

**ASSESSMENT OF TRAINING NEEDS BASED ON
INTERVIEWS WITH COUNTERPART AFGHAN
MINISTRY AND AGENCY OFFICIALS**

**JULY 18 – JULY 27, 2005
Kabul, Afghanistan**

Prepared by:
Futures Group
A Constella Company



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Enhancing Human Health

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THIS REPORT IS PREPARED FOR SOLE USE OF THE U.S. GEOLOGICAL
SURVEY (USGS) AND AFGHAN MINISTRIES AND AGENCIES
USE OF THE INFORMATION CONTAINED HEREIN IS BY PERMISSION FROM THE USGS AND
APPROPRIATE AFGHAN MINISTRIES

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List of Abbreviations

ADB – Asian Development Bank
AGCHO – Afghan Geodetic and Cartography Head Office
AGS – Afghan Geological Survey
BGS – British Geological Survey
ESIC – Earth Science Information Center
EU – European Union
FAO – Food and Agriculture Organization
GIS – Geographic Information System
IT – Information Technology
MEW – Ministry of Energy and Water
MIWRE – Ministry of Irrigation, Water Resources, and Environment
MMI – Ministry of Mines and Industry
MMS – Minerals Management Services, U.S. Department of the Interior
USACE – United States Army Corps of Engineers
USAID – United States Agency for International Development
UNAIDS – United Nations Afghan Information Management System
UNDP – United Nations Development Programme
UNO – University of Nebraska, Omaha
USGS – United States Geological Survey
USIA – United States Information Agency
WB – World Bank

Executive Summary

This second phase of the Futures Group training needs assessment seeks to identify Afghan counterpart training needs as reported directly by the counterparts themselves. The data presented in this report were gathered via interviews with Ministry heads and senior administrative staff and written commentary on the content of the Phase I report (the USGS view of the training needs). Copies of the Phase I report were distributed to all Ministries and Agencies.

During the course of the interviews, it became very clear that from the perspective of every counterpart Ministry and Agency, there are many additional training needs not within the USGS training mission, but are, nonetheless, ancillary to this mission. Success in providing this ancillary training will significantly increase the value of the USGS training to each Ministry and Agency. This additional information provides valuable input regarding the capacity building needs of every Ministry and Agency and is included in this report.

The assessment team solicited unrestricted commentary concerning requirements that should be met in order to accelerate functioning of each organization's geoscience staff. Three categories of data input were identified from the USGS counterparts: (1) training requests directly relevant to the USGS mandate, (2) other training needs, and (3) other needs, usually infrastructural in nature. All of these identified needs are categorized and reported under these headings (see Tables 1-3 for a synoptic review). The categories "Other Training Needed" and "Other Needs" is thought provoking and can serve as a reference for planning purposes.

English language training and basic computer training are counterpart priorities. The assessment team learned that English language is being taught at a variety of sites in Ministries and at private schools in Kabul. This training is supported by a variety of organizations. (Table 4 provides a synopsis of reported on-going training in counterpart Ministries.) However, it was reported that results have a random success rate. On several occasions team members heard the comment that follow-up and individual practice opportunities (such as in a language lab or at networking sessions) appear to be non-existent or at best limited.

The skill level in English among counterpart staff does not seem easily adequate to efficiently accomplish the technology transfer envisioned in this project. Training in technical English and IT to facilitate communication with USGS counterparts was given high priority by everyone.

Urgency exists for beginning technical English language training as soon as possible. It was suggested that making audio tapes/CDs containing English geotechnical words with accompanying Dari definitions might accelerate technical English learning. These would be used in a language lab environment to support lessons learned during classroom language sessions. MMI offered to provide a suitable room and a laboratory supervisor.

Ministry recommendations of training needs related to the USGS mission are recorded in Table 1. This data will be integrated with the USGS recommendations to create a final training plan.

Some of the courses listed in the “other training needs” category are likely to be taught under the auspices of other funded projects, hopefully in the near future. Those courses not a part of existing funding venues need special attention to identify alternative funding. These lists constitute an excellent reference for future planning purposes and represent a focused cataloguing of technical transfer needs that are key to future geoscience development in Afghanistan.

Information about “other needs” provides valuable insight into limitations that may encumber successful implementation of some training initiatives. The list serves as a guide to prioritizing training to allow time for equipment installation or other items that must be accomplished before a trainee can effectively utilize any newly gained knowledge in his/her discipline.

As stated earlier, this is an assessment by the Afghans regarding their geoscience needs and is a comprehensive, first look at essential activities to be initiated as soon as possible. This assessment will be used in conjunction with the USGS’ assessment to produce a final integrated training plan under Phase 3.

Background

Futures Group is working with the U.S. Geological Survey (USGS) to maximize the efficiency of technology transfer between USGS researchers and their Afghan counterparts. Technology transfer will occur during the regular interactions between USGS and Afghan scientists while USGS conducts the resource and natural hazard investigations supported by USAID and other US funding agencies. Skills transfer to Afghan scientists will occur in a variety of training venues (structured classroom, on-the-job, workshops, seminars, etc.) and will be focused on professional development in the specific project disciplines in which USGS is involved.

This report is the second phase of the training needs assessment that began early in 2005. In the first phase, the USGS perspective on training requirements for their Afghan counterparts was documented. This second phase is intended to provide insight into the Afghan ministerial perspective on the training needs of their personnel.

Objectives

Active engagement of Afghan counterpart organizations in the development of the training agenda is a prerequisite for its successful implementation. The focus of the present data collection effort was to receive input regarding program content from counterpart Ministries and Agencies and to establish the communication pathways that will maintain the long-term Afghan engagement in the training process. This second component of the training needs analysis had three primary objectives:

- (1) To understand training priorities from the Afghan perspective;
- (2) To receive input from Afghan counterparts regarding training considerations they believe critical to accomplish effective technology transfer; and
- (3) To solicit Afghan stakeholder comments on the training recommendations made by USGS as reported in first phase of the training needs analysis.

