THE MINERALS SECTOR CONTRIBUTION TO STABILISATION AND DEVELOPMENT IN AFGHANISTAN

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Abstract

Minerals of high value and strategic importance have and continue to play a role in many of the conflicts seen around the world. They can however also provide an opportunity for less developed countries to quickly generate revenues either from the direct development and exploitation of mineral resources or by leasing or tendering prospective ground or known mineral occurrences to exploration and development mining companies.

There are many issues to consider when looking at mineral resources as a tool.

• The country will require a robust, transparent and investor friendly mining legislation to encourage mineral development and to deter nationalisation and corruption.

• Investment must be made in the host nation's capacity to manage its mineral resources. This might include the management of both exploration and exploitation licences, ensuring that there is a competent and useful geological survey organisation, and that the host nation's universities and centres for technical and engineering excellence are producing the next generation of geologists, engineers, metallurgists and cartographers.

• External assistance and funding must be geared to towards developing a sustainable and long term plan for minerals development. Investment must be carefully channelled to build capacity, maintain transparency and not undermine other initiatives being conducted by other organisations and government departments.

This paper will also examine countries where minerals have been a critical cause of instability and also where minerals development has or is being used as a tool to promote stability and drive economic development.

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Introduction

Global trends indicate that instability is likely to pose greater, and perhaps more numerous, challenges in the years to come (Marshall et al., 2011). As we have seen in the past 12 years, unconventional, asymmetric warfare appears to have become the norm and as such military forces, as extensions of their governments, have to look to incorporate non-kinetic tools as ways to not only succeed in the initial stabilisation of an area of operations but to prevent a regression back into instability by way of medium to long term development.

In 2010 a New York Times article purported that Afghanistan was host to over US$1 trillion of mineral resources. Almost immediately, commentators, governments and even the military were promoting the mineral resources of Afghanistan as 'enough to fundamentally alter the Afghan economy and perhaps the Afghan war itself' (Risen, 2010) (Figure 1).

However, to any economic geologist, the prospectivity of Afghanistan was of no surprise and indeed there was ample evidence dating back into the 1960s and 1970s of the extensive exploration programmes conducted by Soviet geology teams (Peters et al., 2007). Indeed, the Northern Alliance in the 1990s financed itself through annual sales of lapis lazuli of up to US$60 million (Rubin, 2000).

In a modern economic geology context, Afghanistan is underexplored and unexposed to modern exploration technology. It sits at the eastern end of the economically rich Tethyan Metallogenic Belt (TMB), has a complex geological history and, as a result, comprises some of the most highly prospective ground in the world.

Exploration geologists have had Afghanistan on their watch-list for years. However a range of issues, the most obvious being the past 30 years of prolonged conflict, have made it unattractive for investment when there are lower risk opportunities elsewhere.

Progress is nevertheless being made in Afghanistan towards developing the minerals sector but it will still take many years and require a series of factors to be favourably resolved before the country might seriously consider itself being on the path to developing a mining

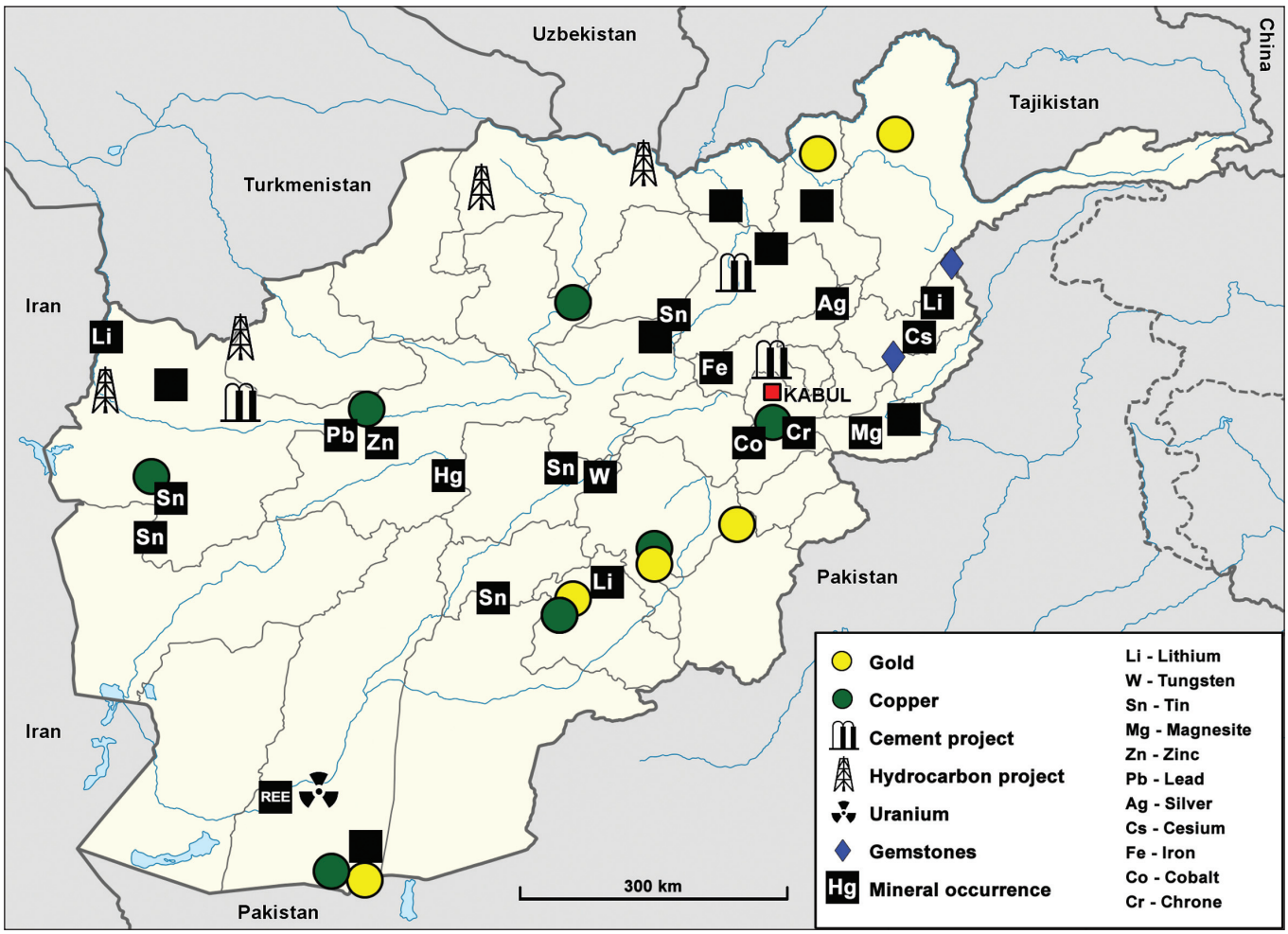

Figure 1 *Areas of interest identified by the United States Geological Survey (USGS) in Afghanistan for potential mineral exploitation (Peters et al., 2007).*

industry and, in turn, have that industry contribute significantly to the country's Gross Domestic Product (GDP).

This paper looks at mineral resources as a potential driver for stability and development by examining the minerals sector in several high profile conflicts, identifying the governmental, legal and economic frameworks required to support an embryonic minerals sector and to review in more detail the on-going development in Afghanistan.

The Natural Resources Curse

Conflict can arise for a variety of complex reasons but natural resources are unlikely to ever be the only cause. Natural resources do not make conflict inevitable but their presence, especially in low-income and poorly developed countries, can significantly exacerbate the risks of conflict developing. They can also contribute towards the prolongation of conflict if it breaks out and can ultimately make it harder to resolve. This is what is commonly referred to as the 'Natural Resources Curse' (Ross, 2003).

