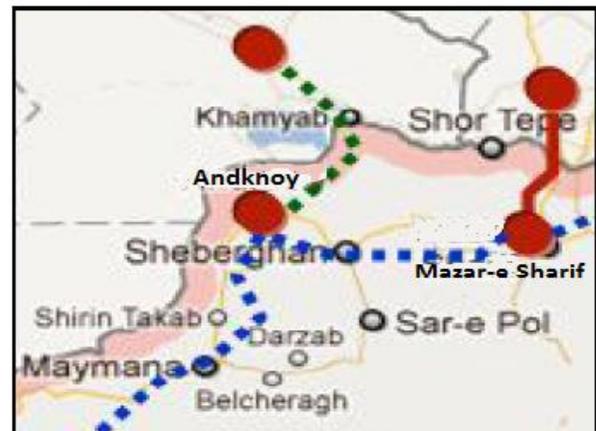
While the new railway line connecting Mazar-e Sharif to Hairatan constitutes, according to the ADB, "[the first rail project in Afghanistan's history](#)," the MoTCA lists additional rails that remain [under construction](#) or in the planning phase.

- Mazar-e Sharif – Andkhoy
- Herat and Sher Khan Bandar (at the border with Tajikistan)
- Kandahar – Spin Boldak – Quetta (Pakistan)
- Kabul – Jalalabad – Torkham – Peshawar (Pakistan)
- Aynak site – Kabul – Mazar-e Sharif – Torkham (at the border with Pakistan)

#### *Mazar-e Sharif – Andkhoy Railway*

In October 2011, the Afghan government opened bids to conduct a feasibility study for the Andkhoy railway project, a [future railroad](#) that would connect Afghanistan with Turkmenistan (*Figure 2*), reports *Pajhwok Afghan News*. This railway would constitute the second phase of the Mazar-e Sharif – Hairatan railway. The railway track would extend from the Naheb Abad area of Mazar-e Sharif and run 230 km westwards into the Aqina and Andkhoy areas in [Faryab province](#) bordering with Turkmenistan. In July 2012, Waheedullah Shahrani, Afghan Minister of Mines indicated that Afghanistan was [in negotiations](#) with the ADB over the provision of funding for this USD 500 million railway project, writes *Khaama Press*. Subsequently, MoPW officials noted in November 2012 that plans for the construction of the railway were [underway](#), reports *Tolo News*. This railway section is part of the [larger plan](#) to construct a railway in Afghanistan stretching 2,000 km from Mazar-e Sharif through Kabul and Kandahar, according to *Railway PRO*. Once completed, the Andkhoy railway should also facilitate Afghanistan's connection to the [Caspian Sea](#).

Figure 2. Mazar-e Sharif – Andkhoy Railway

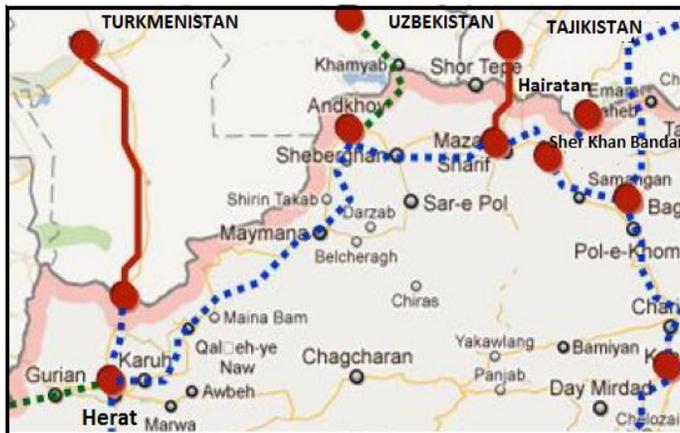


Source: [UNECE](#), 2012, modified by the author.

