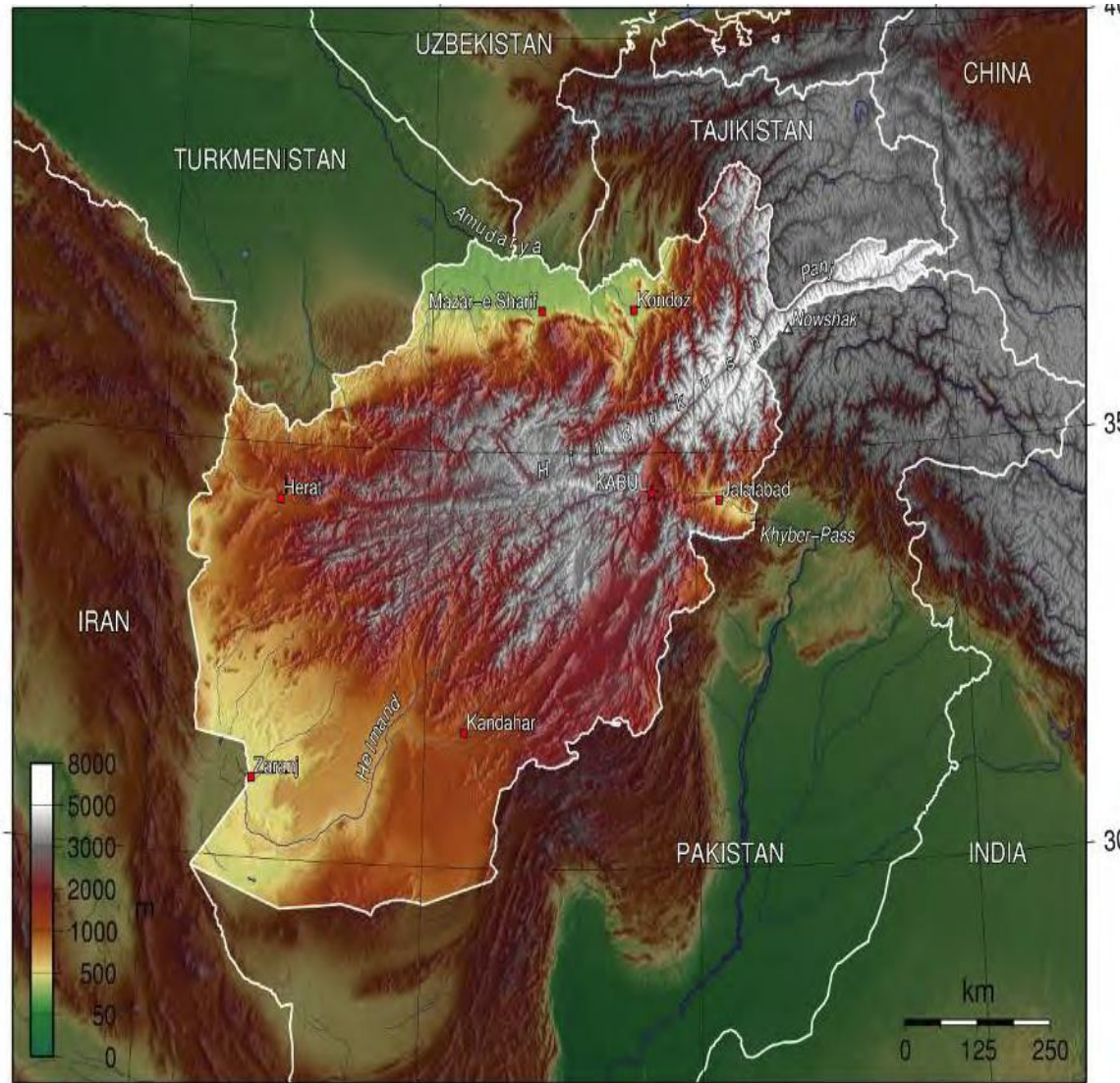


Emerging Resource Growth Corridor Afghanistan

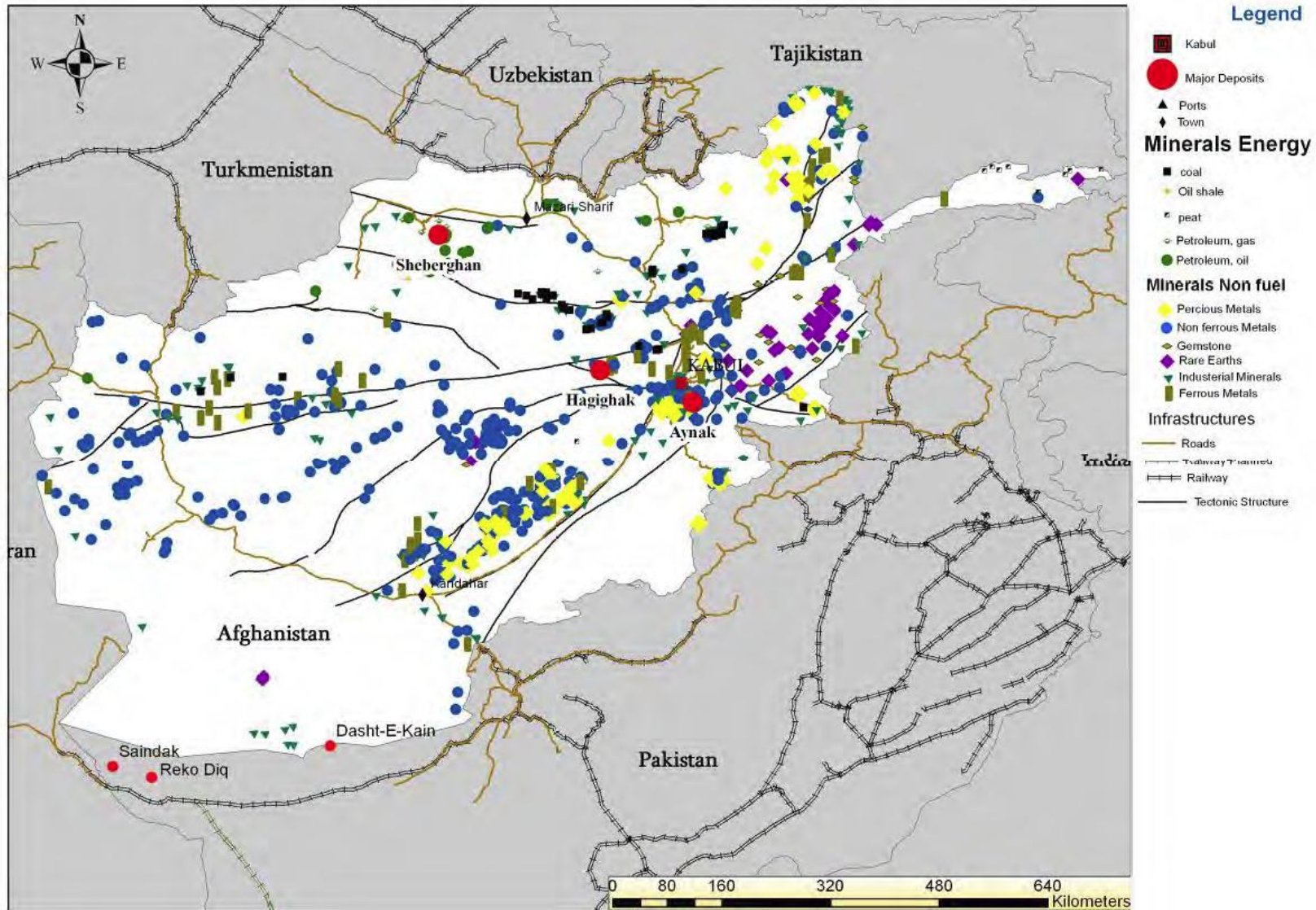


- ✓ At war , insecurity
- ✓ Landlocked , rugged terrain
- ✓ High relief mountains (7,500m)
- ✓ Poor transport infrastructure
- ✓ Water deficit
- ✓ Power deficit
- ✓ External aid \approx GDP (\$16 bn)
- ✓ 63% of aid is military
- ✓ Hope for stabilization before 2014 NATO military drawdown