The mineral resources that appear to cause the most harm to stability are largely oil and certain hard-rock minerals, including: coltan (columbite-tantalite), diamonds, gold and other gemstones. The hard-rock minerals noted are all low volume/high value commodities, which makes their transport and sale harder to track, control and, in turn, to tax by the authorities. The ability also for most of these commodities to be produced by artisanal methods makes them ideal as revenue generators for insurgency. Of the 15 intrastate conflicts in Figure 2, fourteen are related, at least in part, to mineral and hydrocarbon wealth.

Information on the annual production (2011 and 2012) and estimated reserves of gold (Table 1) and copper (Table 2) are presented for multiple countries. The considered security and political risks, the ability to do business, and corruption levels for those countries are also presented. The data is shown because:

- Gold is considered to be a safe haven for wealth and historically has been the go-to commodity when there are plenty of geopolitical triggers looming on the horizon (Money Week, 2013). It therefore provides a useful metric against which to examine global production in a geographical context.
- Copper production and price is seen as a metric of global growth and economic health. Growing wealth, notably in China and India, with the requirement for infrastructure and construction are the key drivers of the copper price.
- Both gold and copper are seen as major future contributors to mineral wealth revenues in Afghanistan and have contributed significantly to other developing nations in the past 50 years, for example Zambia for copper (Mulikelela, 2013) and Ghana for gold (Kawa, 2012).

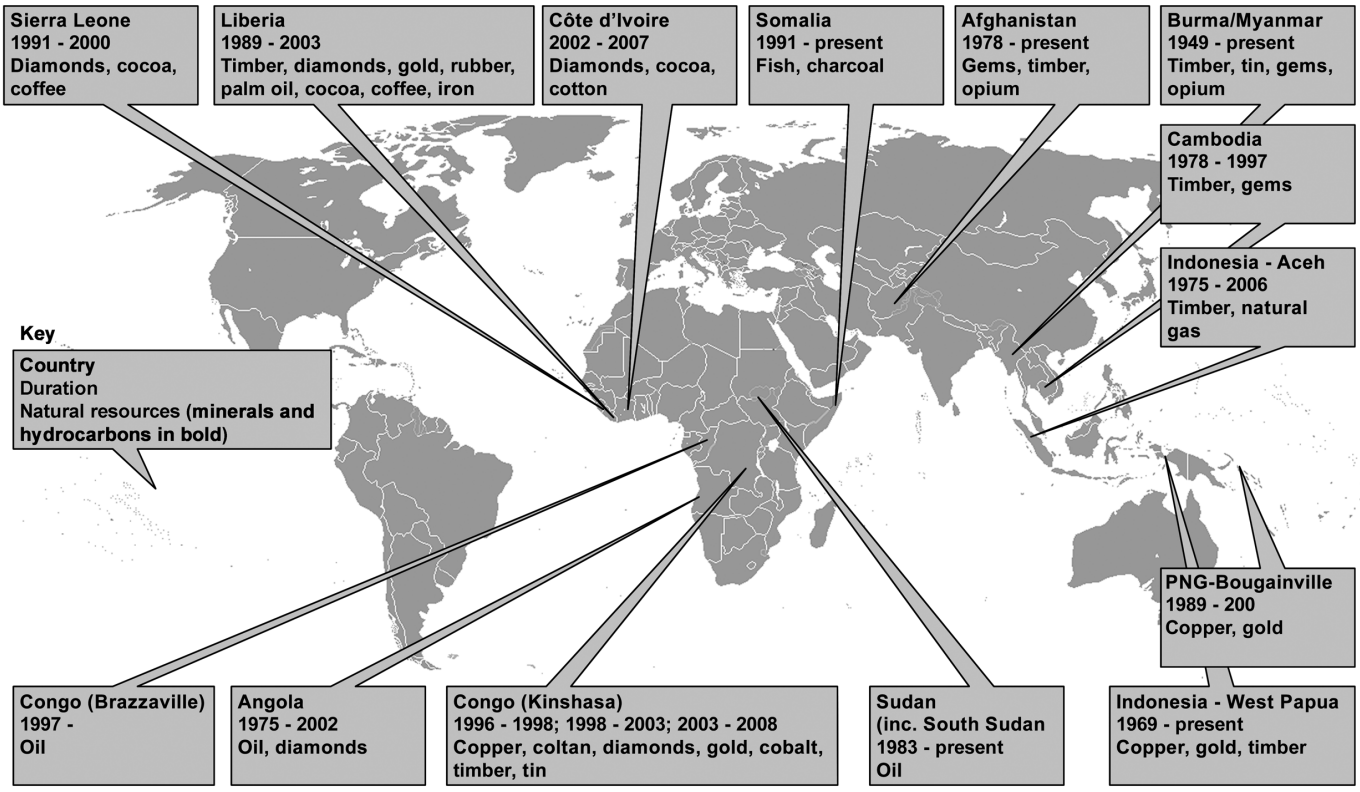

Figure 2 *Intrastate conflicts with links to natural resources in the last 60 years. Data from Ross (2003). Note: 'Congo (Kinshasa)' is also known as the Democratic Republic of Congo or DRC.*

Country	Au mine production, tonnes (USGS, 2013)			Security Risk (Control Risks, 2013)	Political Risk (Control Risks, 2013)	Doing Business 2013 (out of 185) World Bank, 2013	Corruption Index 2013 (out of 178) (Transparency International, 2013)
	2011	2012	Reserves				
Afghanistan	Unknown	Unknown	Unknown	E	E; H in Kabul	168	174
United Kingdom	0.2 *	-	-	L	L	7	17
Other countries	640	645	10,000	N/A	N/A	N/A	N/A
China	362	370	1,900	L; M in some border areas and some provinces	M; L in Hong Kong	91	80
Australia	258	250	7,400	L	L	10	7
United States	234	230	3,000	L; M in deprived urban areas	L	4	19
Russia	200	205	5,000	M; H in north Caucasus	M; H in north Caucasus	112	133
South Africa	181	170	6,000	M; H in Johannesburg, deprived urban areas.	M	39	69
Peru	164	165	2,200	M; H in several valley areas	M	43	83
Canada	97	102	920	L	L	17	9
Indonesia	96	95	3,000	M; H in Papua, Maluku	M	128	118
Uzbekistan	91	90	1,700	M; H in some border areas and valleys	H	154	170
Ghana	80	89	1,600	L; M in some border and northern provincial areas.	M	64	64
Mexico	84	87	1,400	M; H in various states (drug related violence)	M	48	105
Papua New Guinea	66	60	1,200	H; M in some areas	M	104	150
Brazil	62	56	2,600	M	M	130	69
Chile	45	45	3,900	L	L	37	20
World total	**2,660**	**2,700**	**52,000**				

Risk	
L	Low
M	Medium
H	High
E	Extreme

Afghanistan	Unknown	Unknown	Unknown	E	E; H in Kabul	168	174
United Kingdom	0.2	-	-	L	L	7	17

Table 1. *Gold (Au) production in 2011 and 2012. Data from: USGS (2013), Control Risks (2013), World Bank (2013), Transparency International (2013); * UK Au production data from BGS (2012).*

