

AFGHANISTAN CONSULTATION WORKSHOP REPORT

(A preparatory meeting, between Purdue University faculty and Afghan professionals resident in the United States, and the Afghan Minister of Higher Education, Dr. Sherief Fayez, for the re-establishing of a linkage with Kabul University.)

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Afghanistan Consultation Workshop Report

The Motivation & Global Context

"Terrorism really flourishes in areas of poverty, despair, and hopelessness. We have to show people who might move in the direction of terrorism that there is a better way."

(United States Secretary of State Colin Powell, in an address to the World Economic Forum, New York City, New York, February 1, 2002.)

"Our part of the \$296 million U.S. pledge for Afghanistan will focus on agriculture and education and programs that support women and improve healthcare."

(U.S.A.I.D. Director Andrew S. Natsios, "Notes from Natsios", February 7, 2002.)

The two quotes taken together indicate that major aspects of the U.S. portion of the worldwide war on terrorism will focus on improving the educational opportunities available to the Afghan population.

Within our present global context this workshop report demonstrates and records the relevance and importance of the discussions held during the Purdue Afghanistan consultations. The workshop aimed at initiating, mobilizing and organizing the resources that are necessary to help rebuild Kabul University and promote human capacity building for Afghanistan and in partnership with Afghan professionals.

The lack of professional opportunities, severely limited academic facilities (few professors and inadequate laboratories), and book-deprived libraries, are major factors haunting young intellectuals in so much of the developing world. These very unfortunate and frustrating factors are contributors to the unstable environments of emerging economies and the least developed nations. They are accompanied by wide spread illiteracy, ignorance of global change, and often go hand-in-hand with extremist and undemocratic activities.

This Afghanistan Consultation Workshop was an initial step towards re-establishing a linkage between Purdue University, Kabul University, and the institutions of higher education across Afghanistan. This important initiative will provide much greater access to knowledge and promote a sound learning academic environment for the young talented people of this war torn Central Asian nation bringing them fully into the international community of learning, scholarship, and dialogue. Most importantly it enables the utilizing of the gifted people resources in building up the Afghan economy.

In addition, the early phases of the initiative are focused on providing the local skills necessary for helping to rebuild Afghanistan's shattered infrastructure (a major conclusion of the workshop). The project can help ensure that the Afghans themselves

can ably maintain the multi-billion dollar investment the world has pledged for restoring their nation.

In the words of UNESCO:-

"Without adequate higher education and research institutions providing a critical mass of skilled and educated people, no country can ensure genuine endogenous and sustainable development."

(UNESCO World Declaration on Higher Education for the 21st Century: Vision & Action).

The Workshop Event

The Afghanistan Consultation Workshop took place at Purdue University from February 11 to February 13, 2002. In addition to His Excellency Dr. Sherief Fayez, the Afghan Minister of Higher Education, in attendance were eleven Afghan experts, currently resident in different states of the U.S.A., as well as more than twenty Purdue faculty and senior administrators (Appendix 1). The Afghan professionals attending the workshop included three former Afghan cabinet ministers, current deans of U.S. university schools, U.S. university professors, Afghan educationalists, planning managers and engineers.

The objective of the workshop was to enlist Afghan experts in the early stages of the proposal to make sure that a realistic and well-focused rebuilding plan for Kabul University was created. More than half of the time of the workshop was spent in smaller group discussions using a "Vital Issues Process" methodology, to identify the critical and most needy areas (at Kabul University and Afghanistan generally) within the disciplines of agriculture, education, engineering, infrastructures, and technology. There were five small panels for each of these disciplines as well as plenary sessions. A substantial part of the Tuesday afternoon plenary session gave the platform to Minister Fayez.

The Workshop Outcomes

Following the workshop an agreement and Memorandum of Understanding were signed between Purdue University and the Afghanistan Ministry of Higher Education (Appendices 2 & 3) for re-establishing the link between Purdue and Kabul University. A letter from the Afghan Minister of Higher Education, who arrived at Purdue on February 11th and attended two days of the workshop, was sent to the Association Liaison Offices, (ALO/USAID, Appendix 4). This formed a request to the ALO to give support to Purdue for re-establishing the link and support Purdue's attendance at the March Workshop in Kabul to discuss higher education, following the invitation received from the Ministry of Higher Education.

