A RAPID DESK STUDY:

Afghanistan – Current Status and Future Prospects for the Construction Sector



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December 2014

This report has been produced for Evidence on Demand with the assistance of the UK Department for International Development (DFID) contracted through the Climate, Environment, Infrastructure and Livelihoods Professional Evidence and Applied Knowledge Services (CEIL PEAKS) programme, jointly managed by DAI (which incorporates HTSPE Limited) and IMC Worldwide Limited.

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DOI: http://dx.doi.org/10.12774/eod_hd.december2014.ghiorghistg

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Report Summary

The construction sector in Afghanistan has been one of the main beneficiaries of the huge investment made on civilian and military projects in the last decade by the international community. During this period, many military bases were constructed, thousands of kilometres of roads have been constructed and rehabilitated, numbers of schools and health facilities have increased significantly and improvements have been made to all other infrastructures such water, power, irrigation schemes etc. The GDP of the country has quadrupled since 2002.

Currently, Afghanistan is in transition. Presence of foreign troops and international NGOs is decreasing. The decrease in foreign military presence and the transfer of responsibility for the security of the country to the Government is creating significant uncertainties in all sectors of the Afghan economy. This is true in the construction sector which is facing serious problems as demand decreases resulting in significant layoffs and a downward decline of unit rates.

To mitigate the situation, the construction sector has to shift from donor financed projects to more sustainable market based initiatives. The purpose of this paper is to identify and propose market based sustainable schemes to lessen the impact of reduced demand for the sector. The proposed actions should also enable broad based and inclusive participation of the different parts of the society and creation of significant job opportunities.

The major schemes proposed are the following:

- It is proposed to strengthen the residential housing construction business by resolving current drawbacks. This action should go hand in hand with the creation of significant numbers of micro and small business enterprises (MSEs) with market linkages to the housing development projects in the provision of construction materials and undertaking part of the construction itself.
- 2. The use of cobblestones or concrete pavers on road construction within cities using micro and small business enterprises for the production of the construction materials and to undertake construction of the pavements.
- Undertaking country-wide all weather rural road construction and maintenance using labour based and intermediate systems employing small business enterprises and consultancy firms created for the purpose.
- 4. Improved road maintenance performance by invigorating current efforts to the creation of a "Roads Authority" and a "Roads Fund" for the provision of road-user financing to finance the maintenance work.

The experience of Ethiopia is used extensively here due to the similarities of conditions that prevailed and exist in both countries. Ethiopia also emerged from extended period of conflict and is landlocked. GDP per capita of both countries is similar. The population of both countries is multi ethnic of which about 80% lives in rural areas. In the recent past, both have enjoyed the economic support of the international community. In addition, Afghanistan and Ethiopia have enjoyed sustained GDP growth in the last decade of around 10%. Though the countries face similar challenges in the economic arena, a real difference exists in security situations. While Ethiopia is enjoying a relative period of peace, Afghanistan is still entangled in conflict and insurgency. Nevertheless, this author believes that the experiences of Ethiopia would be very relevant to Afghanistan at this stage.



SECTION 1

Introduction

1.1 Structure of this Paper

This paper is structured in four Sections.

Section 1 This introductory section.

Section 2 Provides an overview of the construction sector in Afghanistan and discusses

the challenges and opportunities the sector is currently facing.

Section 3 This section proposes market based initiatives to invigorate the construction

sector and to contribute to jobs and growth.

Section 4 Discussion is made here on the capacity building required to implement the

proposed initiatives.

1.2 Purpose of the Study

This rapid desk based study on the current status and future prospects of the construction sector in Afghanistan is required to understand how the sector may be developed further and inform the development of a country growth diagnostic paper – with a particular focus around private sector / construction sector development.¹

1.3 Methodology of Study

In the development of this paper, the author has used the following:

- Internet searches.
- Review of reports from Afghan Government, Donors (WB, USAID, DFID and ADB) and NGOs.
- Relevant news reports.
- Study of other countries of similar experience in Sub-Saharan Africa, especially Ethiopia.
- Discussions with relevant experts in Ethiopia in implementation of country wide construction sector initiatives.
- Recent personal experiences of the author working in Afghanistan construction sector.

1.4 Caveats

This report is a brief desk based study on the status and future prospects of the construction sector in Afghanistan in light of the rapidly changing situation in the country. As such, the report does not in any way assume to be a comprehensive study on the subject matter. The case studies included in the report are limited in scope due to time limitations. Further reading is included in the Reference List included in the report.

Taken from description of author's assignment



SECTION 2

An Overview of the Construction Sector in Afghanistan

2.1 Status

The construction sector was one of the main beneficiaries of the post 2002 situation in Afghanistan. During the 10 year period from 2002 to 2012, the sector benefited from the huge investment made to reconstruct the infrastructure destroyed in the previous conflicts in the country and build the facilities required for the international force stationed in Afghanistan. Approximately fifty billions dollars were poured in construction of roads, schools, health centres, rural infrastructure, military bases, etc.

The Afghan economy has been growing at about 10% per year in the last decade, which is mainly due to the infusion of over \$50 billion in international aid and remittances from Afghan expatriates.² The main drivers of this growth have been the agriculture, telecommunications, banking and construction sectors.

The construction industry currently constitutes around 10% of the national GDP and similarly provides employment to about 10% of the population. The sector has grown by 29.5% between 2003 and 2009³. In the last decade more than 15,000 km of roads have been built and reconstructed. USAID alone has spent more than USD 2 billion to rehabilitate and build about 2,000 km of roads. Similarly, the Asian Development Bank (ADB) has provided \$1.9 billion to construct or upgrade over 1,500 kilometres of regional and national roads⁴. During this time some 5,000 schools were built or renovated. The number of functioning health facilities increased from 496 in 2002 to more than 2,000 in 2012. USAID alone has constructed more 600 health facilities⁵.

There has also been a massive increase in private construction, notably in housing. This is especially true for Kabul. The huge construction of residential buildings is visible throughout the city in spite of the challenges the business is facing.

The construction sector is currently suffering because of decreasing demand as international donors' activities have been decreasing since 2012. And also, the sector has also not benefitted fully from the past construction boom since most construction was implemented by foreign companies with Afghan firms playing minor roles as subcontractors. Most of the good jobs created in the sector had also gone to foreign expats, mostly from the region, due in part to lack of experience in the local labour market.