Country	Cu mine production, '000 metric tonnes (USGS, 2013)			Security Risk (Control Risks, 2013)	Political Risk (Control Risks, 2013)	Doing Business 2013 (out of 185) (World Bank, 2013)	Corruption Index 2013 (out of 178) (Transparency International, 2013)
	2011	2012	Reserves				
Chile	5,260	5,370	190,000	L	L	37	20
Other countries	1,970	2,100	80,000	N/A	N/A	N/A	N/A
China	1,310	1,500	30,000	L; M in some border areas and some provinces	M; L in Hong Kong	91	80
Peru	1,240	1,240	76,000	M; H in several valley areas	M	43	83
United States	1,110	1,150	39,000	L; M in deprived urban areas	L	4	19
Australia	958	970	86,000	L	L	10	7
Russia	713	720	30,000	M; H in north Caucasus	M; H in north Caucasus	112	133
Zambia	668	675	20,000	L; M in Lusaka, parts of Copper Belt	M	94	88
Congo (Kinshasa)	520	580	20,000	H; M in Kinshasa; E in North Kivu province	H	181	160
Canada	566	530	10,000	L	L	17	9
Mexico	443	500	38,000	M; H in various states (drug related violence)	M	48	105
Indonesia	543	430	28,000	M; H in Papua, Maluku	M	128	118
Poland	427	430	26,000	L	L	55	41
Kazakhstan	417	420	7,000	L	M	49	133
World total	**16,100**	**17,000**	**680,000**				

Risk	
L	Low
M	Medium
H	High
E	Extreme

Table 2. *Copper (Cu) production in 2011 and 2012. Data from: USGS (2013), Control Risks (2013), World Bank (2013), Transparency International (2013).*

This data illustrates that:

- Mineral endowment is spread across a wide spectrum of countries with many having stable, first world economies and robust, transparent natural resource legislation, for example: Australia, Canada and the United States.
- Several of the major producers, for both gold and copper, are in jurisdictions that are widely regarded and measured as being poor in terms of doing business, risk (both security and political) and corruption.

However, even with significant challenges to transparency and risk, a country may find itself open and inviting to investment and the development of a successful extractive minerals industry. Bray (2003) notes that at the exploration stage companies' prime concerns are geological rather than political. Bray goes on to note that, after geology has been considered, security issues are next to become of concern and only after that, politics and social issues. This is truer of the junior explorers and developers who are traditionally regarded as more risk tolerant than the majors as a result of the relatively low capital sums required.

Figure 3 outlines the life of a minerals project illustrating the key decision points, scale of risk and the relative value of a project. An important observation that can be made from this figure is that mines can take many years to come to production and that large scale mining production revenue is therefore unlikely to constitute a viable component of any stabilisation plan but may contribute to medium to long terms development plans.

One must also consider that the chances of bringing a raw prospect into production have been estimated at 1 in 5,000–10,000 (Mining Journal, 2013). This is due to the highly complex interplay of a variety of geological, metallurgical, environmental, social, economic and legal issues that can make or break a project's viability. It is therefore logical to conclude that, due to the risks and time periods involved with developing mines, unless they are projects of particular note, i.e. world class, that their future success should not be wholly relied upon as part of a medium to long term development strategy.

A Glint In The Heart Of Darkness

One commentator (The Economist, 2010), upon reading the 2010 news of Afghanistan's mineralogical endowment, was quick to draw analogies with the Democratic Republic of the Congo (DRC) where minerals are very much seen as a curse and a catalyst perpetuating the conflict and unrest that has affected Africa's second largest and most mineral rich country for over 30 years (Ross, 2003). The DRC has abundant mineral wealth, including large deposits of coltan, diamonds, cobalt, gold, copper and bauxite are thought to be worth over USD$24 trillion (UN, 2011).

At present, the DRC remains a semi-stable state with large tracts of land under government control, mostly in the west. However eastern DRC is awash with a variety of different rebel groups, many of which are taking advantage of the lack of a strong state presence in rural areas to seize control of the area's mineral riches (ELDIS, 2005; ELDIS 2009). As a result of the persistent instability, the DRC government has not been able to capitalise on

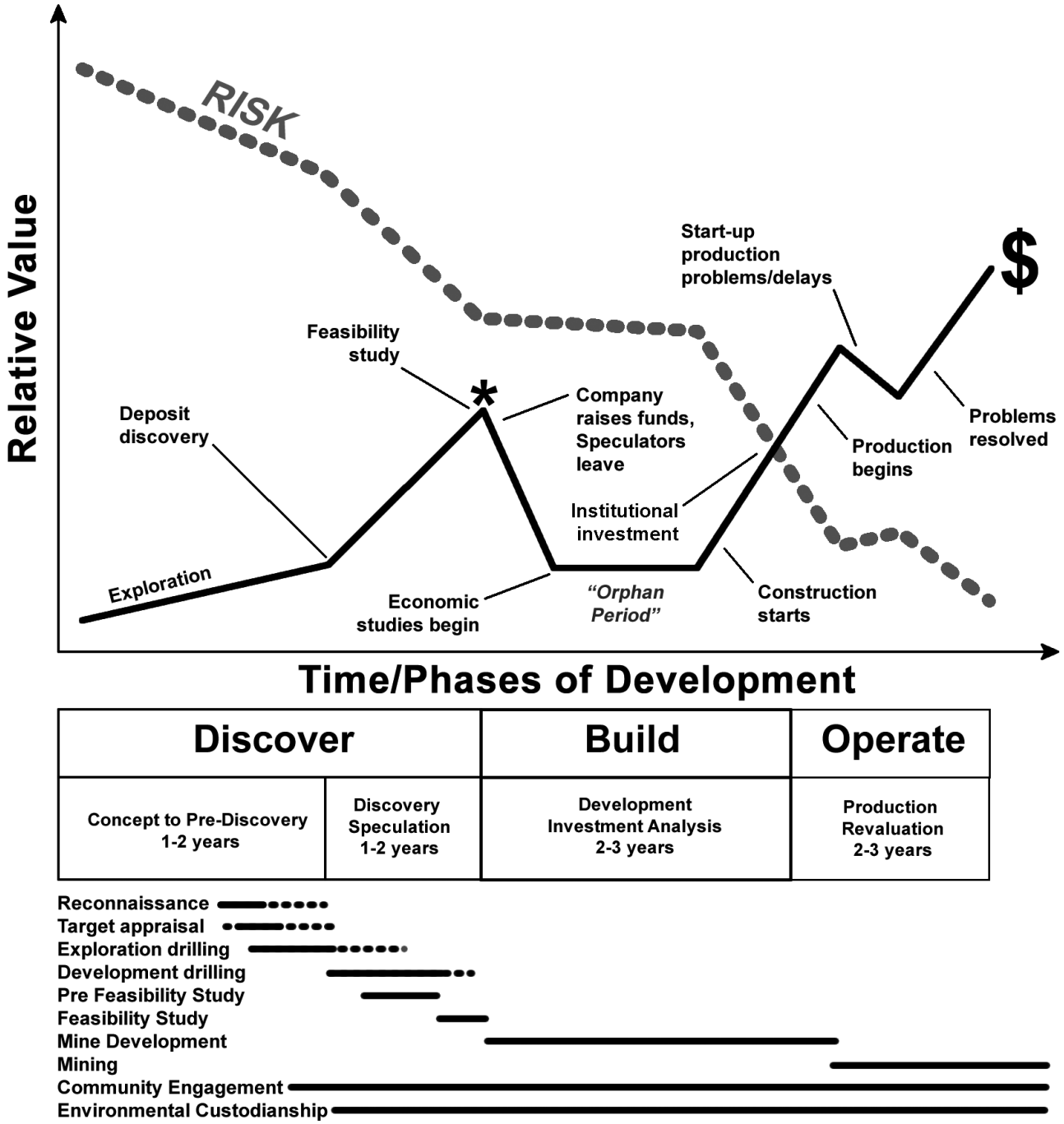

Figure 3. *Conceptual development of a mineral project, from exploration through to production (not including decommissioning and rehabilitation).*

the mineral wealth to deliver the wide-spread improvements in infrastructure, wealth dissemination and local economy that would undoubtedly have been realised in First Tier mining jurisdictions.