Major Conclusions of the Workshop

The major conclusions reached by each of the five workshop panels are as follows:-

Agriculture

The School of Agriculture should aim at a total enrollment of 800 bachelor degree students and 40 faculty split among four departments, plant science, animal science, agricultural economics, and irrigation management. There will be a focus on teaching, research, and extension, the latter requiring close collaboration with the Ministry of Agriculture and the agricultural re-development process to be started soon in the country.

First steps are:-

- (1) Immediately link the Kabul School of Agriculture redevelopment process to the broader agricultural development process for Afghanistan by establishing an extension-training center at the University.
- (2) Recruit qualified expatriate Afghans to join the Kabul faculty.
- (3) Train qualified Afghans in U.S. institutions.
- (4) Involve at least six U.S. faculty to work with Afghan faculty at Kabul University.

Education

Educational needs have to be considered in the overall national context of the wider needs for survival and security issues. A considerable amount of information needs to be gathered for a proper education plan to be drawn up and basic managerial oversight put into place. The initial operation of Afghanistan's educational system will need a great amount of help and only then can the longer term planning effectively be considered.

An enormous amount of updating of curriculum will be needed. The provision of textbooks and other instructional material is a critical and vital issue demanding immediate attention. There is also a desperate need for more teachers especially vocational and technical ones. Good teacher training facilities have to be re-established. The dire needs of the situation are further stretched with a greater number of students coming from the special groups of returning refugees, returning military, war wounded, and also the disenfranchised female population.

Engineering

The School of Engineering should aim at an enrollment of 1500 bachelor degree students at the central campus, with 200 additional students each at four specialized satellite campuses offering two-year associate degrees.

Department focus should be:-

- Civil & Irrigation
- Construction & Architecture
- Electrical & Computers
- Mechanical & Industrial
- Chemical & Petroleum
- Agricultural & Biological

Training should be externally monitored and closely coupled to the immediate public works redevelopment needs of Afghanistan by means of establishing a national infrastructure management center at the University (a portion of the resources needed to come from money spent on redevelopment). Construction and irrigation issues are to take foremost priority within the teaching programs receiving assistance.

Crucial is the development of export markets for Afghan goods of oil, natural gas, textiles, metals, as well as preparation of university students to adhere to the principles of efficiency, transparency, accountability, and honesty. First steps are to identify Afghan engineers in Afghanistan, neighboring countries, and beyond, and provide upgrading educational opportunities for those willing to return to teach at the University.

Infrastructure

This workshop group addressed two broad issues:-

- Educational infrastructure (physical facilities, administration etc) at Kabul University
- Integration of Kabul University into the sustainable redevelopment of Afghanistan

Major conclusions from the Workshop were to immediately send an assessment team to Kabul University to determine rebuilding needs and identify potential funding sources for the identified deficiencies. Procedures are needed to ensure proper co-ordination between Kabul University Schools and departments and more importantly between Kabul University and other vocational and technical schools, including the Polytechnic Institute.

It is vitally important, from a national perspective, to establish a multi-disciplinary center or institute for infrastructure redevelopment at the University. The new Institute is to be charged with the initial task of assessing the gap between the skills needed to assure sustainable Afghan development and the current existing supply, and provide recommendations to fill that gap. First steps are, by June 2002, to see the completion of the identification and prioritization of infrastructure needs, through team visits to Kabul University.

Technology

Major recommendations of the technology group, at the workshop, were fivefold:-

- (1) Establish a "Technology Learning Center" at Kabul and sites throughout Afghanistan to allow for quick upgrading of the skills necessary for redevelopment.
- (2) Establish training schools for potential teachers in appropriate technology and computer skills.
- (3) Identify needed skills and numbers in four key areas:-
 - Manufacturing
 - Construction
 - Communications
 - Transportation
- (4) Adapt the technologies successfully implemented by other less developed nations similar to Afghanistan, and make recommendations to the appropriate Afghan Ministries, with proper attention to cultural issues associated with the technologies.
- (5) Structure all this so that the people of the nation become participants in the efforts to rebuild Kabul University and vice versa. Also ensure that the redevelopment resources secured are expended in the country, and not outside it.

Background to Workshop

Following the tragedy of September 11th the staff within Purdue's Schools of Engineering and Institute for Interdisciplinary Engineering Studies (IIES) a proposal was drafted for optimal planning of the infrastructure needs of Afghanistan.