Effective training program development and implementation requires an understanding of the institutional framework within which Afghan counterparts operate. Thus, a second series of objectives considered very important during this evaluation includes:

- (1) Assessing the status of existing training venues in Kabul in terms of facilities (space, computers, projectors, other equipment, caretaking staff etc.) available at each Ministry, and also the broader University community. This information will be of specific importance when planning for training delivery.
- (2) Developing an understanding of infrastructure within counterpart Ministries, both in terms of basic equipment needs (access to textbooks, paper, chalkboards, computers, etc.) and staff capabilities. Though it is beyond the scope of this assessment to address infrastructural issues, it would be short sighted to train peo-

ple but not make adequate provisions to provide long-term infrastructural support that will enable trained professionals to perform their assigned functions.

- (3) Obtaining recommendations from senior Ministry officials regarding additional training needs required within other functional sectors of their Ministries and Agencies. The information is important because USGS trained counterparts ultimately must support or contribute to other functions within their respective organizations. Though an assessment of training needs outside the USGS professional development program is not within the scope of this assessment, identifying additional training that can potentially improve the capacity for information transfer between the geoscience professionals and other professional sectors within the Ministries and Agencies will ultimately improve the success of the USGS program. Senior administrators have a broad overview of their organization's needs and are well positioned to identify how addressing their organization's training needs in its other functional sectors can improve the functional effectiveness of the USGS trained professionals. This data provides a basis to formulate additional targeted training programs that will support deeper integration of USGS training with other ministerial functions.
- (4) Knowing the skills and capabilities of Afghan counterparts to the USGS team is essential for the training to be effective, particularly because there is a wide range of skills and experience among the proposed trainees. Although USGS counterparts have been identified, professional background information about these individuals is not yet available. To date, our efforts to obtain copies of the BGS report on professional background have been unsuccessful. Therefore, introduction of a questionnaire to gather this information constitutes a programmatic focus.

Process

Effective data collection for this phase of the training needs assessment required on-site visits with all of the appropriate counterpart Ministries and Agencies as well as other relevant groups such as BGS, ADB, UNAIMS, Afghan Universities, and others working in Afghanistan. The list of organizations and groups to be interviewed was developed based on USGS identification of counterparts and relevant organizations, however additional visits were scheduled based on data collected during the interviews. Actual scheduling and timing of this trip was under the complete logistical control of the US Embassy in Kabul.

Data was gathered during the course of interviews with USGS' Afghan counterparts. Primary input was received during a series of multiple interviews with the senior leadership of the Ministry of Mines and Industry, the Ministry of Energy and Water, the Afghan Geodesy and Cartography Head Office, and the Afghan Geological Survey. During these visits, the assessment team had the opportunity to tour the facilities, assess basic training infrastructure (make a preliminary determination of the availability of rooms,

computers, projectors, supplies, etc.) and briefly interact with some of the ministerial staff.

Two parallel approaches were used to gather data - direct interviews with Ministry officials and written commentary on the Phase I report. Introductory meetings with all of the counterpart Ministries and Agencies were held during the first four days of the visit. During these visits the assessment team solicited direct commentary from Ministries regarding their views of training needs. Copies of the Phase I report were distributed to senior officials. Recognizing it will take time to (a) digest the contents of the Phase I report and (b) provide reasoned input into ministerial training needs, a series of subsequent follow-up meetings were scheduled for the remainder of the assessment team's time in Kabul. The data provided in this report was compiled from information gathered during interviews with Ministry and Agency officials and from the written commentary on the contents of the Phase I report.

During the interviews with Ministry and Agency officials it was clear there are concerns that training and capacity building delivered to them did not provide integrated connections among Ministry or Agency functions. This was illustrated by the example that there will be significant efforts involved with conducting resource assessments in Afghanistan, but no training in the function that converts the assessment data into saleable resource exploitation blocks (mine leases, petroleum exploration lease blocks, etc.) Though such courses are outside the USGS purview, the assessment team believes there was merit in documenting these additional training needs because they identify, from the Ministry or Agency perspective, where there are weaknesses in the current capacity building program. The results of this report can be used as a blueprint to seek means for additional resources to fill these capacity gaps.

To fulfill some of the secondary objectives of the assessment, the team toured Ministry facilities and met with staff whenever possible. The purpose was to assess the state of the facilities that will be available at each site to support training.

The interviews and tours indicated several training efforts were being conducted concurrently within each Ministry or Agency and multiple providers were involved in the delivery. For the purposes of this assessment it was important to understand the focus of the other on-going training to ensure there is no duplication between the USGS efforts and other initiatives. Coordination will be critical in areas where there is the potential for duplication. During the interviews, the assessment team made every effort to determine the status of on-going training programs in each organization and to what degree USGS counterparts were involved in these activities.

Meetings with the Ministers indicated that a minimum of long-term follow-up has been done to assess the results of completed training or to determine if additional training is needed to support and reinforce previously learning.

For the record, the transcripts of the assessment team's interviews with Ministry, Agency and other officials in Kabul along with the team's notes and commentaries are presented

in Appendix I. A summary of training needs as expressed by Afghan counterparts during meetings and in subsequent written communications is presented in the sections and tables that follow.

Summary of Training Needs: Afghan Perspective

The written and oral input provided by each Ministry and Agency is summarized below. Responses have been sorted into various categories – (1) training that relates directly to the USGS program; (2) other training needs; and (3) other, mostly infrastructural needs. Recommendations and comments varied from organization to organization, consequently there is a significant range in the content of each category from group to group.

With one exception, the USGS mandate extends only to cooperation with Afghan government Ministries and Agencies. The exception is Kabul University, which will acquire a USGS installed seismic station. University staff will require training to operate and maintain this equipment and to contribute to the interpretation of the recorded data. In order to learn about the conditions at the University and to solicit training needs comments from the faculty, a visit was made at the University's engineering department. It is this group that will have responsibility for the seismic station.