*Herat and Sher Khan Bandar Railways*

There are plans to [further extend](#) the Mazar-e Sharif – Hairatan rail line to Herat in the west and to Sher Khan Bandar ([Kunduz](#) province) in the east (*Figure 3*), according to the *Railway-Technology*. In Herat, the rail would connect Afghanistan to the Iranian city of Khaf, and from Sher Khan Bandar it would connect to Tajikistan. According to the MoPW and ADB’s “[Afghanistan: Railway Development Study](#)”, if constructed, the new railway between Sher Khan Bandar to Herat would connect Central Asia to South Asia, Caucasus and the Middle East via Iran. The railway would serve mainly for the transport of bulk and non-perishable cargo such as cotton, cement, bitumen for road construction, agricultural and off-highway construction equipment, oil and fuel, processed foods and consumer products. Together, the planned railway lines would [create a railway corridor](#) through northern Afghanistan. This corridor would enable freight coming from Tajikistan and Uzbekistan to reach Persian Gulf ports via rail without having to pass through Turkmenistan thereby increasing Afghanistan (as well as regional) transport connectivity and efficiency.

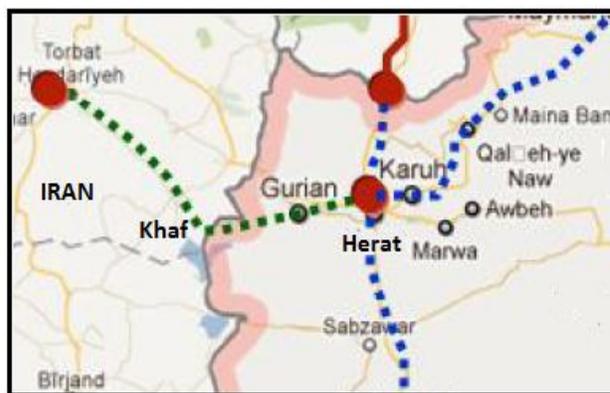
Figure 3. Herat and Sher Khan Bandar Railways



Source: [UNECE](#), 2012, modified by the author.

The [construction](#) of a 124 km-long railway link between Khaf in Iran and Herat in Afghanistan is currently in progress, according to the MoTCA. The railway consists of [four parts](#): two sections on Iranian soil and the other two in Afghanistan, writes *Wadsam*. In September 2012, Herat officials reported that [90 per cent of work](#) on the railway was finalised. However, in October 2012, the governor of Herat appealed to the Iranian government to [expedite the construction](#) of the Herat – Khaf link. The project commenced in 2007, originally slated for completion in 2009. The first phase of the railroad was finalised in 2011, but the completion of the whole project has been postponed several times. Currently, it is projected that Iran will construct the Afghanistan segment of the Herat – Khaf railway by the [end of 2013](#). According to Wali Mohammad Rassouli, Deputy Minister of MoPW, Iran plans to invest USD 75 million, with the ADB funding the rest of the project. Once completed, the rail line is projected to bring annually around UDS 200-300 million in [trade revenues](#). It is also expected to enhance Afghanistan’s trade with [Turkey and Europe](#) once Iran connects Khaf with the rest of its national railway network.

Figure 4. Herat – Khaf (Iran) Railway



Source: [UNECE](#), 2012, modified by the author.

*Kandahar – Quetta and Peshawar – Jalalabad Railways*

In July 2010, Afghanistan and Pakistan signed a [Memorandum of Understanding to build railway](#) tracks to expand bilateral trade between the two countries. The planned railways would connect Quetta in Pakistan to Spin Boldak



in the southern province of [Kandahar](#) in Afghanistan; and Peshawar in Pakistan to Jalalabad in Afghanistan (Figure 4), according to *Pajhwok*. In May 2012, *Railly News* reported that the Pakistani government [approved construction](#) of the 12 km-long railway section from Chaman in Pakistan to Spin Boldak; however, there appear to be no other details regarding the further development of these railways.