⁵ USAID – Achievements in Afghanistan



² Wikipedia, Afghanistan

Ministry of Commerce and Industry, Implementing the SME Strategy: An Action Plan for Developing Afghanistan's Construction Materials Industry July 2011 – April 2013

⁴ ADB Fact Sheet 2013

2.2 The Construction Sector and Other Related Sectors

In the opinion of the author, the main sectors of the economy that mutually affect the construction sector are agriculture, construction materials industry and mining. **Agriculture and Rural Development -** The agricultural sector constitutes an estimated 25 to 30 % of Afghanistan's GDP, with around 80% of the Afghan population dependent on agriculture and agriculture related activities for their livelihoods. In the past Afghanistan was famous for its agricultural products. But years of conflict and deterioration of the rural infrastructure have had their toll on the sector. Since most of the population lives off agriculture, the sector has been the focus of the government and the international community. Billions of dollars have been spent to revive the agricultural sector. Much effort has been made to improve irrigation, the use of fertilizer through extension services and improved accessibility through rehabilitation of rural roads. This has resulted in significant growth in the sector, though it has been affected by unfavourable weather conditions from time to time.

The support of the donor community to the agricultural sector is set to continue. Projects planned include rehabilitating irrigation systems, building small multi-purpose dams, secondary and tertiary roads⁶. These will help maintain demand for the construction sector.

Construction materials production industry – Unfortunately most construction materials are imported from outside. This includes strategic materials such as cement, bitumen and reinforcing and other steel. Almost all glazing, pipes and fittings and sanitary installations are imported. This is despite Afghanistan being endowed with significant raw materials required for the manufacture some of these products.

Import of most construction materials has significant implications for the construction industry through higher prices, time required for delivery, unreliable supply sources etc.

Mining – Although currently the contribution of the mining sector to GDP is very modest, the sector has significant potential to spur growth of the construction sector.

The World Bank in its "Afghanistan Overview" updated on Oct 21, 2014 states "A key to identifying and sustaining sources of growth will be work around the concept of "Resource Corridors" which seeks to catalyze investments in Afghanistan's huge natural resources in a holistic manner, linking up mineral resources, infrastructure, communities and employment-creating sectors in a way that provides growth and jobs beyond the borders of the mines. In addition, enhancing the connections between Afghanistan and its neighbors in terms of transportation, power and other infrastructure will be essential not only for the export of Afghanistan's minerals, but will also help foster wider cooperation and trade in region."

As can be seen from the above citations the potential economic impact of the mining sector is enormous. One of the prerequisites for development in this sector is availing the necessary infrastructure to exploit and transport the minerals. The construction sector will benefit from the development of the mining sector in provision of the necessary infrastructures.

USAID Engagement in Afghanistan – 2014 and Beyond, Feb 2014; World Bank's Afghanistan Overview, Updated Oct 21, 2014 and Afghanistan Interim Strategy Note, 2012-2014



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2.3 Challenges Affecting the Construction Sector

2.3.1 Dependency on Donor Financed Projects

There is high dependency on donor financed projects. For example the National Institute of Standards and Technology (NIST) states that "The U.S. Department of Defence accounted for approximately 50% of total demand (construction) in FY2010. The U.S. Army Core of Engineers, for example, committed \$1.66 billion USD for FY2011 and \$2.93 billion USD in FY2012 for construction projects alone. It was estimated that the market value of the construction sector will be relatively stable then steadily decline towards 2014 as the international community's support diminishes".

The Afghan economy has slowed down since 2012 due to the uncertainty of the political and security transition of 2014 that led to a slump in investor and consumer confidence; and the decrease in external financing. Economic growth in 2013 is estimated at 3.6%, down sharply from a strong growth of 14.4% in 2012⁸. This decline in economic output is coupled with a decline in revenue collection, exacerbating the situation further.

The quantity of smaller works is also in serious decline due the downturn of NGO activity in the country. The reduction in construction of schools and health centres has compelled many contractors to lay off staff and reduce activities⁹.

Largely due to the nature of external financing, the majority of the construction projects have been implemented by foreign companies. Afghan companies have mostly played the role of subcontractors and sub-subcontractors. This has severely limited the possible capacity building that would have been possible. Currently the capabilities of the local construction firms in terms of planning, contract management and quality control and assurance are very low.

2.3.2 Security and Instability

Among 15 possible obstacles in the business environment, firms in Afghanistan are more likely to rate political instability as the biggest obstacle to their operations, followed by access to land, corruption and then access to finance. Interestingly, firms in other South Asian countries such as Bangladesh and Nepal also indicate political instability to be their top business environment obstacle. The Afghanistan Enterprise Survey also shows that crime, theft, and disorder are no longer the top-rated obstacles in 2014 as they were in 2008¹⁰.

2.3.3 Corruption

The 2012 Transparency International Corruption Perception Index lists Afghanistan as one of the most corrupt countries after North Korea and Somalia. Corruption is endemic and is rooted in archaic legal and administrative systems and procedures. Highly centralized systems, lack of transparency and accountability, and the security situation are the main causes for the corruption in the construction sector. Until recently, contractors were very reluctant to bid for government projects for fear of corruption and associated delays in

The world Bank Group Country Highlights Afghanistan 2014



1

Department of Commerce, Federal Business Opportunities, Solicitation Number: AFG_CDP

WB, Afghanistan Economic Update, April 2014
 National Public Radio, Afghan Contractors Feeling Drawdown Pinch, Dec 09, 2012, Sean Carberry

effecting payments. Bids issued for road construction within Kabul attracted only one or two bidders. Contractors were required to secure a high number of signatures from different departments to process payments. The system whereby the Ministry of Finance directly effects payments to contractors after they have completed all processes with client institutions is a big obstacle and a source of corruption.

The existence of many security check points is similarly another major concern. Contractors' delivery and dump trucks are required to pay graft money at many locations, especially during the evening and night hours, an ideal time for delivery of construction materials as the roads are free from congestion during this period¹¹.