Despite the issue of instability in the east and the poor assessment for risk and transparency, the DRC is still the 9th largest producer of copper in the world (Table 2). This illustrates that even within a poor jurisdiction, when the geology is right, companies and their owners and investors are still willing to operate.

Two present day examples of this interest include the north-eastern province of Orientale which is thought to have gold reserves of over US$30 billion and where both Anglogold Ashanti, the 3rd largest gold producer in the world, and Randgold Resources, a significant mid-tier producer, are looking to exploit several large and highly prospective gold prospects (Luck, 2012). Additionally, the south-east Katanga province, which has been active with mining for over 1,500 years with a focus on copper, cobalt and gold, has seen a large number of companies over the past 10 years seeking to develop both greenfield and brownfield sites.

The DRC is therefore seen as a prime example of where the presence of world class mineral resources continues to act as a destabilising element but also indicates that there are companies prepared to accept high levels of risk for the chance to exploit potential world class deposits.

Natural Resources – Degrees Of Success

Three of the countries illustrated in Figure 2 warrant further discussion as success stories where the natural resources, notably both hydrocarbons and minerals, have contributed to stabilisation and development.

Angola

After independence from Portugal in November 1975, Angola faced a devastating civil war which lasted several decades. Whilst the Angolan war was generally seen as being a Cold War proxy, a sizable amount of the revenue required by the various factions to perpetuate the conflict was derived from the exploitation of natural resources. Hydrocarbons bankrolled the government forces but the relative abundance and easy access to artisanal diamonds made them the preferred target for the rebel factions, notably the largest; UNITA (BBC, 2002). Ultimately, it was the capture of diamond producing areas by government forces and United Nations (UN) led economic sanctions against these 'blood diamonds' that led to the financial stranglehold of UNITA, leading to the negotiation table and eventual peace.

In recent years, diamonds and oil have made up to 60% of the Angolan economy (The Economist, 2007) and an important outcome from the war was the Fowler Report, which named those countries, organizations and individuals involved in the illegal trade of diamonds. The report is credited with establishing the link between diamonds and third world conflicts and led directly to the UN's Security Council Resolution 1295, as well as the Kimberley Process Certification Scheme (Kimberley Process, 2013).

Sierra Leone and Liberia

Civil war raged across the West African states of Liberia and then Sierra Leone from 1989 to 2003. Rebel forces in Sierra Leone; the Revolutionary United Front (RUF) were found to be under the support of the former Liberian president Charles G. Taylor (now serving a 50-year prison sentence for war and humanitarian crimes; Simons et al., 2012) and received both weapons and training in exchange for diamonds.

During the conflict the UN applied sanctions on the Liberian diamond trade in 2001 but this was not before al-Qaeda allegedly used Liberian sourced diamonds for funding after financial assets were frozen in the aftermath of the 1998 United States embassy bombings in Africa (Jones, 2003).

Both countries now have flourishing minerals industries with keen interest in bauxite, rutile, iron ore, gold and of course diamonds. Both countries are seen as success stories where the respective governments have managed to mitigate a degree of the corruption and bad-practice that had previously prevented them from utilising their mineral resources as a catalyst to drive infrastructure development, employment, and secondary and tertiary industries.

Offshore oil development is also now in its infancy and is likely to contribute significantly if economically viable reserves are identified. Both are now members of the Kimberley Process.

Foundations For Success

Stabilisation versus development

In counter insurgency and conflict environments the measures and tactics employed, from the strategic level (country and government) down to tactical level (local community) converge upon the idea of reaching a 'tipping point' on the path to a self-sustaining peace, where stabilisation acts to support institutional and societal capacities to constrain conflict 'drivers' and to extend the political, military and moral authority of the state (Stabilisation Unit, undefined date).

Stabilisation is commonly conducted in a kinetic environment and it is therefore difficult to identify or engineer opportunities for natural resources to provide a timely contribution to the overall stabilisation effect. In part this is due to the time required to develop a prospect, often several years, as shown in Figure 3.

Where an almost immediate impact can be made is through supporting the host government and its agencies, the most obvious being the Ministry of Natural Resources or Mines and also an indigenous Geological Survey. Assisting them to help themselves would in all but a few cases be deemed to be the best and most cost effective approach.

Once beyond the stabilisation phase, development in a more permissive environment may enable a wider range of field based activities that are less reliant on the presence of either state or private security forces, and are therefore less costly. By even achieving a semi-permissive environment in an isolated area, perhaps provincially, the opportunity grows for gaining access to prospective geology and attracting investment interest. Iraqi Kurdistan and provinces in the north (Balkh) and east (Herat) of Afghanistan are good examples.

Early stage exploration can lead to localised economic stimulus with the employment of local labour, purchase of local produce and support in community engagement projects, such as medical or veterinary clinics. Development work can start to improve existing infrastructure in an area and a mine itself can lead to major infrastructure development.

In addition to the above, artisanal mineral production can, in certain circumstances, assist with stabilisation because it can provide an economic incentive which may divert manpower away from insurgency by providing a viable, commensurate alternative to taking up arms. Not only economic but also political, security and social dimensions should be understood to ensure that the initiative will have a positive impact on stabilisation. Special attention needs to be paid to the risk of socio-economic exclusion and of the economic benefits being monopolised.

Figure 4, illustrates a simplified organisational structure for the state management of natural resources and highlights areas where mentoring, training and support might be provided, ultimately geared towards improving the efficiency of the minerals sector. Note however that the whole sector is founded on the composition and strength of the mining legislation.