Kabul University and Kabul Polytechnic University supply graduates to the government Ministries therefore learning the training needs of these organizations can lead to defining long-term strategies that will improve University graduate preparation for their future roles within the Afghan government. The assessment team explored the possibility of including selected faculty or students from these Universities in the USGS training activities provided that space is available and University inclusion is within the hosting Ministry's long-term strategic plan. Including select University faculty in such training programs has the advantage of preparing the faculty to instruct students in specific disciplines that will be required by Ministries in the near future.

Efforts were made as a part of this assessment to determine the nature and status of training activities being carried out by other organizations supporting and providing training in Afghanistan. These data are summarized in the sections below.

The findings of the assessment team are presented in several formats – a bulleted summary by organization, a combined tabular summary of input from all organizations, and detailed transcripts of meetings reported in Appendix I.

Input from Afghan Government Ministries and Agencies

Ministry of Mines and Industries (MMI)

- (1) Training requested under the USGS program:

- Information technology (including basic computer troubleshooting).
- Microsoft Windows, Excel, MSWord etc.
- GIS training.
- English training.
- Establish a language lab.
- Create tape/CD with technical English terms, pronunciation and brief description of concept with definition translated into Dari for use in the language lab.
- Classroom equipment and supplies for teaching English and/or IT such as English language text books, vocabulary books, whiteboards and markers and headsets and cassette players for the language lab.
- Refresher training in geology field techniques.
- Coal geology training.
- Review of current geologic theory and how it applies in the subject areas that are the focus of Survey activities.
- Refresher courses in geology.
- Refresher courses in mineralogy.
- Modern instrumentation – how to use X-Ray diffraction equipment, microscope, etc.
- Training in resource exploration for industrial minerals (sand, gravel, clay for bricks, limestone for cement, etc.) that are needed for reconstruction activities.
- Exploration and assessment techniques for ornamental stone.
- Training in minerals assessment techniques. 2-3 months are envisioned and the training should be conducted in Afghanistan.
- Training in hydrocarbon assessment techniques 2-3 months are envisioned and the training should be conducted in Afghanistan.

(2) Other training needs:

- Training of Ministry lawyers so they have a specific understanding of the new Afghan minerals law.
- Legal training for engineers and geologists so they know the new mining laws and how to interpret and apply them in real life situations they are likely to encounter during the conduct of their professional responsibilities.
- Negotiating the terms of minerals and hydrocarbon lease and exploration agreements.
- Monitoring company compliance with the financial and production terms of contracts.
- Monitoring mine and wellhead production to ensure accurate royalty collections.
- Training in the joint venture process.
- Training in proper procurement procedures.

- Training of contract specialists
- Training in strategic planning methodology used to define short and long-range goals for the Ministry.
- Cadastral training specifically to enable the Ministry to demarcate hydrocarbon and mineral lease tracts. 2-3 months are envisioned and the training should be conducted in Afghanistan.
- Sustainable mining practices.
- Inspection/monitoring of mining sites, including environmental inspection to determine whether activities are in compliance with the environmental laws of Afghanistan. 3 – 6 months (Note: World Bank program for Mineral Resources has scheduled training of monitoring mines.)
- Gemstones mining, cutting and polishing.
- Safe and effective mining practices and techniques.
- Training in laboratory standards for testing samples.
- Selected study tours for decision makers.

(3) Other needs:

- Vehicles.
- Laboratories for analyses of samples, etc.

(4) Training facilities assessment:

- 1st training room: has 8 computers and thereby 16 people can be trained at a time...there are tables at the back of the room which are classroom style. This is a big room but needs projector and screen for presentations.
- 2nd training room: has 9 computers
- 3rd training room is for IT and has good facilities – total of 7 computers
- It is reported that not all computers are operational, because no one with basic troubleshooting skills is available to fix minor problems when they arise.

(5) Ongoing training activities:

- One motivated Afghan individual has initiated an English language program within the Ministry.

Afghan Geological Survey (AGS)

(1) Training requested under the USGS program:

- English Language.
- GIS.
- Geologic mapping.

- Upgrading technical expertise to current standards.
- Coal exploration and assessment techniques.
- Hydrologic techniques training.
- Earthquake science and hazard assessment techniques.
- Oil and gas assessment techniques.

(2) Other training needs:

- None specifically identified.

(3) Other needs:

- Funds for exploration.
- Funds for fieldwork.

(4) Training facilities assessment:

- Computer lab where students can practice what they have learned in the training sessions.
- Rooms that can be used to conduct training sessions.

(5) Ongoing training activities:

- National cadastre for Afghanistan (implementation status unknown)
- IT training in WORD, EXCEL, POWERPOINT, ACCESS (1 hour per day) sponsored by BGS.
- English Language at various levels (approximately 140 people being trained) sponsored by BGS
- Immersion English for 2-3 months proposed by BGS for most advanced students. BGS proposes that such training will likely be conducted in New Delhi, India)
- GIS training.
- BGS is planning to initiate a training program for mining cadastre. A short course is currently being offered. The most promising candidates will have an opportunity to attend an advanced course scheduled to occur at a later date.
- BGS is planning to initiate refresher courses in basic geologic disciplines like stratigraphy, sedimentology, structural geology, etc.

Afghan Geodesy & Cartography Head Office (AGCHO)

(1) Training requested under the USGS program:

- Application of modern mapping technology using modern equipment.

- Training in digital mapping techniques.
- Study Tour to observe how counterparts and counterpart Agencies in U.S. administer and organize a modern Earth Science Information Center.

(2) Other training needs:

- None specifically identified.

(3) Other needs:

- Agency is charged with creating large-scale cadastral maps for 12 new settlements to accommodate refugees returning to Afghanistan. These are maps that will be created for the Ministry of Public Works.
- Access to internet.

(4) Training facilities assessment:

- EU has established a GIS lab containing three computers.

(5) Ongoing training activities:

- A major, USAID sponsored cadastral program is reportedly scheduled to begin shortly.
- EU provided two years of GIS training, but no long-term follow-up or monitoring of progress and implementation.

Ministry of Energy and Water (MEW)

(1) Training requested under the USGS program:

- None specifically identified.