Afghan businesses have ranked corruption the second most severe problem they face following political instability as per the 2014 business enterprise survey¹². U.S. firms also identify corruption as one of the biggest obstacles to foreign direct investment and routinely report being asked for a bribe, called "sherini" (sweetness) or "baksheesh" (present). Although official working-level government salaries have been raised, many officials at all levels take small bribes for government services¹³.

"Senior managers (Afghan) spend approximately 9.8% of their time dealing with the requirements of government regulations. This overall measure of regulatory burden, the time tax, is comparable to businesses in other low income countries. However, certain transactions such as obtaining a construction-related permit take long compared to other countries. The average number of days to obtain a construction permit in Afghanistan is 140, considerably higher than what it was in 2008 (~45 days) and higher than the average for low income and landlocked countries (~60 days)" This extended time required to get permits can be another reason for corruption.

The Government of Afghanistan joined the Construction Sector Transparency Initiative (CoST) in October 2013 following recommendations made by the Afghanistan Joint Anti-Corruption Monitoring and Evaluation Committee (MEC) for greater transparency in the construction sector. The CoST Afghanistan programme is led by the Ministry of Economy with the process of disclosure and assurance initially tested by Afghanistan Reconstruction and Development Services.

It is learnt from the "Cost" website that a Multi-Stakeholders' Oversight Committee was recently established in February 2014 which is tasked with developing an action plan, monitoring implementation and ensuring compliance with CoST principles. Ministry of Economy officials are now preparing a funding proposal to help establish a CoST Afghanistan Secretariat that will ensure the effective management and coordination of the programme.

Effort will be required to simplify and streamline procedures and system governing the administration of contracts in client organizations. Decentralization of responsibilities and improved accountability in these institutions would go far in reducing corruption of the construction sector.

A major obstacle is lack of indigenous consultancy and construction supervision firms. Almost all consultancy services are undertaken by large foreign firms. The firms also employ

WB Group, Country Highlights, Afghanistan 2014



¹¹ Author's experience of working with Afghan contractors

WB Afghanistan Country Profile 2014

²⁰¹³ Investment Climate Statement, Bureau of Economic and Business Affairs. As per this report The Afghani private sector experiences more than twice bribery incidence compared to other LDC countries. The depth of bribery is also double that of other LDC.

most of their staff from nearby countries like India, Bangladesh, Pakistan, Iran etc. or employ sub-consultants from these countries who would do almost all of the work. Foreign firms and consultants do not feel obliged to perform as local firms because they are transient and often action that can be taken after a misdeed is limited. Reducing the current level of corruption in the construction sector can be considered a prerequisite to building local consultancy and contracting capabilities.

2.3.4 Low Access to Finance

"Afghani firms are much less likely to have bank accounts compared with firms in low income and landlocked developing countries. The precipitous drop from 73% to 44% across the two surveys (2008 vs. 2014) may be a result of citizens having less faith in banks after the Kabul Bank scandal which emerged in 2010. On the credit side, only two percent of firms use banks to finance investments; this is less than one-tenth of the average for firms across all LDCs. Despite a slight increase from 2008, access to bank finance for investments remains extremely low"¹⁵.

Credit to the private sector stands at less than 10 percent of GDP, significantly lower than other countries in the region. Afghanistan ranks 154th out of 185 countries for ease of obtaining credit in the World Bank's 2013 "Doing Business Report." Afghan entrepreneurs complain that the interest rate for a commercial loan from a local bank ranges from 15-20 percent.

In response to this situation, investment funds, leasing, micro-financing and SME-financing companies have entered the market; however, despite strong donor support for many of their activities, these firms have been handicapped by difficulties in securing repayment. USAID is working with GIRoA and the banking sector to promote improved access to finance and the expansion of mobile money for financial inclusion. New IMF-mandated banking legislation to improve banking sector oversight reached Parliament early in 2013.

In 2013, deposit in commercial banks was about 16% of GDP while loans to the private sector only amounted to 4% of GDP. This shows a considerable amount of liquidity in the Banks; amounting about to USD 2.6 billion¹⁶.

Local contractors have very severe problems acquiring advance payments from clients as they are unable to provide the unconditional advance payment guarantees required. The banks routinely require the deposit of the full amount of the advance payment as collateral though some banks have started accepting other types of collaterals. Absence of advance payment for the contractors can be a reason for poor performance.

2.4 Opportunities for the Construction Sector

2.4.1 Continued Commitment of the International Community

All the major donors/financers (USAID, WB, ADP, DFID, JICA, etc.) have indicated their commitment to continue their support towards the development of Afghanistan¹⁷¹⁸¹⁹²⁰²¹. It is

JICA – Country Assistance Policy for the Islamic Republic of Afghanistan



WB Group, Country Highlights, Afghanistan 2014

WB, Afghanistan Economic Update, 2014

WB's Interim Strategic Note

Asian Development Bank Fact Sheet for Afghanistan.

Fact Sheet USAID Engagement in Afghanistan – 2014 and Beyond

DFIDIDC Report Afghanistan update Final

planned that there will not be any sudden drop in external funding that would have a negative effect on the country.

"In 2014, the UK will co-chair the first Ministerial Review of the Tokyo Mutual Accountability Framework (TMAF) with the Government of Afghanistan. At this meeting international partners will be asked to account for and renew the aid commitments they made in Tokyo, alongside reviewing progress against the Afghan Government's reform commitments. As co-host, we will continue to play an active role in this process"²².

"The July 2012 donor meeting in Tokyo pledged \$16 billion in development aid for Afghanistan over 2012-16. Together with earlier pledges on the security side, this means annual aid of about \$8 billion—roughly equally divided between civil and security aid. This would cover the projected budget financing gap and allow the authorities to progress towards development and infrastructure targets. However, these funds will only be made fully available if the Government makes satisfactory progress on the TMAF²³."

From the above, it can be seen that budget constraint will not be a main issue to finance the construction sector.

2.4.2 Enduring High Demand for Construction

Afghanistan is one of the least developed countries. There is a huge need for additional infrastructure in all sectors of the economy. More roads, schools, health facilities, irrigation schemes, housing, etc. are required. All these need the construction sector. As an example, according to an estimate by the Minister of Education another 8,000 schools are required to be constructed for a remaining 3 million children who are currently deprived of education²⁴.