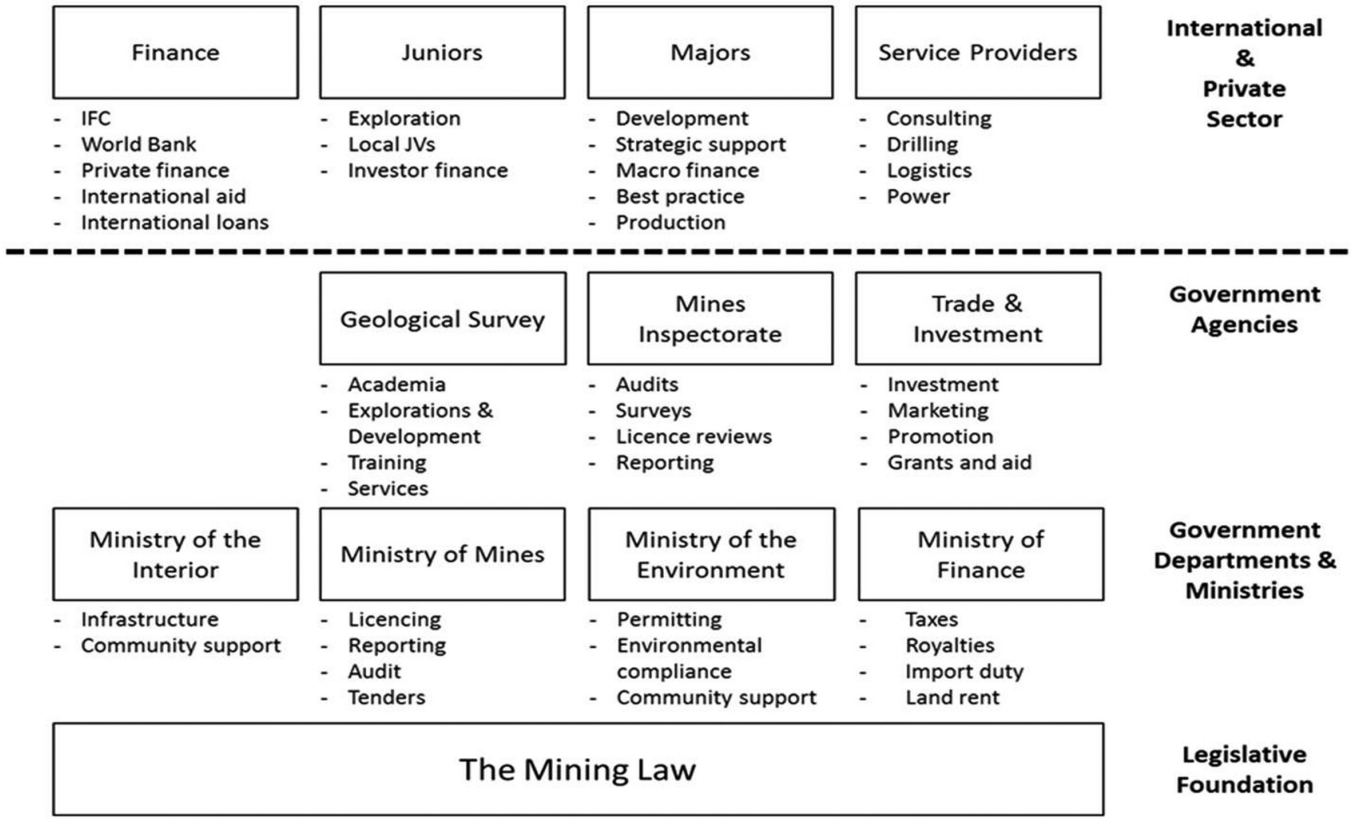

Figure 4. *Simplified organisational structure for the state management of natural resources.*

Building a mining industry; a recipe for sustainable success

The most important requirement for a nation to build a mining industry is the legislation that determines the ownership, consumption, distribution and governance of the natural resources (Evans, 2010). This legislation forms the foundation upon which governmental departments and agencies can manage and exploit the resources for the benefit of the country.

Development and exploitation of natural resource is all but impossible without a robust and attractive legal framework and can lead to unsanctioned exploitation, often artisanal in nature, going unchecked. This might benefit local communities to a small degree but will not benefit the country as the product is unlikely to be taxed or provide any royalties. Low bulk, high value commodities such as precious stones or gold, which could provide substantial revenue for the government are often the main targets for illegal artisanal production and as noted in earlier sections can act as a catalyst for destabilisation and lead to further illegal activities (PakTribune, 2013).

From an investment point of view, aside from the geology itself, one of the most important aspects of any mining law is that of security of tenure. Recent surveys have consistently identified resource nationalisation as being a key risk for minerals investment when compared to many other risk factors (Figures 5 and 6). This is supported by numerous examples of both hydrocarbon and minerals projects being nationalised (Venezuela [Wallis, 2012], Argentina [BBC, 2012]) or where licences have been cancelled or not awarded (Pakistan [Mineweb, 2011], Kyrgyzstan [Mashrab, 2013]) often resulting in protracted and expensive international arbitration which can often have a devastating effect on investor confidence (Martin, 2013).

Sustaining the peace – the transition from stability to development

In conflicts with a significant natural resource dimension, the economic interests of parties can threaten stability long after the signing of a peace agreement. In post-conflict countries corrupt management of natural resources is often entrenched by international peace building efforts that focus on 'kick-starting' the economy via the extractive industries and relegate natural resource governance reforms to further down their list of priorities. This can open the door to military and political leaders capturing valuable state assets and harnessing them to their own agendas (Global Witness, 2013; Qobil, 2012).

Detailed Case Study: Afghanistan

Progress to date: International assistance

The mineral resources of Afghanistan have been well known for over 50 years (Peters et al., 2007). Since the onset of operations in 2001 there have been several phases of work conducted by donors from various stakeholder countries. The largest of these donor programmes are outlined below:

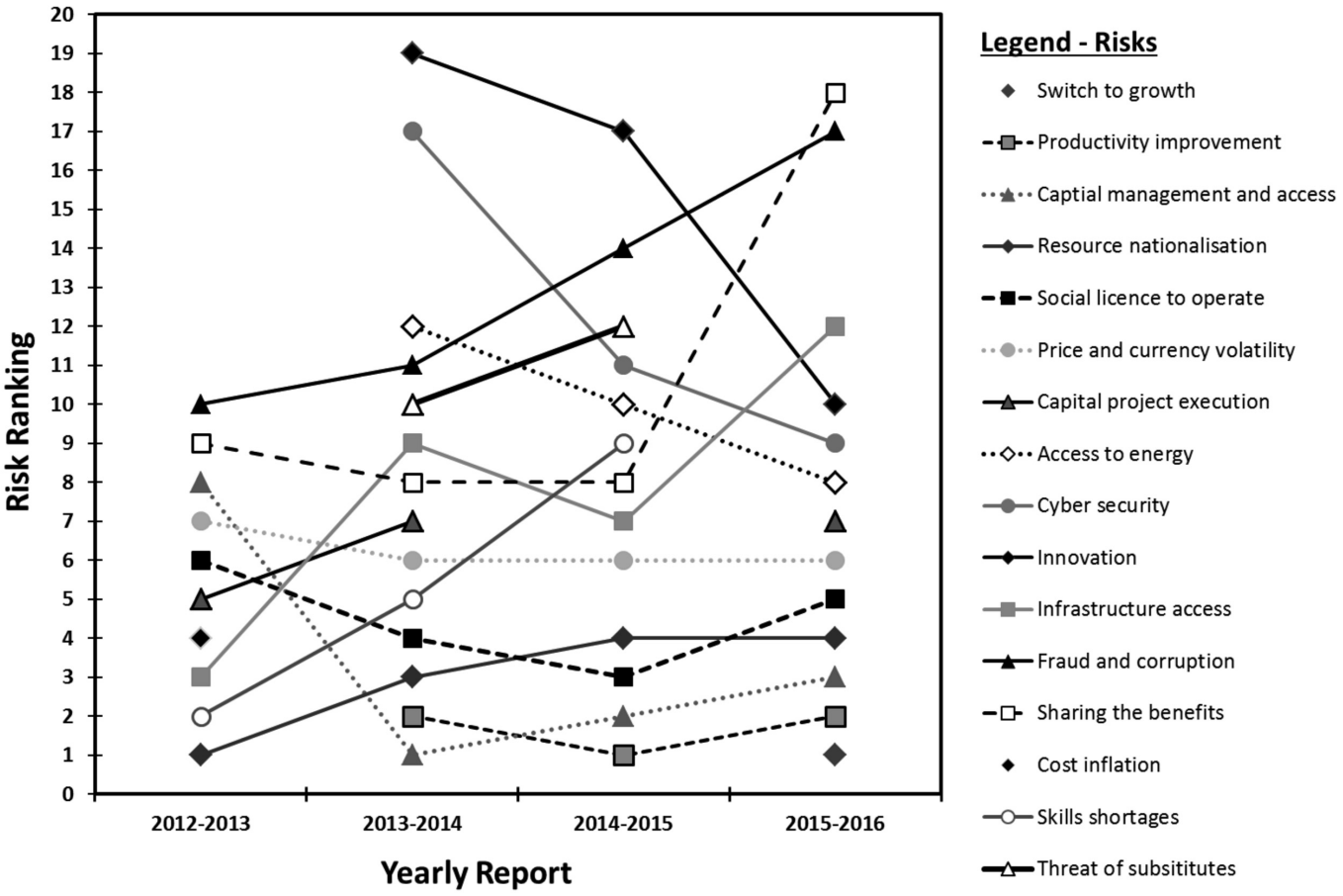

Figure 5. *Mining and metals sector risks. (Ernst & Young; 2012, 2013, 2014, 2015).*