(2) Other training needs:

- How should the technology and organizational structure at MEW be instituted for an effective and professional geoscience organization?
- U.S. study tours for senior professionals to learn how the technology and organizational structure should be instituted to promote effective operation of geoscience organizations.

(3) Other needs:

- An advisor to the Minister to advise on the proper functions and functioning of the Ministry.

- Equipment.
- Rebuilding of offices.
- Assistance setting up venues to support professional networking and sharing of ideas (for example connection into Society of Afghan Engineers, web-based clearinghouse for information and experience sharing, etc.)
- Incentives to keep Ministry employees working.

(4) Training facilities assessment:

- Not Assessed.

(5) Ongoing training activities:

- USGS has trained six Ministry hydrologists (4 men, 2 women) in modeling related to water resources management. The six were sent to the US for training.
- There has also been on-the-job training in English and IT (and AutoCAD) at the Ministry headquarters and in the regions by the Food Agriculture Organization (FAO) and the World Bank.
- Courses in topographic surveying were also supported.

Input from Other Organizations in Afghanistan with Programs Relating to the Geosciences

Kabul University

USGS will install a seismic station at University facilities within 6 months; therefore University staff will need training for station operation and maintenance as well as basic seismology training.

The engineering faculty reviewed a variety of other needs within the University including:

- A need for modern textbooks,
- Internet access, and
- American advisors to help with long-term strategic planning for University structure and operations.

Kabul Polytechnic University

Many graduates of Kabul Polytechnic University are employed by the Ministry of Mines and Industries; therefore, the University has a stake in developing training programs that prepare their graduates for service in the government. If USGS counterparts should need

specialized prerequisite courses, the University indicated a willingness to provide such focused training on an as needed basis.

U.S. Army Corps of Engineers in Kabul

USACE is providing specialized hydrologic training for engineers from the Ministry of Irrigation, Water Resources, and Environment (MIWRE). Training is being provided at USACE facilities in Davis, California. The Corps is keen on capacity building and currently have a linkage with Kabul University and is seeking linkages with other Universities in Afghanistan because they consider Universities effective venues for capacity development.

University of Nebraska Omaha in Kabul

The University has a variety of facilities in Kabul that could be used for training venues. Currently at the Omaha Nebraska campus, training of school principals and immersion English training of teachers is being delivered. There is also a program that brings U.S. medical doctors to Afghanistan to conduct training at Kabul University.

Asian Development Bank

ADB is currently funding technical assistance projects focused on administrative capacity building in the Ministries, (i.e., how to function, manage, etc.). ADB is funding a water resources project for the Western Basin in the north of Afghanistan. The project is being implemented by the Ministry of Energy and Water.

The World Bank

For fiscal year 2005 beginning in July 2005, the World Bank will be devoting approximately \$10M to the support of projects within the Ministry of Mines and Industry.

UNAIDS

There are a variety of skills and resources available in this organization that may be relevant to some of the activities envisioned in the project. GIS capabilities development may be particularly relevant.

TABLES

TABLE 1: Afghan training requests related to USGS programmatic activities

ORGANIZATION	MMI	AGS	AGCHO	MEW	Kabul U
Basic computer troubleshooting					
Microsoft Windows, Excel, Word etc.					
GIS					
English Language					
Establish language lab					
English Language teaching supplies					
Updates of discipline specific advances					
Refresher courses in geology					
Refresher courses in mineralogy					
Refresher: Geologic field techniques and mapping					
Industrial minerals resource exploration					
Exploration & assessment techniques, ornamental stone					
Training in minerals assessment techniques					
Training in hydrocarbon assessment techniques					
Coal resource exploration and assessment training					
Training in the use of modern instrumentation					
Water resource exploration and assessment techniques					
Earthquake hazard assessments					
Earthquake science					
Training in other digital mapping techniques					
Training in modern mapping technology					
Establishing an Earth Science Information Center					

TABLE 2: Other training needs identified during the interviews

ORGANIZATION	MMI	AGS	AGCHO	MEW	Kabul U
Minerals law training for Ministry lawyers					
Minerals law training for Ministry engineers & geologists					
Negotiating minerals & hydrocarbon lease agreements					
Monitoring company contract compliance					
Monitoring mine and wellhead production					
Training in the joint venture process					
Training in proper procurement procedures					
Training contract specialists					
Strategic planning methodology for organization planners					
Cadastral training to demarcate lease tracts					
Sustainable mining practices					
Environmental monitoring training					
Gemstone mining, cutting, and polishing					
Safe mining practices					
Training in laboratory standards for testing samples					
Selected study tours for decision makers					
Capacity building to create effective Ministry functioning					

TABLE 3: Other needs identified during the interviews

ORGANIZATION	MMI	AGS	AGCHO	MEW	Kabul U
Vehicles for fieldwork					
Laboratories for analyzing samples					
Funds for fieldwork					
Funds for exploration					
Internet access					
Support to create cadastral maps for 12 new settlement cities					
Equipment					
Office reconstruction					
Incentives to keep Ministry employees working					
Assistance establishing venues to support pro networking					
Advisor to assist with long-term strategic planning					
Access to modern textbooks					

TABLE 4: Ongoing Training

TRAINING		English Language	Basic Computer Skills	GIS	Water Resource Management	National Cadastre	Mining Cadastre	Topographic Surveying
PROVIDER								
USGS					MEW			
USACE					MIWRE			
BGS	AGS	AGS					AGS	
UNAIDS		MMI (& others)	Various Min					
MMI	MMI							
USAID Contractor						AGCHO		
EU	Various Min		AGCHO					
Unknown Provider		MMI	AGS					MEW
British Consulate	Various Min							
UNDP	Various Min							
ADB	Various Min							
World Bank	MEW (& others)	MEW						
FAO	MEW							
UNO	Provinces							
Private Afghan Providers	Major Cities							

Key							
MMI	AGS	AGCHO	MIWRE	MEW	Various Min	Provinces	Major Cities

APPENDIX I

Meetings in Kabul: Transcripts and Observations

Meeting with: Ministry of Mines and Industries (MMI)

Eng. M. Ibrahim Adel
Deputy Minister of Mines Affairs

The Deputy Minister identified the following training activities as being critical to his Ministry:

1. Cadastral training,
2. Environmental training,
3. Inspectorate training,
4. Targeted resource materials such as:
 - Construction materials (sand, gravel, clay)
 - Coal
 - Hydrocarbons
 - Ornamental stone
 - Gem stones
5. Study tours for decision makers
6. Field training/experience critical for the young Agency hires.