Although figures from different sources vary, the road network is about 38,500 km, with a low density of 4 km per 1,000 km² and with only 7% being paved. About 70% of inter-provincial and inter-district roads are in a poor state of repair. The lack of well-maintained roads makes rural areas isolated, which has a negative impact on growth and prospects for social inclusiveness, peace and stability. Railways reach only about 100 km into Afghanistan through cross border extensions from neighbours. Intraregional trade is growing but remains seriously constrained because of limited transport infrastructure, facilities and political factors.²⁵

Providing affordable housing is critical. Though the construction of residential building is evident, the houses under construction target the very high income earners. The cost of an apartment is beyond the means of the high middle income earners. Affordable housing development is a big opportunity for the construction sector due to existing high demand.

The maintenance of already constructed infrastructures is also a major concern.

2.4.3 High Liquidity of the Banking Sector

As can be seen from the "Afghan Economic Update 2014" of the WB, total deposits of the banking sector in 2013 stood at 15.5 present of GDP (USD 3.4 billion) while, on the other hand, lending to the private sector has remained steady at around 4 present of GDP or \$820 million.

ADB Country Operations Business Plan (2013 – 2014)



²² DFIDIDC Report Afghanistan update Final

WB. Afghanistan Economic Update, 2014

Wikipedia, Afghanistan, Education

"Despite excess liquidity in Afghanistan's banks, the primary mortgage market remains moribund. Afghanistan's finance-to-GDP ratio is less than one present compared with 50-70 present in developed countries and 7 present in India. As a result, the population finances housing purchases through friends, relatives, and moneylenders. Commercial loans account for 86.8 present of total lending, agriculture 7.3 present, all other loans except residential 3.7 present, and mortgage loans 0.88 present".²⁶

The banking sector is reluctant to provide loans to the private sector because of perceived uncertainty during the transition period and worry about return of loans made to the private sector. A solution must be found to this problem. The money that is sitting in the Banks should be used to stimulate the economy, especially affordable housing construction.

The DAB and the commercial banks have to be supported to mitigate the situation. Detailed study will be required to clearly identify causes and required actions.

2.4.4 Young and Eager Workforce

The Afghan labour market is characterized by a young and fast growing workforce. The share of population aged 15 or below is as high as 48 present. Average household size is 7.4. It is estimated that the labour market will have to accommodate an annual flow of about 400,000 new labour market entrants.

Youth unemployment rate stands at 10.4 present. Female participation rate in the labour market is significantly lower than that of the male population. Share of women in wage employment in the non-agricultural sector is very low at 11.1 present.

"The most notable characteristic of the employed population in Afghanistan is that most workers by far – 81% work in a vulnerable setting, characterised by informal work arrangements and insecure employment, unstable and inadequate earnings, and low productivity. The age pattern of labour force participation shows high levels of 80 % and over for males in the productive ages of 20 to 59. However, even among boys of 14 years old almost half (46 %) already work. Similarly, male elderly in age groups between 65 and 79 years old indicate economic activities for percentages ranging from 22 to 53 present. These figures indicate the dire need for large parts of the population to contribute to family incomes and livelihoods."²⁷

The "National Risk and Vulnerability Assessment (NRVA) 2011-12" shows that 25 present of the Afghan population is either unemployed or underemployed. This high portion of the population could be characterised as follows:-

"One quarter of the adult population (25 years and over) in Afghanistan has no formal education. Overall, only 12% has more than a primary school education (excluding Islamic schooling), with the corresponding figures for males and females, respectively 19% and 4%." Although much has been achieved during the last decade in the education sector, the size of graduates from secondary, TVET and higher education is still low. This has resulted in low level of marketable capabilities of the labour force. Due to this, a good portion of in the newly created good quality construction sectors jobs are filled with imported labour.

National Risk and Vulnerability Assessment 2011 – 2012
National Risk and Vulnerability Assessment 2011 – 2012



²⁶ Central Bank of Afghanistan, **Housing Finance Program in Afghanistan**

The availability of abundant and young workforce is an opportunity for the construction sector. This will allow the implementation of low-cost labour intensive systems both in rural and urban areas.



SECTION 3

Prospects of the Afghan Construction Sector

There is a clear need for the construction sector to shift from donor supported projects to more viable market based initiatives. The initiatives should generate steady demand for the sector and enable sustained job creation.. The Afghan economy itself should also be able to generate most of the financing required, after an initial phase, with reduced support from the international community.

In order to realize these requirements the interventions proposed must fulfil the following criteria.

- 1. They must address real needs of the Afghan society.
- 2. Must be able to mobilize a large part of the population at grass-roots level.
- 3. Must be market based for sustainability.
- 4. Are technically and economically viable.
- 5. Should allow gradual escalation to scale, enabling learning from doing.

It is recommended that the main prospects for the construction sector in the immediate future would be affordable housing development, rural roads construction, urban access roads construction and road maintenance.

3.1 Affordable Housing Development

The demand for housing in all Afghanistan is huge. A Report by IFC of the World Bank "Housing Finance in Afghanistan: Challenges and Opportunities" of July 2008 states "The housing shortage in urban areas has led to the expansion of informal settlements without access to the most basic city services. In Kabul informal settlements provide shelter for 80% of the population, cover 69% of the residential land, and with the land value excluded, represents a fixed private capital investment of \$2.5 billion. Much of the informal housing in Kabul is built on government land, self-constructed by migrants, and in poor condition. ... Countrywide, the demand for housing was estimated at 1.0 million units in 2006 and is projected to grow steadily, to reach 1.25 million in 2010 and more than 1.5 million in 2014".

According to the "National Risk and Vulnerability Assessment 2011 – 2012" the size of the population living in slums stands at 86.6% indicating the enormous need for affordable housing.

This need for additional housing is a huge opportunity for the construction sector. Housing development by its nature is labour intensive and is able to mobilize many other sectors of the economy. The two main problems to tackle are securing land for the construction and making available financing through long term mortgage systems.

According to research findings, 83% of the households showed strong interest in borrowing to own a house of their own, 92% sought to have long-term loans and 93% preferred Sharia-compliant financing. The research was conducted in the five main cities (Kabul, Jalalabad, Mazar-e Sharif, Herat, and Kandahar) of Afghanistan. Moreover, the research showed that



the amount of investment needed to meet the current demand in residential housing construction in the in five main cities of Afghanistan to be \$15.8 billion USD²⁹.