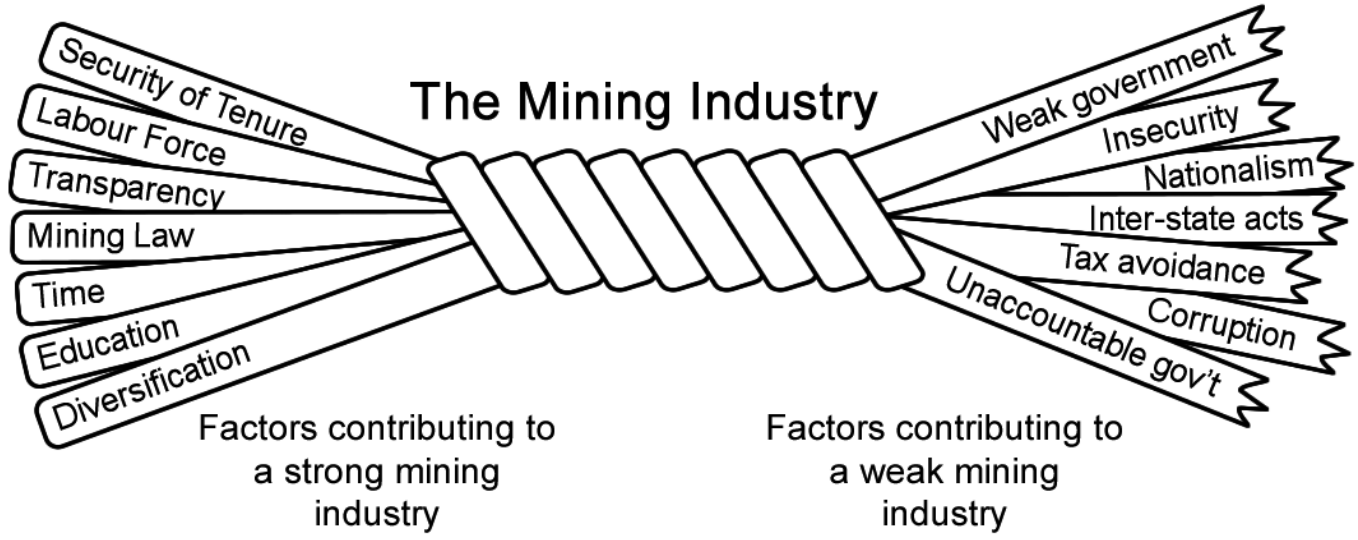

Figure 6. *Factors contributing to a strong and weak mining industry.*

United States of America

The USGS has had a role in stabilisation and capacity building in Afghanistan since 2002 across a range of initiatives and programmes, notably: documenting a wealth of information on geology and mineral endowment and publishing several reports outlining key Areas Of Interest (AOI). Additional sub-phases of work have also provided detailed studies based on hyperspectral remote sensing data as well as on-going analysis and interpretation of historical and more recently acquired geological data (Peters et al., 2007).

From January 2010 to December 2014, the Task Force for Business and Stability Operations (TFBSO) operated in Afghanistan, at the direction of the US Secretary of Defence. The TFBSO's mission was to help Afghanistan unlock its economic future with focus areas on: minerals, energy, indigenous industries, agriculture, and information technology (TFBSO, 2012). Several of the aforementioned USGS initiatives benefited from the arrival of the TFBSO as the availability of military resources enabled USGS and other consulting subject matter experts to access AOIs to conduct geological assessments and fieldwork.

The United States Agency for International Development (USAID) Mining Investment and Development for Afghanistan Sustainability (MIDAS) project focused on three areas: legislative and regulatory reform; mineral exploration and capacity development; and private sector development (Van Horne, 2013).

United Kingdom

The British Geological Survey (BGS) was commissioned by the British Government's Department For International Development (DFID) in 2004 to provide support to the Ministry of Mines and Petroleum (MoMP) and the Afghanistan Geological Survey (AGS). Based in Kabul, the BGS's team's main focus was in training, generating mineral databases, helping to develop the mineral economy, and encouraging good governance (Mitchell and Benham, 2008; AGS, 2013). Several of the elements were conducted in partnership with the USGS programme. The BGS programme concluded in 2007 due to a withdrawal of funding from the British Government. In 2015 International Geological Services, a commercial spin-out from the BGS, commenced work on a three year programme to support capacity and facility development at the AGS, as well to assist with international promotion of the Afghanistan minerals industry (Benham, 2015)

DFID has also supported the MoMP directly since 2002 through the provision of embedded expertise from Adam Smith International (ASI), a leading independent government advisory consultancy. Their focus has been around supporting the MoMP in the restructuring of the AGS, including: an organisational structure review, improvements in departmental management, training plans, capacity building for management and technical staff and the transference of commercial functions to the private sector (ASI, 2013).

The World Bank

The World Bank has supported several phases of work in Afghanistan as part of the Sustainable Development of Natural Resources Projects in Afghanistan (SDNRP) programme. Work has either been completed by the World Bank directly or through associated consultants such as GAF-AG, a German company with specialisations in earth observation and geo-information solutions (GAF-AG, 2013a). GAF-AG projects included: the training of mines inspectors (GAF-AG, 2011), the establishment of an online cadastre and inspectorate system (GAF-AG, 2013b), the Aynak Compliance Monitoring Project and supporting various MoMP and AGS marketing and educational activities such as visits to mines in other countries and facilitating attendance at international mining event such as the INDABA.

Recent and ongoing initiatives

The following briefly summarises recent and ongoing initiatives by donors in Afghanistan (TFBSO, 2011, and personal communications with donor agencies and organisations). Many of these initiatives are cross-donor and each initiative may be connected to more than one other; showing very much a comprehensive approach. See Figure 7.

Local economic stimuli – Village stability operations (Donor; TFBSO)

Artisanal mining operations were aimed at providing a source of revenue within the community. Challenges included locating viable resources that could be exploited economically, providing the commercial framework for trading, and, exporting the product. All of this was underpinned by the requirement for a transparent and functioning minerals law that accommodates and incentivises small scale artisanal operations.

Secondary benefits to minerals exploration and development relate to the opportunity to improve the geological understanding of the regional and local geology, which in turn should enable the identification of further geo-opportunities. For example geothermal sources can be used for power generation (energy) or heating for greenhouses (agriculture).

Care however must be taken to ensure that insurgency or crime related elements do not manage to divert revenues or extort protection monies from successful operations.

Tenders (Donors; World Bank; TFBSO)

To date there have been several hydrocarbon tenders and six complete or pending mineral tenders for some of the country's most advanced deposits.