Deputy Minister Adel envisions approximately 3-6 months of training per discipline will be required. The preference of the Ministry is that the majority of the training be delivered in Afghanistan. The most capable students trained in Afghanistan would then be eligible for additional, more specialized training in the United States should this be necessary. Candidates for training will be selected by the Ministry in conjunction with the US technical experts. The Ministry will provide us with the final list of candidates selected for the training.

Cadastral Training: MMI has no specific interest in the development of a general cadastre for the nation. Their specific concern is to obtain cadastral surveys for mineral and hydrocarbon bearing properties.

Environmental Training: MMI will be charged with the responsibility for the oversight of compliance to environmental regulations by the mining and hydrocarbon industries. This is an area where the Ministry has no experience and can use some guidance.

Inspectorate Training: MMI will be responsible for the financial/contractual management of the minerals and hydrocarbon projects which means the Ministry will be responsible for:

1. Negotiating the terms of minerals and hydrocarbon lease and exploration agreements,
2. Monitoring company compliance with the financial and production terms of the contracts.
3. Monitoring mine and wellhead production to ensure accurate royalty collections.
4. Understanding the legal basis upon which all minerals, solid fuels, and hydrocarbon, exploration, development, and production agreements are based.

[COMMENT] The U.S. Minerals Management Service (MMS) training for administering petroleum and mining lease sales as well as basic training for the joint venture process will be of particular benefit to the Ministry. Funding for such training is outside the scope of the USGS mission and must be found from other sources.

Resource Materials Training: The Deputy Minister has a specific interest in obtaining training in areas where resource development can contribute immediately to the expansion of the Afghan economy. Construction materials are an important sector because of the immediate need for raw materials (sand, gravel, clay for bricks, limestone for cement, etc.) to support reconstruction activities in Kabul.

The precious stone industry is an area of substantial concern for MMI. The Deputy Minister recently had occasion to discuss the quality of Afghan emeralds while traveling internationally. He learned that because of the mining methods employed, the stones were excessively damaged, and therefore their value is considerably reduced. It is a priority for the Ministry to improve the mining practices for this industry and return the down stream processing (cutting, polishing, and jewelry manufacture) to Afghanistan. A proposal to the World Bank to upgrade mining practices, improve mine safety, train in gem grading, cutting and polishing is therefore an urgent priority.

There is concern that donor agencies are funding training without any consideration for whether or not trainees are able to function proficiently and independently once training is completed. Additional concern appears to be accountability required from the trainers by these institutions. We assured the Deputy Minister that the Futures/USGS training will focus on empowering the trainees to ensure they are capable of independently carrying out assignments once they have completed their training programs.

During a subsequent tour of the building we viewed some of the facilities that would be available to conduct training. We noted that there are several rooms equipped with computers (approximately 18 computers were counted in three separate rooms). Also internally sourced basic IT training classes were ongoing, though we do not know their content, intensity, or level of success. We were informed that though there were numerous computers installed, there is no one in the building capable of maintaining the equipment. Consequently, many of the computers were not in working order, in many cases probably needing only minor repairs. An intensive two-week computer trouble-shooting training course would be very helpful to the Ministry to teach 6-9 individuals how to repair and solve a variety of basic computer problems. These individuals can subsequently function

as trainers to teach others the most basic trouble shooting skills and can become the backbone of a future computer tech support team for the Ministry.

Training Recommendation

During the Ministry tour we had occasion to meet with Mr. Paikar. He is a young Afghan possessing a reasonable command of the English language and is conducting English Language training classes within the Ministry. Approximately 140 individuals are currently undergoing training. Training materials (English language text books, vocabulary books, whiteboards and markers, language cassettes and CDs) were not available and are needed critically. Providing basic equipment like an inexpensive cassette player and headphones would provide an opportunity to mimic the experience of a language lab. In conjunction with on-going basic language training, the concept of the language lab offers an opportunity to introduce simultaneous technical English training. We should explore the possibility of creating a technical English dictionary on CD Rom in which important technical words are pronounced in English (by a native English speaker) and then defined in Dari (by a native Dari speaker).

Meeting with: Afghan Geological Survey

Mohammad Asef Anwar, Director

Dr. Anwar is newly appointed to his position, and, at the time of our meeting, had occupied his office for less than a month. He commented that training provided by USGS has been limited and that AGS needs more training. The BGS is conducting training at AGS in basic American English and basic IT.

Dr. Anwar indicated that AGS skills have become dated and help is needed to upgrade their capabilities. Training is needed in coal, hydrology, geospatial, earthquake, oil and gas etc. Training in geologic mapping at larger scale should also be done. There is concern that the AGS had an insufficient budget to support exploration and fieldwork.

Dr. Anwar commented that the BGS is in the process of translating Russian reports into English and compiling the available information into a national database.

Meeting with: British Geological Survey (BGS) Team at Afghan Geological Survey

Dr. Peter N. Dunkley
British Geological Survey

Mr. Clive J. Mitchell
British Geological Survey

Ms. Fiona McEvoy

British Geological Survey

Dr. Peter Kováč
Slovak Academy of Sciences

English Language: BGS is currently training about 140 people in AGS in basic English and IT. Classes are 12 to 20 people in size. The English classes are multi-level (beginner, advanced beginner, intermediate, etc.). BGS is considering immersion English training in New Delhi for advanced Afghan trainees. Thus far however, only two to three of the BGS trainees are able to maintain a conversation in English. The British Consul has established a training-the-trainers language program in Kabul, but none of the language trainers being employed are native English speakers. It was reported that the EU has also expended significant funds on infrastructure to develop a language training facility. Many individuals are apparently being trained, but none have graduated to-date therefore a measurement of the facility's effectiveness is difficult to ascertain.