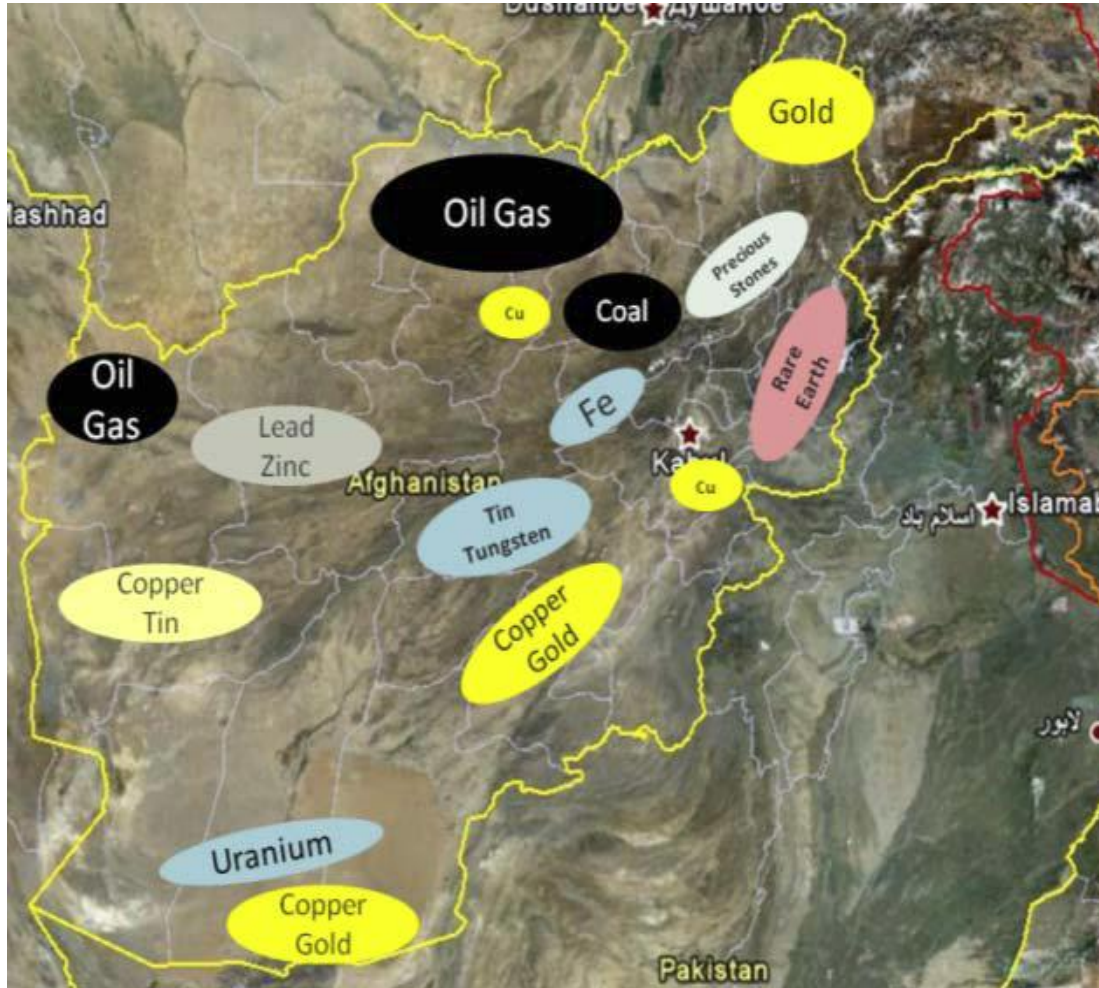


Must find new sources of growth to make economic transition successful

The resource sector offers a window of opportunity: estimated worth \$1 trn



Concessioning process has started

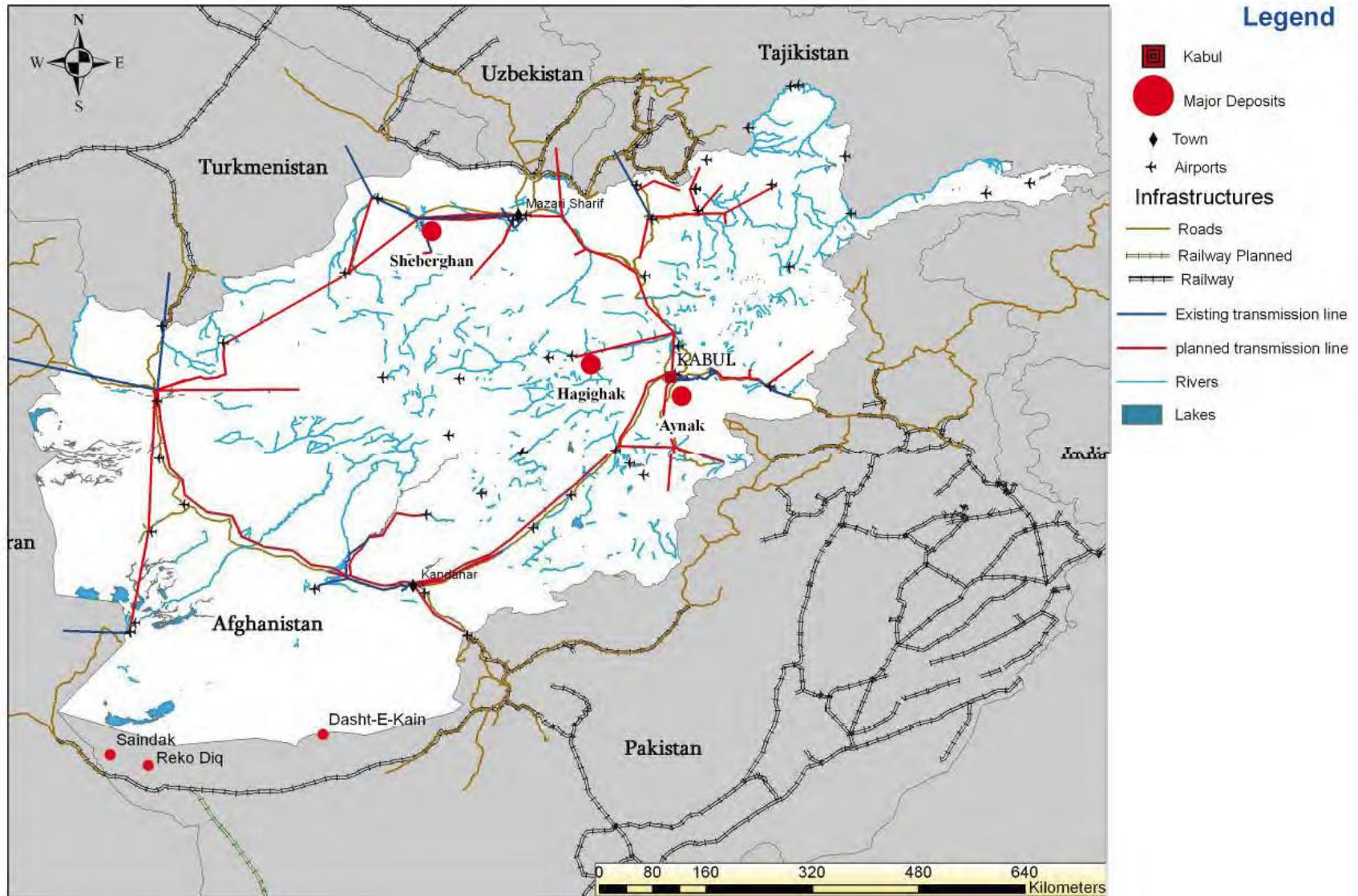


- ✓ 3 contracts awarded
Aynak Copper 200 ktpa
Hajigak Iron ore 25mtpa
Sheberghan Oil and Gas
- ✓ 4 contracts planned in
March 2012 (Gold, Copper)
- ✓ Aynak to build 400MW power st.
200MW on the grid, coal or gas
- ✓ Hajigak to build a steel mill and
Power station and use gas from
Shebergan and/or coking coal