Following a series of meetings among the faculty it became apparent, that following the earlier link between Purdue University and Kabul University in the 1960s and 1970s, the most helpful contribution from Purdue would be to assist as much as possible in the rebuilding process of Kabul University. Very soon the interest of faculty within the Schools of Agriculture and Technology became a very active part of a more organized series of meetings on the West Lafayette campus. Reference to the January 2001 letter, received from Kabul University, marked the turning point from looking only at Afghanistan's infrastructure planning to now concentrating on the needs of Kabul University itself (Appendix 5).

Prior to a meeting between the Association Liaison Office (ALO is a USAID supported organization) and Purdue faculty (Sparrow and Tyner), on January 11th, a short overview of the proposal was documented (Appendix 6). During the workshop the importance of including Purdue's Schools of Management and Education became even more apparent.

A unanimous outcome came from the workshop that it was the right thing to do for Purdue University and the Afghanistan Ministry of Higher Education to embark together on this higher education rebuilding process. It was agreed that Purdue and the Ministry will jointly develop programs, procedures, protocols, and funding resources to ensure the full range of resources available at a land-grant institution such as Purdue University be accessible to help re-establish the institutions of higher learning in Afghanistan.

Both a short-term and long-term commitment is realized for the project. Vocational (training the trainers) and English language training needs are immediately needed. Development of the Kabul University Departments for degree curriculum improvement, research and outreach, and the establishing of the Infrastructures Consulting Services Institute will follow in later stages. Post- graduate training will follow with Kabul academic staff coming to Purdue and other universities in the U.S.A. The project is now anticipated to progress over a 10-year horizon.

This report documents the discussions and decisions taken at the February 11-13, 2002, Workshop. The workshop breakout groups were subdivided into five areas: agriculture, education, engineering, infrastructures, and technology. These groupings formed the nucleus of activity during the workshop. Issues and strategies associated with each of the five designated areas were discussed at length.

Reports from each of the five breakout groups are in the pages that follow.

The workshop helped to clarify the needs and goals of Kabul University in preparation for a proposed follow-up workshop intended to take place in Kabul for May 2002.

Agriculture Group Report

Participants in the Agriculture Group of the Afghanistan Workshop were the following:

Wally Tyner
Mir A. Raza
Nazim Anwar
Kevin McNamara
Dave Sammons

The Agricultural Group developed their report around eight (8) critical issues that need to be resolved in order to go about rebuilding the School of Agriculture at Kabul University. These eight issues are as follows:

1. What philosophy or general approach will be used in organizing and structuring the School of Agriculture?
2. What size in terms of students and faculty should we strive for?
3. What departmental structure and curriculum make sense for the school of agriculture?
4. What degrees should be offered?
5. How do we implement a staffing plan?
6. What approaches should we use to engagement?
7. What are the priorities for repair and rehabilitation of facilities?
8. How can we establish linkages between short-term and long-term priorities for redevelopment of Kabul University and Afghanistan?

This report covers the strategies we developed for dealing with each of these eight issues.

Philosophy

The group agreed that the Land Grant approach should be used in redeveloping Kabul University. In the past, the School of Agriculture followed more traditional lines and focused almost exclusively on teaching. However, we think it is very important that the new School of Agriculture encompass teaching, research, and extension. This will require some changes in the way extension and research are organized in the Ministry of Agriculture and certainly closer linkages between faculty and staff at Kabul University and those responsible for those functions in the Ministry of Agriculture. It is important to capture the synergies among teaching, research, and extension in the new structure.

Size

We believe that Kabul University School of Agriculture should strive to enroll about 800 students. In order to accommodate 800 students, it will be necessary to have about 40 faculty, half of whom should have PhD degrees and half MS degrees. These numbers imply a student faculty ratio of about 20 to 1, which is appropriate for an institution of this type. These size targets are what we would expect by the end of a project that could operate for 10 years.

Departmental Structure

We envision four major departments in the School of Agriculture:

1. Plant Science, including horticulture and forestry
2. Animal Science, including animal health issues
3. Agricultural Economics, including extension and agricultural education
4. Irrigation Water Management, including soil science and agricultural engineering.

These are not the same departments that existed previously, as we have combined several departments to gain efficiencies in administration.