The first tender in 2010 of the world class sedimentary copper deposit at Aynak has not been without its problems. A lack of transparency, which persists today (Global Witness, 2012a), and a hiatus on development at site due to archaeological (ARCH, 2013) and security concerns continues to frustrate the MoMP.

In 2011 an Indian consortium and a Canadian listed junior (MoMP, 2011) were selected as preferred bidders

for the four blocks of the Hajigak iron ore project. This was followed by the 2012 and 2013 announcements of preferred bidders for a further four gold and copper projects (MoMP, 2013a).

The more recent tenders have been run with improved transparency, including independent monitoring, and have utilised the experience of international impartial consultants (MoMP, 2013b). Aside from the Aynak tender, all others remain incomplete whilst the Afghanistan government works towards a revised mining law (O'Donnell, 2013).

Future tenders that have been proposed include the Syadara iron ore and North Aynak copper prospects as well as further hydrocarbon opportunities (MoMP, 2012).

Site specific geological investigation (Donors: TFBSO, USGS, World Bank, MIDAS)

Technical experts have visited and sampled a variety of sites around the country and have looked at a range of commodities including: coal, cement raw materials, lithium, rare earth elements (REE), chromite, precious gems, base metals, precious metals, industrial minerals and decorative stone and dimension stone. Summaries of the work completed are usually released into the public domain as Open-file reports or academic papers (Peters, et al., 2007; Mitchell and Benham, 2008) and often form the core of technical reports that can later be used to promote tenders.

Capacity building at the MoMP (Donors: DFID, TFBSO, World Bank, MIDAS)

Donors have provided embedded expertise to help the MoMP across a wide range of subject matter, including: improvements in management, developing new mining legislation, improving self-sufficiency and self-reliance, developing a better understanding of the international minerals industry and improving the management and utilisation of the AGS.

Capacity Building at the AGS (Donors: DFID, TFBSO, USGS, MIDAS)

Once the AGS building had been refurbished in 2006 donors began the work of re-equipping the AGS, retraining those skills that had fallen out of competency and adding new skills and techniques. Capacity development was sought both at the Kabul based AGS facilities for deployable teams and assets that could be used to develop prospects on behalf of state interests.

Investment (Donors: TFBSO, World Bank, MIDAS)

The goal of the investment strategy is to create a continuous pipeline of investors visiting Afghanistan, to increase and promote partnerships or joint ventures and to change perceptions about the country and is mineralogical endowment.

Future Initiatives

The international community has committed to support the Afghan mineral industry (Global Witness, 2012b; Jamasmie, 2013). Notable programmes of aid and investment include:

- DFID – GBP£10 million over 3 years;
- USGS – up to USD$20million* (Peters, 2013, personal communication);
- USAID (MIDAS programme) – USD$40 million to US$45 million over 4 years* (Van Horne, 2013, personal communication).

(* Estimates, also it is unclear at this time as to how US sequestration will impact upon foreign aid programmes).

Some of the areas that will or are likely to be supported in addition to those initiatives already being implemented are noted below and illustrated in Figure 7:

Media & Marketing Planning

Widespread access to the media in Afghanistan, through cell phone and the internet, makes it all the more necessary for the MoMP and the AGS to have detailed, long-term media plans to attract international mining investment and to help educate the Afghan people about the mining industry.

Community Relations

As mining companies are finding across the globe, the community is key to securing the consent to operate from the exploration stage through the exploitation phase. Various organisations are currently promoting such initiatives and with ready access to the media all stakeholders have the opportunity to influence the success of a project.

Education

With many of the elder generation of geologists and engineers reaching or passing the age of retirement there is an urgent need to educate future generations. It is also necessary to expand and build upon the knowledge of the more recent generations who, due to the instability, have missed out on the opportunity to build their experience. Extensive vocational training will provide a cadre of geologists capable of sustaining a growing industry. Failure to provide this cadre will result in high operational costs due to the requirement to bring in more costly expatriate expertise.

Female empowerment

Improvements to female integration to society in general have been a high priority during operations in Afghanistan. There have been major improvements but there is more that can be done to ensure that female Afghans are involved at all levels of public service and private enterprise. Education plays an important part of this process.

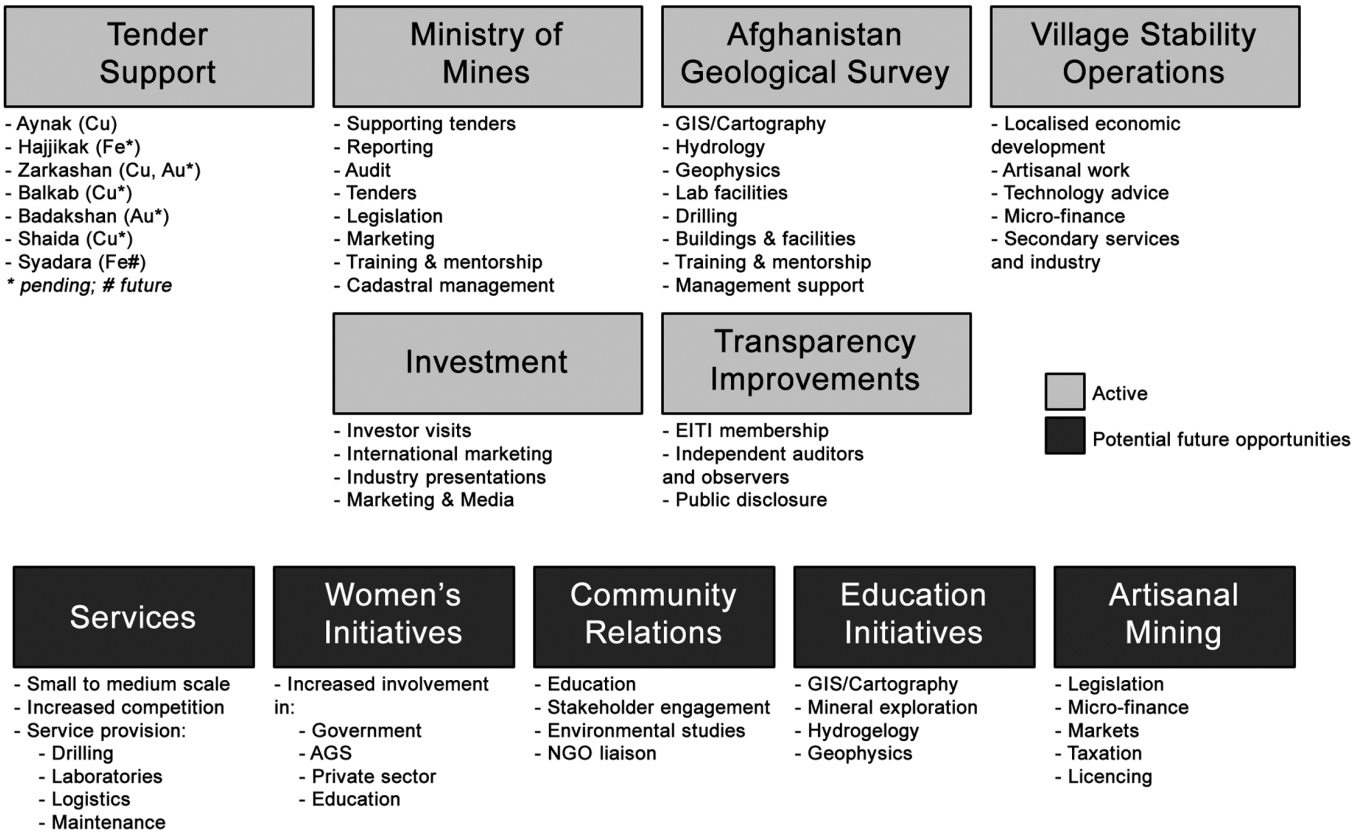

Figure 7. *A summary of current and potential future initiatives that are being implemented in Afghanistan.*

Anti-corruption and transparency initiatives

Afghanistan is preparing for membership of the Extractive Industries Transparency Initiative (EITI) which is a global voluntary standard to ensure transparency of payments from natural resources (MoMP, 2013c). Further support and mentoring is likely to be needed to assist the MoMP but ultimately, through EITI, the Government of Afghanistan will become more accountable for the revenues received from the exploitation of Afghanistan's natural resources.