BGS indicated the selection process for determining who is to be trained by AGS is based upon their project work assignments at the office. Individuals who are not assigned to ongoing projects therefore had limited opportunities for training advancement. In order to resolve the situation, additional English courses were created to accommodate these individuals.

[COMMENT] It is unclear at this time how many of the BGS English language and IT trainees are USGS counterparts. If BGS is providing IT and English language training already, there is no reason for USGS to duplicate that effort. For our counterparts, we can improve the educational experience by creating the technical language CD, and perhaps reinforce the message with targeted technical English short courses taught by Dari/English speaking geoprofessionals. Any USGS counterparts not currently taking English language training should be enrolled as quickly as possible preferably into the BGS program, but if space unavailable then into the MMI program.

Recommendation

We suggested that a structured and moderated English Language Club might be a helpful strategy to encourage trainees to practice speaking English among themselves. Club meetings would be regular events that would be moderated by a fluent English speaker. At first English language movies would be the primary study medium. The movies would be watched and then discussed in English by the club members. As proficiency increased, books could be included. This strategy would have beneficial secondary effects in that it encourages using English in a different venue and also encourages networking among a variety of staff.

IT Training: IT training consists of Windows and basic MS Office. Training is structured – 1 hour English, 1 hour IT training per day. Trainees demonstrate very mixed abilities. In IT, some are complete beginners and are very uncomfortable using the computer, others learn quickly and begin to explore independently. BGS is using an IT trainer from New

Delhi. There are plans for more advanced IT training, but it has not yet been implemented.

Only one computer troubleshooter is currently available to the AGS. His contract will expire in 6 months and it is not expected that it will be renewed by the donor Agency that provided him. He is a contractor (from India?). BGS indicated that they had encouraged their AGS counterparts to shadow this troubleshooter so that staff from AGS could learn how computers are fixed, but apparently no one has shown interest in or has voluntarily assumed this apprenticeship.

Technical Training: It was stated that BGS has compiled a database of Afghan technical capabilities. BGS is aware of our requests to obtain a copy of this report, but to-date it has not been made available.

BGS indicated it is undertaking a training program for mining cadastre. Currently a short course is being offered in cadastre. The most promising of these candidates will be offered more advanced training.

In terms of training strategies, BGS advises sending trainers to Afghanistan, or for advanced technical training, sending Afghanis to regional institutions (India, Pakistan, etc.). In their opinion, this is a more cost effective strategy than sending trainees to the UK or the US. The expected BGS training will include courses such as structural geology, stratigraphy, etc. and will be focused on classroom training rather than targeted training to facilitate specific work assignments.

Meeting with: Minister Sediq, Ministry Mines and Industry

Eng. M.M. Sediq
Minister of Mines and Industry

The Minister informed us that UNDP, ADB, WB and BGS are conducting English language and IT training in Kabul however, the effectiveness of these activities is yet to be determined.

The Minister indicated that environmental and fiscal monitoring/regulatory responsibilities are newly assigned to the Ministry. He reiterated the needs identified at our morning meeting with Vice Minister Adel:

- The Ministry needs training so that it can effectively carry out its various monitoring responsibilities.
- The Ministry is keen to improve mining practices in the precious stones mining sector as a means to increase the value of the raw product and encourage the return of the downstream part of the industry (grading, cutting, polishing, and jewelry manufacturing) to Afghanistan. Return of the downstream part of the industry

to Afghanistan will enable the people to realize more profit and benefit from the wealth creation from the nation's natural resources.

Meeting with: Afghan Geodesy & Cartography Head Office (AGCHO)

Eng. Abdul Raouf, General President

Mohammad Shuaib Partaw
President, Institute of Remote Sensing and GIS

Engr. Raouf advised AGCHO is the central government agency responsible for map-making in Afghanistan. No other organization is authorized to make maps or conduct surveys. It is an independent Agency within the Afghan Government and reports directly to the first Vice-president.

AGCHO was established in 1958 and has made a complete (?) set of 1:250,000, 1:100,000 and 1:50,000 scale maps for the nation. In addition, they have produced some 1:25,000 and 1:10,000 scale maps for the major cities. As of 1978, approximately 30% of the nation had been covered with geodetic networks and cadastral surveys. After the Soviet invasion, all survey work stopped and is yet to resume. Once the civil war started, all Afghan organizations were damaged. AGCHO is aware of its extreme isolation from modern technology.

Two critical needs for AGCHO are:

1. Capacity building,
2. Modern equipment and technology.

AGCHO has approximately 750 people in 16 regional directorates located in 16 different provinces. More than 100 technically proficient women work in professional positions in AGCHO. (A tour of the facility showed many women working on the scribe coats needed for the map printers). Nonetheless, there is a tremendous lack of trained people because many Afghan professionals either emigrated abroad or were lost during hostilities.

AGCHO is organized into 7 departments: Engineering Geodesy, the Institute of Remote Sensing and 5 others. We were provided with an organizational chart (in Dari).

AGCHO is affiliated with Kabul University and Kabul Polytechnic University and employs many graduates from these two Universities.

AGCHO training needs are centered on various digital map technologies so that they can update the old maps and complete the 1:25,000 scale maps. The need for very large-scale maps (1:5,000) is particularly critical because of the large number of returning refugees that are in need of resettlement. The Afghan Government plans to develop 12 new "cities" in Afghanistan to accommodate these returnees. Some of the resettlement blocks will

be on the order of 200 km² and will be located around the peripheries of existing cities. Kabul municipalities have been accepting money from the returnees for guaranteed land parcels in these new cities, but there is no land currently available to provide until these new cities are surveyed.

Accurate infrastructure maps (power lines, pipelines, road networks, etc.) are needed for planning and development. Accurate maps are also critically needed to enable identification of war damaged and land-mined areas.