#### *Chabahar – Hajigak Rail Railway*

In November 2011, the *Hindustan Times* reported that India was [finalising its plan](#) to build a 900 km railway between Chabahar port in Iran and the mineral-rich Hajigak region in [Bamian](#) province of Afghanistan (Figure 1). The railway is necessary for an Indian consortium, led by the Steel Authority of India Limited (SAIL), to transport [iron ore from Hajigak's](#) mines, which hold an estimated USD 1 trillion worth of mineral resources, according to *The Telegraph*. Furthermore, this railway would provide Afghanistan with access to the sea, while reducing its dependence on Karachi port in Pakistan. In August 2012, *The Telegraph* reported that the three countries – India, Iran and Afghanistan – discussed setting up a joint working group before the end of 2012 to [finalise the details](#) of a trade and transit deal. This pact is seen as a precursor to the railway project.

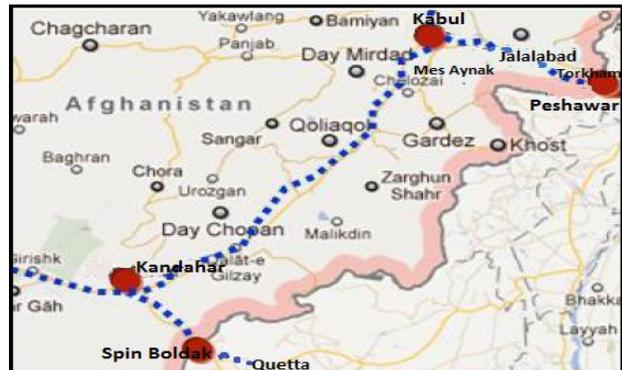
#### **Railways-Mining-Development Nexus**

Afghanistan's future [rail system is vital](#) to Afghanistan's economic expansion, particularly in the mineral extraction sector, notes a December 2012 "Report on Progress Toward Security and Stability in Afghanistan" by the Department of Defense (DoD). Given the impending withdrawal of the coalition forces in 2014 and diminishing foreign aid, the Afghan government and the international community hope that potential revenues from Afghan mineral wealth, estimated to be worth some USD 1 trillion, will drive revitalisation of the Afghan economy. Lack of railroads is one of the main impediments to extracting economic benefit from mineral deposits since an effective railway system would be necessary to export the minerals. By 2016, Afghan leaders hope to generate about 15 per cent, or around USD 300 million of the Afghan government's civilian budget from the mining projects; and over the next 12 years the Afghan government would like to see the overall mining revenues account for up to [half of the country's GDP](#), according to *Wadsam*. According to former Afghan Finance Minister, Anwar-ul-haq Ahady, a cross-country railways system stretching to Afghanistan's neighbouring countries "will not only cause an [economic revolution](#) in Afghanistan, but will [also] have a tremendous impact on the evolution and growth of the regional economy," quotes the ADB. Likewise, the Afghan Ministry of Mines points out that if materialised, a railway network would serve as "[the vital catalyst](#)" for the development of other sectors that create a high number of jobs, including agriculture, animal, husbandry and agro-processing.

#### *Railways and Afghanistan's Mineral Wealth*

Although no large-scale mining is currently underway, there are plans for two major projects, both of which would benefit from a reliable railway network. As highlighted by the November 2010 [CFC report on Afghan rails](#), an effective railway system in Afghanistan is largely contingent upon China's Metallurgical Group Corporation's (MCC) commitment to build a cross-country railway network which would link Afghanistan to neighbouring countries. Specifically, a Chinese state-owned consortium which includes MCC and Jianxi Copper Co. pledged to invest [USD 3.5 billion](#) to develop the railways project. The requirement to construct railways was part of the

Figure 4. Kandahar-Quetta, Peshawar-Jalalabad



Source: [UNECE](#), 2012, modified by the author.



contract to exploit Aynak copper mine awarded to MCC in 2008. According to Afghan Minister of Mines, Wahidullah Shahrani, the plan is to connect Aynak mine with Kabul, from which MCC should build [two rail lines](#); one linking Kabul and Mazar-e Sharif to Uzbekistan via Hairatan, with the second line stretching into Pakistan through Jalalabad and Torkham. The construction of these 718 km-long railways has [not yet begun](#), writes *The New York Times*. The company initially planned to commence mining in 2009 but then postponed the project by three years. In 2012, the project was further [delayed until 2014](#), reports *Wadsam*. [Uncertainty](#) about the situation in the country after the imminent coalition forces' withdrawal, security concerns, demining of Soviet-era mines and the excavation of the site due to a discovery of Buddhist ruins and artefacts are among the main causes of the delay. Geologists estimate that Mes Aynak consists of the [world's second largest](#) known undeveloped copper deposits – making the development of the site critical to Afghanistan's economic future, adds *Wadsam*. If developed, it is estimated that the site has the potential to generate more than USD 1 billion annually for the Afghan government.