To go along with this departmental structure, we have some thoughts on curriculum development. The first step in curriculum development should be to establish a joint committee between Purdue and Kabul University for each of these departments and the school as a whole. The curriculum should meet the traditional, present, and future needs of agriculture in Afghanistan both from a scientific and practical point of view. To develop the curriculum we need to consult agencies that employ students and determine their needs. But we also need to focus on future science needs as well as current employment needs. To get a good start we should examine models from leading agricultural universities to draw relevant ideas for the curriculum at Kabul University. As an initial launching point, the curriculum at Purdue University should serve as a model.

We should jump start the launching of this curriculum with short courses for existing School of Agriculture faculty at Kabul University. These intensive short-courses could run for 3 to 5 months and could be given either at Kabul University or at Purdue University.

Degrees

We envision even after complete development of the University awarding only the BS degree. Within the time horizon of this project (10 years) we do not envision that Kabul University will have the capacity to award advanced degrees in agriculture. Advanced degrees are something that could be considered at some future date.

Implementation of Staffing Plans

The staffing plans have three major components. The first component is to recruit qualified expatriate Afghans to join the faculty of the School of Agriculture. It is imperative that these faculty be current in their understanding of the discipline in which they will work and that they have advanced degrees. The second component of the staffing plan is to send as soon as possible qualified Afghans to the United States for long-term training at both the MS and PhD levels. Because training takes so long to accomplish, it is imperative that training begin as early in the project as possible. The third component of our staffing plan is that there must be at least six Purdue faculty in

Kabul working with the Afghan faculty at Kabul University. The six disciplines that need to be represented are as follows:

1. Irrigation Management
2. Animal Science
3. Crop Science
4. Agricultural Economics
5. Horticulture
6. Forestry

It may be useful to have more than one person in some of these areas.

Engagement

This topic concerns engagement of the Kabul University School of Agriculture with the development processes in Afghanistan. We think it is essential that University faculty be engaged in Afghan development. The faculty should be linked with government agencies appropriate to their discipline. For example, faculty in the Department of Irrigation Management should be linked with the government agencies responsible for water management in general. Faculty in the Plant and Animal Science Departments should be closely linked with extension and extension educators working in those areas. Those faculty also should be closely linked with researchers in the Ministry of Agriculture at Agricultural Research Stations in other parts of the country. The same is true of Agricultural Economists who should be linked with the policy units in the Ministry of Agriculture. Student practicum work to be held between the third and fourth years of their academic work should also be integrated with development activities in Afghanistan.

There should be strong agricultural business linkages particularly with firms providing agricultural inputs. The Agricultural Economics faculty should assist in the development of private sector distribution systems for inputs. The faculty at Kabul University should be providing short-term training both for the private sector and for extension educators.

Facilities

The priorities for repair and construction of facilities are as follows:

1. Repair existing facilities as soon as possible.
2. Construct new laboratories and computer facilities for both research and teaching.
3. Equip research farms at 3 to 4 locations around the country plus at Kabul University.
4. Use temporary structures as needed for classrooms and other uses.
5. Construct dormitories both for students and for participants in short-term training programs.

The facilities improvements, repairs, and upgrades are imperative in the long-term. However, lack of adequate facilities should not impede progress on other fronts.

Linking Short-Term Activities With Long-Term Institutional Development

In the short-term it will be imperative to distribute seed, fertilizers, and agricultural chemicals. It will be necessary to repair irrigation facilities to the extent that it can be done with manual labor. In fact, farmer labor might be used in exchange for delivery of seeds, fertilizers, and ag chemicals. It would be useful to establish an Extension Training Center at Kabul University and to link demonstration farms around the country to that Center. There could also be a program established for the distribution of temporary pumps for infrastructure that has not been repaired. It will be useful to tie these short-term measures to Kabul University so that the short-term measures will be functioning through an institution expected to continue and sustain those activities over the long-term.

The ideas developed in this report will be further developed by participants of the agriculture group. The responsibilities assigned to each area are as follows:

1. Philosophy – Tyner
2. Size – Anwar
3. Structure – Sammons
4. Degrees – Anwar
5. Staffing Strategy – Sammons, Anwar, Raza
6. Engagement – McNamara, Tyner
7. Facilities – Sammons
8. Short-term/Long-term linkages – Tyner, Raza

Education Group Report

The Education Working Group of the Afghan Consultation Workshop consisted of Juma Bandawal, Michael Dyrenfurth, Miroslaw Skibniewski, Divya Swamy (Department of State), and Phil Smith (MUCIA). This group, during the course of the workshop, met repeatedly and address in sequence, (1) the identification of key strategic issues, (2) the establishment of important strategies that address each issue, and subsequently (3) framing of potential actions and the identification of owners who might logically carryout that action. The latter, of course, presupposes the availability of appropriate support and safety provisions.