"In June 2014, Da Afghanistan Bank (Central Bank of Afghanistan DAB) and HARAKAT (Afghanistan Investment Climate Facility Organization) signed an official Grant Funding Agreement to launch the Residential Mortgage Framework Development Project in Afghanistan. ... The project will develop a set of necessary mortgage regulations, manuals, guidelines and procedures for the Mortgage Directorate of DAB, and help to develop the capacity of mortgage directorate within DAB, identifying and response to the needs of mortgage product in the country and conduct comprehensive awareness campaigns for some target audiences." 30

It is reported that, during the signing ceremony, Mr. Noorullah Delawari, Governor of DAB, said: "Mortgage is an important part of a functioning economy. Thus far, our commercial banks have stayed away from the mortgage market. Regulation and policies are part of the problem. This HARAKAT program will help change that. Currently most loans are short term (1-4 years) with high interest rates (15-20%). Building on this HARAKAT project, we are in contact with international funding agencies to secure large funds that will be used through commercial banks to provide long term loans. This will provide long term loans, up to 15 years, and with an interest rate of about 5 to 6%."

Case Studies 1 Ethiopian Experience in Affordable Housing Development

Housing Project Objectives:

- To enable low and middle income urban dwellers to acquire homes of their own.
- Alleviation of urban poverty through the participation of Micro and Small Enterprises (MSE) and creation of high number of employment opportunities.
- Build the capacity of the construction industry.
- Promoting cost efficient housing construction technology.
- Empowering citizens of the city through ownership of houses and tenure security.

Achievements:

- More than 200,000 condominium houses completed and under construction in Addis Ababa.
- Many successful contractors and small scale enterprises have emerged.
- Created job opportunities for hundreds of thousands of people.

Implementation Modality:

- Initially G+3 and 4 buildings mostly for low income families. Now up to G+20 buildings started.
- Houses constructed for three levels of income categories in one, two and three bedroom designs.
- Houses transferred on transparent open lottery basis.
- Creating hundreds of small scale contractors mainly to complete the skeletons of the buildings with City providing aggregates, sand and reinforcing steel and advance for working capital (initially no collateral required).
- Creation of hundreds of specialized micro enterprises to work as subcontractors to the small scale contractors producing construction materials and undertaking masonry, electrical, sanitary, carpentry and joinery, doors and fittings etc.

Financing:

- City budget for project start-up
- Down payment from applicants in 10%, 20% and 40% based on income category of estimated cost of condos and the remaining amounts in long-term mortgage loans

HARAKAT - Afghanistan Investment Climate Facility housing.html



Mortgage Market Research by HARAKAT



from the Commercial Bank of Ethiopia.

Sell of commercial units on ground floors of buildings.

Key Factors for Success:

- Commitment and drive from government. Accepting some failures at initial stage.
- Participatory approach.
- Adequate training of the Contractors and MSE

Challenges:

- Weak performance and poor quality work at initial phase.
- Relocation of residents from re-development areas.
- Provision of alternative housing to people disrupted by relocation.

The two main differences between Kabul and Addis Ababa are that all land belongs to the Government in Ethiopia and the existence a big government owned bank to provide the mortgage in long-term loans. It is the strong belief of the author that similar success can be achieved in Afghanistan with the assistance of the international community at the initial phase. Availability of seed money at the onset of project and resolving the problem related to unavailability of long term mortgage loans at reasonable interest rates will be crucial. The situation related to land availability in Kabul and other major cities should be looked at in detail.

3.2 Rural (Secondary) Roads³¹ Construction

Construction of rural roads can create enormous job opportunities to the rural poor and at the same time remove the isolation many parts of the country face today. Isolation may be the factor that contributes the highest towards extreme poverty, limiting access to services and opportunities for people to change their lives for the better.

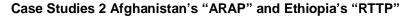
"Roads serve 90% of Afghanistan's travel demand. The network is overstretched while vehicles numbers are rising fast. Since 2009, there are 23% more cars, 15% more trucks, 48% more motorcycles, and 2% more buses on the roads. Freight is carried mainly in private trucks since rail transport is too new and limited and air transport is too expensive. More than 85% of roads are in poor condition, with large portions, particularly in rural areas, impassable. Only 15% of planned national highways have been built. At present rehabilitation work is on-going in over 1,000 km of regional and national road. Most unrehabilitated roads are gravel and are poorly maintained. During winter, most of these roads are impassable."

This indicates that there is enormous need to construct and rehabilitate roads in rural Afghanistan. Especially rehabilitation and construction of gravel surfaced rural roads lends itself to labour based or intermediate systems that can employ high number of the rural poor and at the same time would open-up remote areas to development and alleviate extreme poverty.

ADB Concept Paper, Draft 1; AITF Operation & Maintenance Support; November 2012.



There is a difference in the classification of roads between Ethiopia and Afghanistan. While in the Ethiopian context "Rural Roads" are fully engineered roads with double lanes and natural aggregate surfacing in the Afghan context the terms refers to very low-volume single lane rural access roads. These types of access roads are referred to as "community roads" in Ethiopia. The author has selected the term "secondary roads" as the one most similar to the Ethiopian "Rural Roads" from the definition contained in the "Rural Roads Manual" of Ministry of Rural Rehabilitation and Development.



Ethiopia had a project similar to Afghanistan's "Rural Access Project (ARAP)". The Ethiopian project was termed as the "Rural Travel & Transport Project (RTTP)". The main component of RTTP was construction of "community roads" to provide access to services and markets. During the period from 2004 to 2009, 100,384 km community roads were constructed using the labour of the local community. Because the roads lacked adequate drainage, the torrential nature of the rainy seasons and soft areas rendered the roads impassable during the rainy seasons³³. Thus the government reverted to the construction of more robust fully engineered rural roads. The new project to construct rural roads is now referred to as the "Universal Rural Access Program (URAP)"

The Afghan situation is similar to where Ethiopia was before commencement of the URAP. WB in the press release entitled "Government of Afghanistan Signs \$125 million Grant with the World Bank to Improve Rural Roads" of July 22, 2012 states "Today, Afghanistan's tertiary road network is estimated at 80,000 km, of which only about 7,000 km are accessible to motor vehicles in all seasons; the rest are tracks mostly inaccessible to motor vehicles. Among the roads that remain accessible to motor vehicles all year, an estimated 5,000 km are believed to be in maintainable state, while the rest are in poor condition and need rehabilitation.