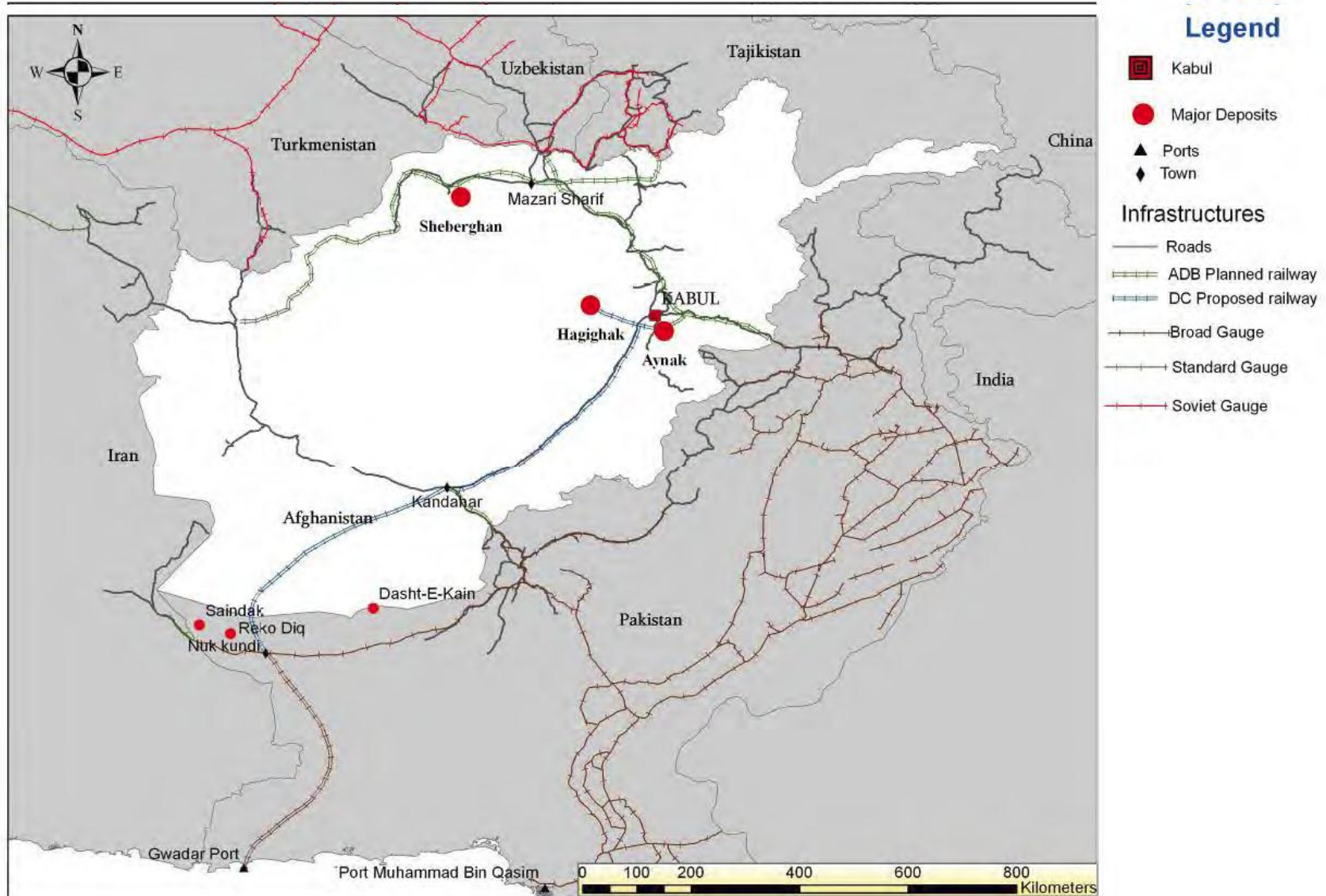
However

- To transform Afghan economy, the fiscal effects, infrastructure, and demand for goods and services from the resources sector must be leveraged.
- Aynak and Hajigak could generate around \$1bn in direct fiscal revenue;
- Transport and power infrastructure can be leveraged to possibly transform a private good into a public good through share use;
- Catalytic investments in agriculture and feeder roads, training and strengthening of domestic private firms can foster diversification and broader economic growth
- Requires not only hard investments but also institutional reforms in public finance management and regulations
- And the adoption of an inclusive resource growth corridor approach