Working collaboratively, and drawing extensively upon the insight and experience of Dr. Bandawal, a former Ministry of Education leader in Afghanistan, the working group identified the following seven issues as essential to the future of Afghanistan.

1. Insufficient attention to survival/security issues for Afghan society
2. Restarting & initially operating the educational system

3. Restructuring and updating the curriculum & providing of related materials, e.g., textbooks. Insufficient supply of textbooks and instructional materials and equipment
4. Inadequate quantity and quality of teachers, faculty and educational administrators
5. Insufficient attention to the education and provision for special groups, e.g., educationally disenfranchised women, returning military personnel, wounded, ...
6. Lack of information needed to properly plan education communication, support and logistics
7. Provision of management education

Clearly, not all of the actions and owners have been detailed. The working group felt that it had just begun to identify many of the fundamental issues, concerns, characteristics and problems facing Afghanistan in the arena of education. We are confident that the actions identified so far would indeed be helpful in moving forward but we wish to point out the need for further planning and on-site assessment. With such follow-up information, the Working Group will be well positioned to complete its work for planning the initial quick start phase of the Purdue – Kabul University collaboration.

Vital issue #1 - Security was not extensively addressed by our group but it must be a pre-condition. It does not fall within the primary control of the education authorities.

Vital Issue #2 - Restarting the overall education system, K - University

- A strategy of working with both ministries (Education & Higher Education) simultaneously will be needed to create a start-up plan
- Identification of quick start capabilities where students, faculty and facilities exist (K – University)
- Developing long range plan to develop Kabul University strategically
- Establish permanent Office of Planning, Articulation and Integration between Ministries of Higher Education, Education and Kabul University

The following are an overall summary set of actions.

- a. Curriculum revision and update and creation of new curricula jointly with ministry of higher education and faculty of Kabul University and faculty of regional colleges
- b. Implementation of teacher training for Agriculture, technical subjects (Engineering & Technology & Vocational), and general education by faculty of the respective colleges at Kabul University working in collaboration with counterpart faculty from Purdue's Schools of Education, Agriculture, Engineering, and Technology

- c. Encourage development of management curriculum by Purdue Krannert faculty working in collaboration with Kabul University faculty (probably from their College of Economics)
- d. Create wide-ranging ESL program in all colleges (MJS & MUCIA)
- e. Creating educational extension system for Afghanistan that is modeled after Purdue Agricultural Extension and TAP
- f. Implement incentive system for teachers' teachers

Work to establish educational accessibility in rural areas by implementing a system of rural/community colleges.

Conduct a short-term intensive vocational/technical train-the-trainer workshop at Purdue (School of Technology & School of Education) to prepare leaders from Kabul University to deliver rapid response vocational technical education in Afghanistan.

Vital Issue #3 - Lack of curriculum and materials

Five strategies were identified to meet the needs of curriculum and educational materials.

- A. Kabul University evolve simple college structure to include/address:
 1. Technical teacher training
 2. Provision of management education
 3. Providing key technologies, e.g., information technology, communication technology, production technology, irrigation technology...
 4. Provision of basic teacher training and upgrading
- B. Evolve land grant model with state-wide and regional campuses that link the needs of the country to selected university development and outreach initiatives
- C. Kabul University and Ministries of Education and Higher Education work together to prepare curriculum for schools and universities following model of USA's instructional Materials Laboratories
- D. Implement a multiple bilingual strategy for instructional materials to be developed.
 1. Pashtun and English
 2. Dari and English
- E. Promote a World Bank or other development agency funded project to re-equip and provide educational facilities.

Vital Issue #4 - Lack of Faculty & Teachers

There were nine important strategies listed to deal with the lack of teaching staff:-

- A. Evolve incentive mechanisms to attract potential and past teachers
- B. Institute a rapid response "train-the-Trainer" institute in key curriculum areas, such as:
 1. Vocational-Technical Education
 2. Basic Education
 3. Engineering
 4. Agriculture