Case Studies 3 Ethiopian Experience in Universal Rural Access Program (URAP)

Background:

- Initially undertaken from the centre by the Ethiopian Roads Authority (ERA) mostly through direct labour system. Later on responsibility for rural roads decentralized to regional states following the adoption of federal system of government.
- Regional states adopted the systems used by ERA under their own State Rural Road Authorities. Both private sector contractors and own-force were employed.
- The Government felt that this traditional approach would not result in the big jump required in rural roads to provide the rural population with access to market and services. The URAP was lunched four year ago to construct 70,000 km of all-weather roads in five years' time.

Achievements:

- 39,056 Km of rural roads have been constructed in the first three years of the program.
- Many successful contractors and micro consultancy firms have emerged.
- The program has created job opportunities for some 300,000 people in rural areas.
- Many equipment rental firms have developed.

URAP Implementation Modality:

- About 350 small consultant firms comprising of three to ten road professionals were formed. These firms were responsible for the design of the roads based on design manual provided and to undertake supervision of the Works.
- Several hundred small contractors comprising typically of five to seven staff were formed. Applicants were allowed to apply individually or to come as an acceptable group.
- Training was provided jointly to the newly setup; consultants and contractors.
- Contractors were directly awarded their first contracts with government providing advance payment (without collateral) to enable them to commence work. Additional work was provided to those contractors that completed initial work satisfactorily.

Financing:

Ethiopian Road Sector Program (RSDP), 13 years performance & Phase IV, January 2011





• The project is mostly funded by the Regional States with some contribution from the World Bank through the central government.

Key Factors for Success:

- Commitment and drive from the Government. Accepting some failures at initial stage.
- Participatory approach.
- Good preparatory work.

Challenges:

- Weak performance and poor quality work at initial phase.
- Problems in financing of the project.

Afghanistan can emulate Ethiopia's URAP program. This would generate much needed work in the country side, create demand for young engineers and technicians; and would also create a huge market for equipment leasing services.

3.3 Urban Access Road Construction

Improving access in urban areas using labour intensive methods would create employment opportunities for the urban poor. With similar intentions, cobblestone road construction has been underway for some time in most urban centres in Ethiopia. In the initial phase technical support and advice was made available through GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH).

A publication of GIZ entitled "Making Good Governance Tangible - The cobblestone sector of Ethiopia", in its "Introduction" states, "The impact of (cobblestone construction) on private sector development and poverty reduction has also become very apparent. This includes: employment creation, especially for unskilled and untrained labour as well as traditionally neglected groups such as women and the physically handicapped; and local economy promotion through tendering construction contracts conducive to local micro and small enterprise (MSE) development."

Case Studies 4 Experience in Ethiopia Cobblestone Urban Road Construction

"The idea for the Cobblestone Project, as it is known, developed out of a government decision to use setts to pave the walkways, roads and courtyards on new university campuses being built at 15 separate sites across the country. With help and expertise supplied by the German Society for International Cooperation (GIZ, formerly GTZ), the aim was to encourage the formation of small local companies which would be awarded contracts on the campus, and whose employees would be taught how to make the cobbles and construct the paving.

By August 2007, long before the project had started on the university construction sites, the municipal authorities in Adama had begun their own paving programme, initially providing work for 80 stonecutters and pavers. Soon a regional training centre was established and people from all over Oromia Province and beyond travelled to the city to learn the skills they would need to pave their own towns and villages.

Granite setts have numerous benefits over tarmac, the more common alternative. "Cobblestone roads are easy to maintain and no asphalt need be imported. Only the local currency is needed and the raw materials (basalt, granite and trachyte) are available nearly everywhere," explained Roland Moezer, leader of the Cobblestone Project at GIZ.

By using local resources and eliminating the need for expensive imports of oil-based materials, Ethiopia is pioneering a greener and more sustainable method of road construction. Plus, cobblestone roads are more durable – according to Moezer, the areas in



Adama where he supervised construction are still in perfect condition four years on. As well as being easier and cheaper to maintain – if a pothole does eventually appear the affected cobbles need only be lifted and replaced – the technique can also be effectively used to repair damage to existing tarmac roads. On top of this, granite paving is much cheaper to lay than its asphalt equivalent. While the cost of preparing the ground and sub-base is the same for both materials, the price of laying 1 metre square of cobblestone is less than half that of asphalt, costing 280 and 680 Ethiopian birr (\$17 versus \$41) respectively.

The whole process is extremely labour-intensive – but this is hardly a bad thing in a country where unemployment is high, especially among the urban youth. On average one paver can lay around 15 square meters a day for which they need 1,500 setts. So to keep one paver fully occupied, 25 stonecutters producing 60 cobbles a day are required. The labour may be physically demanding but the wages, paid on a piece-rate, are good by Ethiopian standards; those laying the paving earn, on average, 150 birr (around \$9) per day, while the lesser-skilled chisellers are paid a daily rate of approximately 78 birr (\$4.5). And the employees seem happy. "This is a wonderful thing for our lives. The wages are very nice – we receive good money," said Kelamu Getachew, a paver from Adama."

At the end of 2009, when the Ethiopian government took over the project, more than 2,000 small and micro-enterprises had been created, providing employment for around 84,000 stonecutters and 4,700 pavers who had laid 1,230,000 square metres of cobbles across the country. "I've been in the development cooperation business for 30 years and I have never seen a project take off so quickly," said Stefan Helming, former Director of GIZ in Ethiopia, who oversaw Cobblestone from the beginning. "It started with the training of a few chisellers and stone-layers and it mushroomed in no time at all."

Today, only three and half years since the first cobbles were laid, the project is still growing. The programme has been rolled out to 120 towns and cities across the country; around 2,200,000 square metres have been finished; and an estimated 130,000 people (45 present of them women) are employed in the trade. Awassa, Bahir Dar, Mekelle, Dire Dawa, Harar and Addis Ababa (larger urban centres) have now established their own training schools. And, with the private sector showing an increasing interest (in Addis Ababa foreign embassies, hotels and businesses are using granite paving in their own compounds), the programme's future looks bright.