Envisaged transmission lines alignment



Envisaged Railways alignments

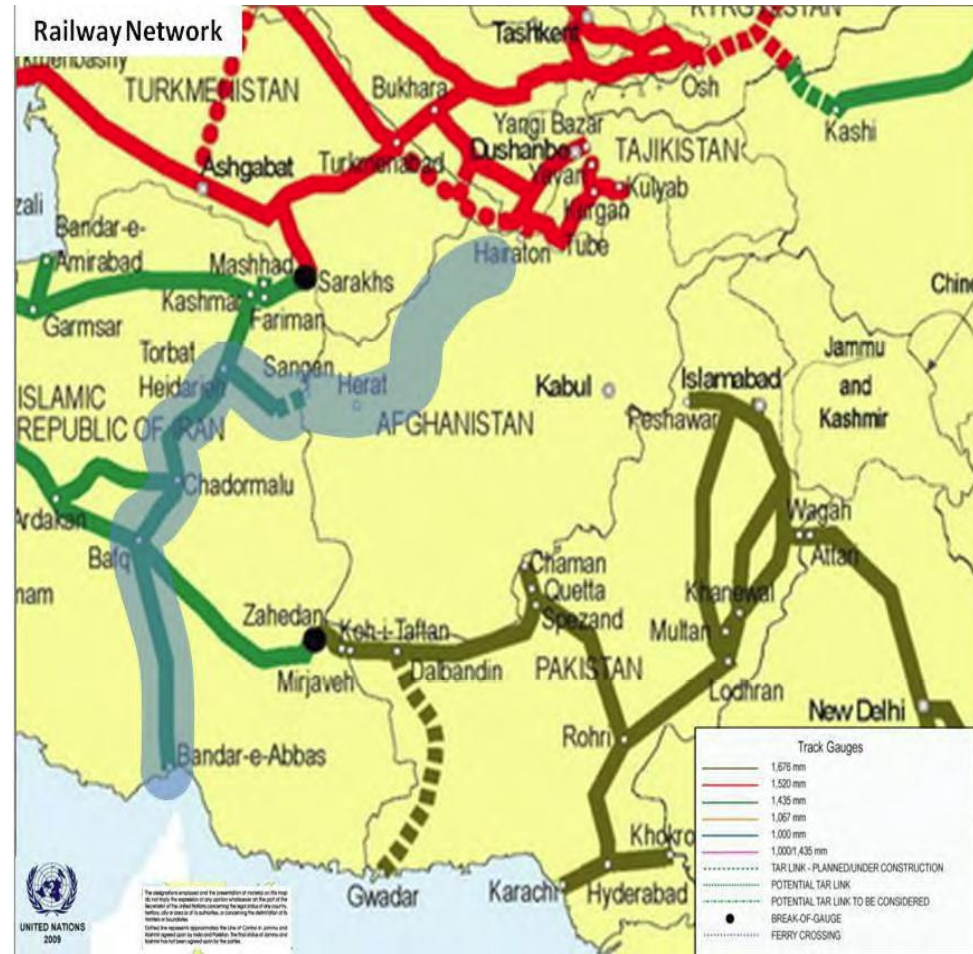


Corridor Identification Process

- ☑ Cross border corridors to export mkts

Central Asia
Pakistan
Iran

- ☑ Economic analyses
- ☑ Possibility of share use (tpt and energy)
- ☑ Dedicated mineral railways
- ☑ Multimodal transport
Start with roads
- ☑ Regional trade and logistics
- ☑ Domestic corridors where highest concentration of people and resources
- ☑ Shortest distance and infr const. cost



- Objective: Achieve inclusive integrated growth by leveraging very large private sector anchor investments in the mining sector along geographical corridors
- National and Regional Resource Corridor Program Secretariat under Min. of Mines
- Must deal with various sectors/themes:
 - Infra dev. (road, rail, power, water, ICT)
 - Social and Environmental
 - Private sector development
 - Governance and institutional arrangements

Railway conundrum

- Mineral railways can only handle minerals
 - 15m tonnes p.a. of iron ore equates to 41,000 tonnes per day
 - That implies 40-50 trains per day, or roughly one each half hour
 - Railways aren't good for developing corridors / private business, in general
 - As a rule of thumb, railways next to highways only capture 15-20% of traffic
 - Railways are optimal for very high volume, point-to-point
 - For most private industries, flexibility of road overwhelms cost advantage of rail
 - Geopolitics ...
 - Pakistani railways in disrepair and likely to be difficult to rehabilitate
 - Northern route to China is extremely long distance to main markets
 - Rumored route through Iran seems at first glance more promising, but ...
 - Aynak will need good roads
 - Aynak will operate long before rail feasibly built, and could justify rehabilitation and / or upgrade of main roads to Pakistan
 - Provides built-in shared use possibility, especially when combined with feeder roads
- Rail necessary for realizing Hajigak
 - Roads more likely means to leverage transport investment for other private sector industry