AGCHO has a map distribution function. There is a department that receives orders and supplies maps. They are working toward a freer distribution of information. Recently the requirement that letters of permission from other governmental Agencies to release maps to private individuals was removed. The ease of information exchange is a new concept to AGCHO. The map distribution department would benefit significantly from Earth Science Information Center (ESIC) training.

Training Recommendation

It was suggested that a study tour for AGCHO department heads would provide an instructive opportunity to observe how their counterparts and counterpart Agencies function in the United States.

Study Tour Recommendation

Once training programs are instituted, the first to be trained will be individuals from the AGCHO headquarters.

AGCHO is actively pursuing map-making based on 1972 Landsat imagery. The agency was provided complete national coverage of this imagery during the early 1970s. More recent imagery is too expensive to purchase, but would be valuable to the Agency not only for providing current information, but also as a means to track changing population/development patterns.

During our tour of the facility we observed at least one laptop running Adobe Illustrator 7 for map-making applications. The EU has provided several GIS stations and about two years' of training in using GIS applications. Several of the AGCHO professionals received GIS training in India and Pakistan via the EU initiative. There is no indication any follow up has been done for maintenance training and on-going skills development.

The lack of internet connectivity was noted, however, we were advised that there are a number of internet cafes in Kabul. Access to the internet is possible for most individuals but it may be inconvenient and/or perhaps too expensive personally.

Meeting with: Ministry of Energy and Water

Eng. Kamalludin Hezami
First Deputy Minister

M. Qaseem Naimi
Technical Advisor

First Deputy Hezami outlined some of the most urgent needs facing the Ministry. It was commented that a consultant or advisor to the Minister is urgently needed to help guide them in what the proper function and operations of the Ministry should be. The Deputy Minister believes this is a more critical need than capacity building, because if there is no clear understanding of what the correct capacity capabilities should be there is no point in building capacity. When capacity building begins, it should be done for the technical staff who do the work, but also for the people who run the Ministry. There is a desire to send higher-level Afghan decision makers to the United States to observe how counterpart US Governmental Agencies operate within the government.

Study Tour Recommendation

A critical problem for the Ministry is that it has virtually no funds to pay its employees; hence it is difficult to maintain incentives to keep Ministry employees working. Unfulfilled equipment needs are also of critical concern.

The First Deputy Minister reported that some USGS training has started and 6 Ministry hydrologists (4 men, 2 women) had been sent to the US for modeling training. There has also been on-the-job training in English and IT (and AutoCAD) at the Ministry headquarters and in the regions by the Food Agriculture Organization (FAO) and the World Bank. Courses in topographic surveying were also supported.

We advised the First Deputy Minister that the USGS agenda is to provide professional development courses not academic training. The purpose of the training is to update Ministry professionals in the technical changes that have occurred in their profession during the past 25 years.

The First Deputy Minister suggested it would be very helpful if a network of Ministry-relevant expertise were identified to enable the staff to access information via the web. Perhaps a web page could be established. It was noted that the Society of Afghan Engineers, headquartered in Washington, DC, is planning to establish an office in Kabul. When this office is established and staffed, it will be a valuable resource for advice and expertise for the Ministry.

A copy of the Phase I Report was provided to the First Deputy Minister and he indicated that he wanted to provide input and insights after the Ministry considered the USGS recommendations.

Meeting with: Kabul University

Eng. Jan Aga Alimy
Head of Civil Engineering Department and Dean of Faculty

Dr. Ata M. Nazar
Faculty of Engineering

In attendance were 7 current and former Kabul University faculty including one Afghan expatriate currently living in the Netherlands.

We were advised that USGS intends to install a seismic station at Kabul University. This should occur within the next six months. Individuals from Kabul University who will be responsible for maintaining the instruments and gathering and processing the data will need training to carry out their mission. USGS will fund this specific training program. In time, it is expected that an entire seismic network will be installed in Afghanistan.

We sensed a strong awareness among the faculty that the University needs to reorganize itself in such a way that it will teach courses relevant to the current reconstruction needs of Afghanistan. Our impression is that the faculty were somewhat overwhelmed by the magnitude of the task at hand, and are seeking sustained long-term guidance. A resident American advisor was suggested as a means to help the University formulate a strategy to move forward.

University faculty and staff remain unpaid and their participation is on a voluntary basis. Facilities are badly damaged, and very little money is available for repair. The faculty we met are senior individuals, younger faculty were not in evidence. Basic materials needed for teaching such as books, internet connections, and computers are generally unavailable. Individual faculty members have ideas about what courses need to be taught and which engineering technologies need to be pursued, but there is no concerted identification of a focused teaching program.

Several recommendations were made to the University's engineering faculty:

1. The faculty is a part of the entire University; therefore department-by-department piecemeal solutions are less likely to be successfully funded than a concerted, University wide plan outlining a strategy for University reconstruction. Such a focused plan will be far more actionable to a donor group.
2. The Engineering Department should conduct an assessment of engineering skills needs for Afghanistan to ensure individuals are trained in skills that have direct application to the reconstruction process.
3. Afghanistan retains a significant amount of technical expertise however there are technical gaps that need to be filled. The University needs to identify where these gaps are, both within the University and the nation as a whole.

The engineering faculty identified several immediate and critical needs:

1. The current faculty is uncertain which actions should be taken next to advance their reconstruction agenda. They feel that they could benefit if an American ad-

- visor could be assigned to the University to help guide them step-by-step through the process and provide advice on routine faculty activities and decisions.
2. Simple things such as ordering books, knowing which books to order, obtaining a copy of the table of contents cannot be accomplished now.
 3. Considerations should be given to the possibility that expatriate Afghan specialists may consider coming as advisors or visiting lecturers to the University at subsidized rates, provided the amount of the subsidy is not excessive.