The Cobblestone Project has proved that by using the best technology for the job – not necessarily the newest or most widely used – sustainable, local solutions can be found for pressing infrastructural problems." ³⁴

The cobblestone road paving project is being implemented using three types of MSEs. The first would be the stone cutters, the second those who construct the pavement structure and lay culverts; and the last cobblestone layers. The second group are mechanized to transport, lay and compact the sub-base and base-course layers. The equipment comes from rental agencies.

3.4 Road Maintenance

Currently road maintenance is a major concern in Afghanistan. The roads reconstructed with the assistance of the international community are not receiving adequate maintenance and there is fear that the roads could quickly regress to previous poor conditions.

Elissa Jobson, "Old ideas are sometimes best", Global the international briefing



Reports say the recent road network deterioration has hurt commerce and slowed military operations; "There's been no maintenance," said a U.S. official who spoke on the condition of anonymity because he wasn't authorized to discuss the issue publicly".

Since 2012, the United States has refused to fund the Afghan government's road maintenance projects Some of the roughly 10,000 miles of roads and highways built by Western donors have been worn away by overuse. Others are shredded by hundreds of improvised explosive devices (IEDs) laid by insurgents. Not long ago, U.S. troops and contractors repaired them.³⁵

Afghanistan does not have an independent "Roads Agency/Authority" to be responsible for the road network and provide the necessary care. Road maintenance work has been undertaken mainly when funds are available from donors. This is clearly unsustainable and would entail loss of the huge investment made on the road sector to date. Earlier trials to form a roads fund have failed. Many developing countries have instituted "second generation" road funds to guarantee sustained financing for maintenance.

"A second, longer-term objective is to develop an autonomous Road Authority to manage Afghanistan's road network through oversight of private sector contractors that carry out both maintenance work and new construction. A key component to this reform initiative is to establish a Road Fund to manage dedicated funding from road user charges, which will provide a sustainable and accountable way to finance road maintenance. Despite political challenges faced by these reforms, accomplishing these goals will protect Afghanistan's revitalized road network that promotes economic growth, increases jobs, reduces poverty, and facilitates lasting change."

USAID News Release of October 20, 2014 by Stefan Korshak (0702-626255) titled "Ministry of public works \$22.3 million road maintenance project" states "The United States Agency for International Development (USAID) on October 20 announced a \$22.3 million project to help the Afghan Ministry of Public Works maintain Afghanistan's roads. The three-year project will help the Ministry create three departments: a road authority to oversee maintenance and construction; a road fund to provide financing; and a transportation institute to train staff."

The issues with the establishment of the roads agency/authority and the road fund should be resolved as soon as possible. Maintenance work would mean continuous work for the construction industry engaging different levels of contractors and consultants ranging from big fully mechanized contractors undertaking rehabilitation works to labour based contractors carrying out small localized works.

Infrastructure Rehabilitation Program (IRP) Afghanistan, Roads Operations and Maintenance / Capacity Building



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After billions in U.S. investment, Afghan roads are falling apart By Kevin Sieff, The Washington Post

SECTION 4

Capacity Building

As mentioned earlier, huge gains have been made in Afghanistan in the last decade in the education sector and in addition, different capacity building projects were executed by the donor community to develop the implementation capabilities of Afghan institutions and install modern systems. It is beyond this paper to discuss in more detail efforts made and results achieved, but the institutions and systems in place are still not adequate.

The interventions proposed in this paper to invigorate the construction sector all require sound planning, programming and implementation capabilities that are not readily available in Afghanistan. In each of the areas proposed capacity building should be a central theme. It is necessary to setup institutions to take responsibility for each of the projects and ensure that the institutions have the necessary skilled staff to design and implement the projects.

Case Studies 5 Capacity Building in Ethiopia

In the Ethiopian context capacity building was given the outmost importance. Separate institutions were setup for the affordable housing project under each municipality and "Road Desks" were established at each District and Sub-District to manage rural road construction. The engineers assigned at the road desks and small contractors that would undertake maintenance and construction were provided training in road design, labour-based construction, contract administration and management. The Ethiopian Roads Authority established a full-fledged training centre specifically for this purpose.

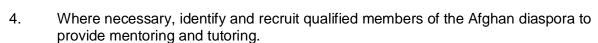
With the assistance of GIZ, many vocational training centres were established to train the young in metal works, masonry and carpentry, surveying, auto mechanics, electrical installations, manufacturing of tools and spares etc. Students were graduated with certificates and diplomas. The unavailability of training facilities was not taken as an excuse. Initial training was provided under purpose built shades. This training was vital later on during the establishment of MSEs to undertake the affordable housing development project. Similarly, training centres were established for the training of cobblestone road construction. Training of trainers was initially undertaken with some assistance from international institutions such as GIZ.

Government institutions were also led through different consecutive reforms, such as implementation of Management by Result and Strategic Planning, Business Process Reengineering and lastly Kaizen, to improve service delivery and effectiveness. The reform processes were designed and implemented with direct participation of all staff. The Government had made reform of the civil service its number one priority for an extended period.

In the Afghan context, the following actions are proposed:

- 1. Identify institutions to undertake each project.
- 2. Provide study tours to top management and other high-ranked officials to look at best practices in terms of building institutions and processes.
- 3. Conduct study and institute the necessary systems and processes.