Thoughts On The Future Of Afghanistan

Several world class projects will undoubtedly be discovered and subsequently exploited in Afghanistan in the future. This will contribute significantly to the country's GDP, should reduce reliance on donor aid and bring widespread benefits in infrastructure, employment and public services.

For Afghanistan to become a stable country, it needs an economic base that will enable it to finance its own security and development. Afghanistan's natural resources have the greatest potential to provide the country with that economic base but as noted previously, the simple presence of vast natural resources is by no means a guarantee to success.

Regular military forces do not conventionally retain mineral exploitation expertise within their geological capability and even that, certainly in the case of the British Army, is a reserve capability. This does however open up the opportunity for Subject Matter Experts (SMEs) who do have expertise in the field of natural resources exploitation to play a part in the stabilisation phase and support through into the development phase. With the recent force reductions seen across many of the Western powers, there has been a move towards recruiting more thematic SMEs who can provide these skills and expertise.

The challenge in the future (see Figure 8 for likely areas of instability in future, and their potential resources) will be for the governments, their departments and their military forces to understand this capability, to see the opportunity and to utilise SMEs in a timely and expeditious manner (MOD, 2013).

To use a nation's natural resources as a tool towards stabilisation and development, there are several important considerations:

- Collective planning is essential; across nations, SMEs, organisations and agencies (both military and civilian) towards a clear strategy drafted with full support of the host nation.
- A modern and competitive minerals law is essential as a foundation to both industrial and artisanal scale mineral exploitation.
- The host nation's minerals strategy must integrate and compliment wider infrastructure and economic planning.
- Natural resource related initiatives should be developed and managed within the framework of a

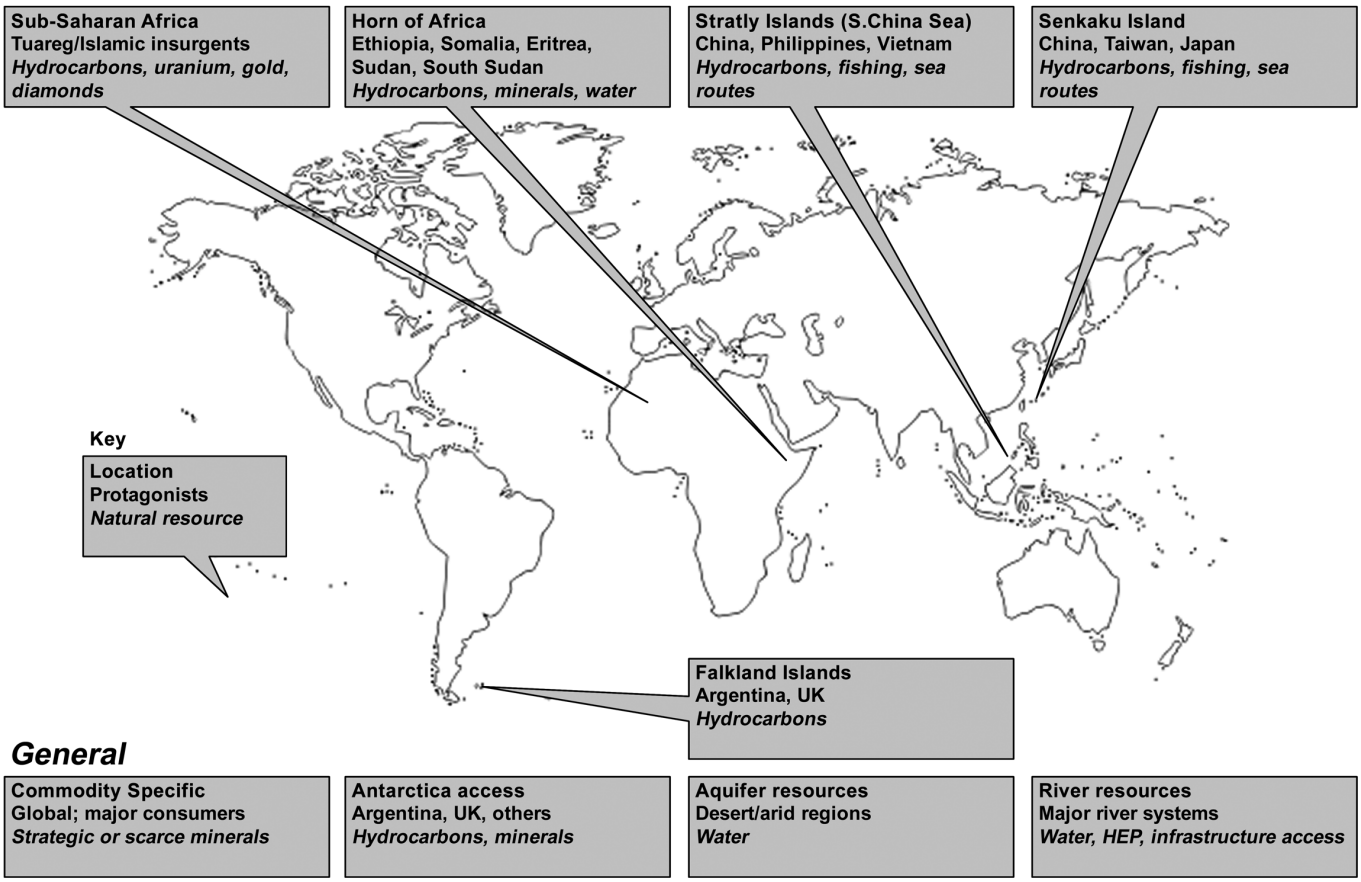

Figure 8. *Likely areas where natural resources might lead to instability within the next 100 years.*

broader programme of stabilisation and then development activities.

- Broader programmes should support, or at the very least be de-conflicted with, the stabilisation strategy, the legitimacy of the host nation and the efforts of the international community.
- Major considerations for planning include: relevance, inclusion, coverage, effectiveness, efficiency, sustainability, impact, speed, coordination, visibility, appropriateness, agency, monitoring and evaluation.
- 'Do No Harm'. Any project's indirect negative consequences should be considered thoroughly - are these acceptable? How might the programme/project fail or destabilise the political settlement in the short and medium term? This principle needs to be applied pragmatically, enabling swift but considered responses.

Conclusions

If the geology is sufficiently prospective even the most extreme environments and jurisdictions, fraught with security and political risk, can attract investment.

The development of mineral resources can play a significant part in the stabilisation and subsequent development of countries emerging from periods of instability and conflict.

However, the inclusion of natural resources within a strategic plan for development, or re-development, should be taken with care and attention due to the significant amount of time and effort, and therefore money, required to ensure that this industrial sector can make a sustainable contribution to a country's GDP.

Expectation management is critical to ensure that all stakeholders understand the long term requirements for building a mining industry and that ultimately the sectoral development has a stable foundation based upon a competitive and transparent mining legislation and regulatory framework.

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