In October 2011, the Afghan Ministry of Mines announced that MCC would conduct a [preliminary technical study](#) for construction of Kabul – Mazar-e Sharif and Kabul – Torkham links. Although in a June 2012 interview, Shahrani revealed that MCC is [not “contractually obligated](#) to build the railroad.” Shahrani iterated that they had an option to abandon the project if the project is unprofitable, writes the *Wall Street Journal*. Meanwhile, MCC in consortium with Jianxi Copper Co. announced that it has plans to spend two years assessing the profitability and viability of the project, noting that it is difficult to specify when it will commence mining. Familiar with the project, Western officials view the China-led construction of the planned railway unlikely since companies can reportedly use [trucks instead of rail](#) to transport the copper from Afghanistan. In March 2013, the MoTCA still categorised the rail lines under [“proposed projects”](#).

The second major project concerns the Indian consortium's plan<sup>2</sup> to develop a large [Hajigak iron-ore deposit](#) in central Bamian province in cooperation with a Canadian company Kilo Goldmines Ltd. (KGL), according to *Bloomberg*. Afghanistan awarded the Hajigak iron-ore mining rights in November 2011. However, the investors project taking three years exploring this 1.8 million tonne iron deposit to determine whether it is profitable and feasible to extract and transport the minerals from Afghanistan. According to Indian Ministry of Mines policy director, Abdul Jalil Jumriany, the Indian group's tender included an offer to invest USD 1 billion in a railroad to export the ore. The planned railway would extend from Hajigak to the Iranian port of Chabhar. A draft report commissioned by the DoD viewed by *The Wall Street Journal*, however, concludes that transporting iron ore out of Afghanistan would necessitate the construction of up to [4,830 km of tracks](#), bridges and tunnels passing through 4,900-metres of mountain terrain, possibly making the project economically unviable, writes *The Wall Street Journal*. In the geologically difficult terrain between Bamian and Kabul, estimates for the construction of just one 970-km section of rail reportedly amount to nearly USD 7.5 billion. Although DoD researchers warn that the report's daunting projections may change, currently no railway route appears to be suitable for transporting iron ore from remote Bamian province located at 2,700-metres elevation, writes *The Wall Street Journal*. In December 2012, *Wadsam* reported that [negotiations](#) regarding the mining deal and the railway corridor between Bamian province and western province of Herat were underway. According to World Bank projections, if developed, the Aynak copper deposit and the Hajigak iron ore deposit will create [more than 90,000 jobs](#).

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<sup>2</sup> The Indian [group includes](#) state-owned Rashtriya Ispat Nigam Ltd, and private-sector companies JSW Steel Ltd. (JSTL), Jindal Steel & Power Ltd. (JSP), Monnet Ispat Ltd. (MISP) and JSW Ispat Steel Ltd. The group is sponsored by government-owned SAIL and NMDC Ltd.



### *A Trading Hub Potential*

The importance of an effective railway system to Afghanistan's and regional economic development was stressed by Afghan Foreign Ministry spokesman Janan Mosazai when he states "connecting Afghanistan to the region's established railway networks is a [critical component](#) of realizing the vision of an economically integrated heart of Asia region, with Afghanistan at its center," quotes *The Wall Street Journal*.