Training Recommendation

The University of Kabul is one of the primary institutions that will be producing professionals for government service for technical and operational duties. At this stage, except for the seismic station, upgrading the capabilities of the University is outside the realm of our current assignment, however, we may be able to contribute in a small way toward institutional capacity building. The University faculty, like the Ministry professionals, need to fill the gap in their professional development. Though we can upgrade the capabilities of the Ministry, the students graduating from the University will potentially continue to have outdated skills. It might be prudent, at least in the subject areas where USGS provides training, to include faculty from the University on a space available basis. This process should help upgrade some faculty skills and begin the process of introducing selected faculty to some of the technological and theoretical changes that have occurred in their areas of expertise during the past three decades. Faculty participation would be most suited to courses taught in the short course or workshop format, though perhaps on-the-job training could also be arranged in special circumstances.

Recommendations

Based on the input of the University faculty the following suggestions for actions and facilities are reasonably inexpensive in proportion to their immediate value to the organization:

1. It is not within our purview to follow-up with the engineering department's request to provide a faculty advisor to the department/university. We do not know if such an action is in the planning stages or which programs might fund such an activity. Providing such an advisor would be of tremendous benefit to the University for helping the organization carry out the planning needed to reestablish itself as a major Afghan institution of learning.
2. A small computer facility with two or three internet connected computers at free or subsidized rates will help the faculty gain access to text book information and allow them some freedom to study technical changes in their respective areas of professional expertise during the past three decades.
3. It may be useful to build a database of faculty capabilities as a resource for individuals who are unsalaried; they may welcome an opportunity for work as consultants when suitable opportunities arise.

Dr. Mir Fakhruddin
Chancellor

Kabul Polytechnic is the only Afghan institution that produces mine engineers and geologists; many of the University's graduates go on to government service. The University has 5 departments:

1. Geology and Exploration of Minerals
2. Geology and Exploration of Hydrocarbons
3. Mine Engineering for hard rock and coal mines
4. Geodesy
5. Chemical Technology

The University offers BS degrees. Originally the University followed the Russian system and offered the degree after five years of study. Starting in the fall semester 2005, the University will institute the credit system as in the US thereby making it possible to earn a degree after only four years of study.

During previous visits to Kabul, USGS scientists presented conferences and workshops at the University. These were attended by students and faculty and were very well received. The University Chancellor indicated his interest in sending a faculty member or a student to USGS shortcourses/workshops presented at AGS and MMI on a space available basis.

Should the need arise for the University to teach intensive shortcourses in basic disciplines (for example basic chemistry) to small groups of AGS students requiring such background and/or refresher course as a pre-requisite for participation at focused USGS technical training, The University can prepare such a course to be offered after normal teaching hours. However there would be a fee associated with such a program.

Meeting with: University Nebraska at Omaha, Education Press

Eng. Amir Ullah Hamid
Quality Control Manager

The UNO facility has the equipment and capability to print training materials, certificates, etc. and currently prints newspapers and announcements for the US military and various diplomatic groups (like the German Embassy) in Kabul. The organization can print in B&W and color.

Meeting with: University Nebraska at Omaha, Visiting Faculty

A. Raheem Yaseer
Assistant Director of International Studies and Programs
Center for Afghanistan Studies

Hamidullah Anwari
Assistant Country Coordinator

The UNO team consisting of Yaseer, Aileen and Hamidullah are in Afghanistan monitoring the progress of their most recent group of Afghan English language teachers trained in Omaha under the Luna program. Teachers are recruited from all over Afghanistan and undergo an 8-week language training program on the Omaha campus. They are housed with American sponsor families. Students and sponsors are urged to maintain contact even after the training is completed.

The Omaha team is currently in Afghanistan recruiting two new groups of students to come to the US for English training. This training will be the last under the current US Department of State contract.

UNO does have the capability to teach English language for special purposes (such as technical English), but this is not a primary focus of their language work. The University program focuses on language immersion at its Omaha campus. Ann Ludwig should be contacted if we want UNO to develop a specialized technical English course for our trainees. Yaseer estimated that four 1-hour English courses could be taught per day, allowing for four hours of teacher prep time, homework grading, etc.

UNO's assessment of the currently available language training in Kabul is that many programs that would be expected in a major city (like the various USIA and British Consul's programs) do not seem to be operating in Kabul. Only private English language courses are being offered in Kabul, but these trainers do not have the skills to teach technical English.

UNO maintains other contacts in Afghanistan. Doctors from the UNO Medical School come to Kabul to give lectures at the medical University, fix equipment, distribute basic medical equipment (stethoscopes), etc. The extent of UNO's involvement in health activities in Afghanistan is unknown.

The representatives of the Afghan Studies Institute recognize there is a significant lack of basic skills among the returning Afghan refugees. Vocational skills (such as plumbing, carpentry, etc.) tend to be done by foreign laborers (Pakistanis and others) rather than by the Afghans. UNO has proposed developing a vocational training program to develop needed skills within the Afghan population. It is our understanding that because of the change in the U.S. Ambassador, the status of this request is uncertain.

Meeting with: UNAIMS

Neal Bratschun
Programme Manager

Ghulam Jelani
Liason Officer

Shahzad Gul Aryobee
Assistant Field Officer

The mission of UNAIMS is capacity building for the Afghan Government, though the agency is currently in the process of re-evaluating its mission. UNAIMS provides technical advice and “MIS” services, data base services, and GIS services to 18 government Ministries. AIMS is also in the process of aggregating basic data from all of these Ministries. UNAIMS is working to standardize IT systems across all Ministries.

AIMS is attempting to build capacity in GIS and has installed GIS laboratory facilities in several Afghan Government Agencies. AIMS also provides basic training in GIS so that these Agencies have a core group of specialists capable of using these applications. According to UNAIMS, 18 staff at MMI have been trained in basic IT and AIMS plans to establish a GIS lab at MMI. According to the information provided to us, AIMS is planning to provide an institutional development expert to AGCHO.

AIMS also reported that they have a proposal to USAID, in alliance with the University of Oklahoma, to provide an advisor to the Geology Department of the Kabul University.

UNAIMS is working with the GIS Corp. which is a volunteer group that provides GIS expertise provided that their transportation and living expenses are paid.

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