- 5. Identify trainers and provide training of trainers with the cooperation of institutions of higher learning and the private sector. These would later on be responsible for project implementation.
- 6. Form the MSEs for each project and conduct extensive purpose driven trainings for members



Reference List

The World Bank: Afghanistan Transport Sector,

http://web.worldbank.org/wbsite/external/countries/southasiaext/extsarregtoptransport/0,,contentMDK:20560890~menuPK:868765~pagePK:34004173~piPK:34003707~theSitePK:579598,00.html

The Heritage Foundation – 2014 Index of Economic Freedom Afghanistan, http://www.heritage.org/index/country/afghanistan

Islamic Republic of Afghanistan, Ministry of Economy: Afghanistan's Jobs Challenge, http://moec.gov.af/Content/files/Afgh%20Jobs%20Challenge_Final.pdf

Mohammad Abid Amiri - Road Reconstruction in Post-Conflict Afghanistan: A Cure or a Curse? http://abidamiri.wordpress.com/

CoST Construction Sector Transparency Initiative: Afghanistan, **Overview of transparency in the construction sector**, http://www.constructiontransparency.org/contact-us?forumboardid=25&forumtopicid=25

American Embassy Kabul - The Afghan Construction Sector: Opportunities and Obstacles, April 23, 2003, http://trade.gov/static/doc_doc_afghanistan_construction.asp
The World Bank - Afghanistan Country Profile 2014, Enterprise Surveys, http://www.enterprisesurveys.org/

ADB Country Operations Business Plan (2013 – 2014), http://www.adb.org/sites/default/files/institutional-document/33786/files/cobp-afg-2013-2014.pdf

Afghanistan Investment Support Agency Research & Statistics Department: Essential facts on economic performance and investment in Afghanistan, March 2012, http://www.aisa.org.af/brochures/economy-fact-english.pdf

The world Bank Group Country Highlights Afghanistan 2014, http://www.enterprisesurveys.org/~/media/GIAWB/EnterpriseSurveys/Documents/CountryHighlights/Afghanistan-2014.pdf

USAID: Agriculture and Economic Growth, http://www.usaid.gov/afghanistan/

USAID Press Release: Ministry of Public Works \$22.3 million road maintenance project, http://www.usaid.gov/afghanistan/news-information/press-releases/ministry-public-works-223-million-road-maintenance

Central Bank of Afghanistan: **Housing Finance Program in Afghanistan** http://www.centralbank.gov.af/CompleteNewsDescription.php?NewsId=38

The World Bank International Finance Corporation with ShoreBank International Ltd and CHF International: Housing Finance in Afghanistan: Challenges and Opportunities, July 2008.

https://openknowledge.worldbank.org/bitstream/handle/10986/8070/446830ESW0AF0H1B0x0327407B01PUBLIC1.pdf?sequence=1





Harakat - Afghanistan Investment Climate Facility: Establishment of Mortgage Market Regulatory Framework Development Project, http://www.harakat.af/news39f2014055234.html

The World Bank: Afghanistan Interim Strategy Note, 2012-2014, June 5, 2012, http://www.worldbank.org/en/news/feature/2012/06/05/afghanistan-interim-strategy-note-2012-2014

USAID: Engagement In Afghanistan – 2014 And Beyond, Updated Feb 10, 2014, http://www.usaid.gov/news-information/fact-sheets/usaid-engagement-afghanistan-2014-and-beyond

Mekonen Wube Ermed: Addis Ababa Integrated Housing Development Program: A strategy for Urban Poverty Reduction and Sustainable Socio-Economic Transformation, http://www.weitz-

<u>center.org/uploads/1/7/0/8/1708801/addis_ababa_housing_development_project_mekonen_</u> wube_ermed.pdf

DFID Afghanistan: Operational Plan 2011 – 2015, Updated June 2012, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67417/afghanistan-2011.pdf

The World Bank: Government of Afghanistan Signs \$125 million Grant with the World Bank to Improve Rural Roads, July 22, 2012, http://www.worldbank.org/en/news/press-release/2012/07/22/government-of-afghanistan-signs-usd125-million-grant-with-the-world-bank-to-improve-rural-roads

ILO Afghanistan Office: Time to move to Sustainable Jobs Study on the State of Employment in Afghanistan, May 2012, http://apyouthnet.ilo.org/resources/afghanistan-time-to-move-to-sustainable-jobs-study-on-the-state-of-employment-in-afghanistan/at download/file1

Elissa Jobson, "Old ideas are sometimes best", Global the international briefing, http://www.global-briefing.org/2011/04/old-ideas-are-sometimes-best/

Asian Development Bank & Afghanistan: FACT SHEET, December 2013 www.adb.org/publications/afghanistan-fact-sheet

Sarah Lister and Zainiddin Karaev: Understanding Markets In Afghanistan, A case study of the market in construction materials, June 2014, http://www.areu.org.af/Uploads/EditionPdfs/420E-Construction%20Materials-CS-web.pdf

The World Bank: Afghanistan Overview, www.worldbank.org/en/country/afghanistan/overview

The World Bank Country Update 2014 The World Bank Group in Afghanistan: country update http://documents.worldbank.org/curated/en/2014/04/19402108/country-update-world-bank-group-afghanistan

Kevin Sieff: The Washington Post: After billions in U.S. investment, Afghan roads are falling apart, http://www.washingtonpost.com/people/kevin-sieff

The World Bank, Afghanistan Economic Update, April 2014, http://documents.worldbank.org/curated/en/2014/04/19425195/afghanistan-economic-update



IRP (Afghanistan Infrastructure and Rehabilitation Program): Roads Operations and Maintenance / Capacity Building, https://www.irp-af.com/?pname=open&id=393&type=html&c=5

Islamic Republic of Afghanistan, Ministry of Rural Rehabilitation and Development: Rural Roads Manual, Version 2, English Version, 2013, http://mrrd.gov.af/Content/files/Rural%20Roads%20Manual.pdf

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH: Making Good Governance Tangible, The cobblestone sector of Ethiopia, http://www.giz.de/en/downloads/giz2012-making-good-governance-tangible-en.pdf

Federal Democratic Republic of Ethiopia, Ministry of Urban Development and Construction: Cobblestone- Youth Job Creation Initiative, the Ethiopian Experience, http://www.mwud.gov.et/c/document_library/get_file?uuid=a1d16cc0-1924-49fc-bb15-47139c2cf9f6&groupId=10136%20

Islamic Republic of Afghanistan, Central Statistics Organization: The National Risk and Vulnerability Assessment 2011-12, http://www.af.undp.org/content/dam/afghanistan/docs/MDGs/NRVA%20REPORT-rev-5%202013.pdf

Ethiopian Roads Authority: Universal Rural Road Access Program, http://www.era.gov.et/portals/0/universal%20rural%20road%20access%20program.pdf

Ethiopian Roads Authority: Road Sector Development Program (RSDP), RSDP13 Years Performance and Phase IV, January 2011, <a href="https://www.era.gov.et/LinkClick.aspx?fileticket=gKxlKrClyQQ="https://www.era.gov.et/LinkClick.aspx.et/LinkClick.