The ADB "[Afghanistan: Railway Development Study](#)", suggests the "geographical uniqueness" provides Afghanistan with tremendous potential to develop its economy by becoming a major national and regional trade hub. This uniqueness refers to Afghanistan's shared borders with six other countries and access to river ports. According to the study, "a very few countries of the world have this kind of strategic opportunity." In addition, development of railway infrastructure in Afghanistan would help stimulate economic development of the neighbouring countries, given that any ground-based trade among these bordering countries would be operated largely through Afghanistan. Without an adequate railway system, Afghan imports and transit goods from all neighbouring countries are transported to the Afghan borders by rail and then loaded onto trucks for movement within Afghanistan or across the borders. In addition to removing this logistical hurdle, railways would provide a more economical and time saving mode of transport for bulk commodities such as fuel and minerals, compared to road-bound transportation.

### **Remaining Challenges**

Despite the benefits outlined above, construction of a larger railway network continues to be impeded by financial, institutional, technical and security obstacles. While on one hand, the lack of railroads is seen as one of the obstacles to extracting economic benefits from Afghanistan's mineral deposit, on the other hand, the cost of constructing and operating a nationwide railway network, estimated at more than [USD 54 billion](#), may inhibit major mining projects by making them economically unviable, according to the aforementioned DoD draft report. Also, no railway line in Afghanistan is expected to be cost-effective unless used to transport iron ore. In this regard, a Western official noted "a general-purpose railway is never going to be economic in Afghanistan." Nevertheless, questioning the conclusions of the draft report, Janan Mosazai, Afghanistan Foreign Ministry's spokesman, expressed his belief that the benefits of the railway network would exceed the costs in the long run, writes *The Wall Street Journal*.

The exploration of iron ore mines is expected to facilitate a [potential build-up of rail](#), as well as energy and road networks, according to a 2012 report by the DoD. However, delays in passing the revised 2012 Mineral Resources Law have impeded development in the extractive industries sector and, in turn, progress in rails development. Despite the expectations, contracts for the aforementioned Hajigak iron ore deposit were not signed in July 2012 because SAIL and Kilo Gold of Canada are awaiting passage of a more favourable mining law. The [importance of the mining law](#) was stressed by Afghan Ministry of Mines senior geologist and adviser, Atiq Sediqi, who warned that the mining law must be approved otherwise "no one will come to invest in the mining sector in Afghanistan and the revenue forecast by the government from the development of the country's mineral resources will become a myth," quotes *Reuters*. It is estimated that, due to the delay, production from the iron ore mines may not start before 2017.

On a more optimistic note, in February 2013, the Afghan cabinet gave [preliminary approval](#) to a draft mining law. Furthermore, in September 2012, the Afghan Cabinet approved the establishment of the Rail Authority, an institution necessary for the development of regulations and standards and for the development of Afghanistan's railway system in general, notes a January 2013 [report](#) by the Special Inspector General for Afghanistan Reconstruction (SIGAR). The MoPW projects that the Authority could be fully-functioning within three years;



however, a much needed [Afghan National Rail Plan](#) remains to be finalised. Also the security situation in Afghanistan continues to pose a challenge and could jeopardise the Aynak mining project and impede other investments. In September 2012, *Khaama Press* reported that a number of Chinese workers have left Afghanistan due [insecurity at Aynak](#) site. Lastly, technical challenges also impede the railway plans, with three [different railway track gauges](#) in the region preventing smooth movement of traffic across the borders, according to an ADB pre-feasibility study.

## Conclusion

For centuries, Afghanistan has remained at the heart of the so-called ancient [Silk Road](#). As a study by Central Asia-Caucasus Institute points out, a [transport-based strategy](#), including development of an extensive railway network has the potential to re-establish Afghanistan's "traditional role as a hub of transport and trade connecting Europe and the Middle East with the Indian sub-continent and all South and Southeast Asia". A reliable and extensive railway network within Afghanistan, and between Afghanistan and its neighbouring countries, is essential to stimulating Afghanistan's economic development, regional cooperation and commerce. Income from Afghanistan mines is viewed as key to Afghanistan's economy particularly as international aid continues to dwindle. It is necessary to develop effective and sustainable rails that would transport minerals out of the country. However, despite all these potential benefits, development of a larger railway networks continue to be hampered by financial, institutional, technical and security obstacles, rendering construction of an extensive railway network unlikely in the near future.