5. Management & Economics
6. Methods & Content
- C. Infuse a teacher education component into each appropriate Kabul University Faculty (Engineering, Agriculture, Economics, etc.) and have it collaborate with the Ministry of Education initiatives to provide leadership for key education efforts
- D. Integrate preparation of educational administrators with that of public sector management education
- E. Prepare faculty with quick upgrading and start-up training here in the USA at Purdue.
 1. Implement a start-up faculty fellowship program to provide for initial faculty and their counterparts
 2. Provide English training for existing and new faculty
 3. Institute a world-wide recruiting initiative for interim and/or new faculty
 4. Implement a comprehensive long-term faculty development program for Kabul University

Vital Issue #5 - Attention to Special Group

Six strategies were discussed:-

- A. Provide for mobilizing and updating of women professionals
- B. Need for support such as a "G.I." bill for returning Afghan fighters
- C. Identify NGO/Interest groups existing within Afghan society that offer potential for assistance in educational efforts
- D. Establish program for education of women and support of women in education
- E. Insure that K-middle school and university are co-educational
- F. Initiate programs to recruit women into technical, management & science programs

Vital Issue #6 - Lack of Support Information & Inadequate Communications

Two strategies:-

- A. Establish central information system for higher education
- B. Interface various relate ministry data systems

Vital Issue #7 - Provide Management Education

- A. Evolve management (marketing, general management, Human resources, logistics, entrepreneurship, info-technology and analysis) program at Kabul University to include:
 1. Public sector/infrastructure management that includes educational administration
 2. Incipient private sector and agriculture
 3. Entrepreneurship and small business and agriculture
- B. Develop ethics, accounting practices, finance practices and increase public awareness of the same

- C. Develop public information program to instill understanding of free market system

Engineering Group Report

Members of the Workshop Engineering Break-Out Group consisted of:-

Warren Stevenson
Joma Mohammadi
Chee-Mun Ong
Shad Sargand
Kumares Sinha
Tom Sparrow
Zia Yamayee

Eight vital issues were discussed during the engineering breakout sessions.

Vital Issue #1

What should the target number of students be when the school is fully restored?
What should the disciplinary mix be?

Strategy

The estimated total number for the central campus is 1500. In addition, 4 satellite campuses of 200 students each for 2-year associate degrees are envisaged.

The mix recommended include:-

- Civil Engineering (Action – Sinha & Sargand) including irrigation and water resources (irrigation is included because there is need for a very large quantity of civil works for irrigation development). (Action – Samizay & Skibniewski).
- Architectural and construction management. (Actions – Sparrow & Yamayee).
- Electrical and computer engineering. (Action – Stevenson & Sparrow).
- Mechanical and industrial engineering. (Action - Stevenson/Sargand).
- Chemical and petroleum engineering, and agricultural and biological engineering; (Action – Mohtar & Anwar).

Vital Issue #2

How shall we insure (a) that graduates are of proper quality and (b) can effectively contribute to actual work when recruited upon graduation?

Strategy

- (a) The programs should be subject to external review by curriculum approval organizations such as ABET, to insure the quality of engineers for Afghanistan's needs. (Action – Yamayee & Stevenson)
- (b) At the end of the second year, assign students to government and private

organizations for employment, thus tying the training to the activities of the employer. (Action – Mohamadi & Stevenson).

Vital Issue #3

How to train engineers to be prepared for promoting sustainable and economic development and adhering to ethical principles?

Strategy

Include in curriculum provisions to prepare the students to pay full attention to efficiency, transparency, accountability, financial and environmental sustainability of projects, prevention of corruption, ensuring user and community participation, and involvement of private sector in preparation, implementation and utilization of projects for ensuring best results for Afghanistan. (Action – Mohamadi & Sparrow)

Vital Issue #4

What foreign languages, if any, should be a part of the curriculum?

Strategy

The medium of instruction shall be in a language most suitable for the reconstruction and development of Afghanistan. It was clearly expressed by the Minister of Higher Education that the language to be used throughout the higher education system of Afghanistan should, in future, be consistently English.

Vital Issue #5

How shall regionalization (satellite campuses) be addressed?

Strategy

Training for associate degree in engineering and technology should be carried out at satellite campuses, which may be specialized to be responsive to the regional development needs. The satellite curriculum should be such that students after graduation have required qualifications to enter the third class of the central campus. (Action – Baha & Stevenson).

Vital Issue #6

How can we increase the retention rate of the school?

Strategy

By:

- (a) Appropriate screening of students and provide remedial measures; and
- (b) Introducing appropriate methods of nurturing the students.

(Action – Stevenson & Sargand)

Vital Issue #7

How can we couple the education of engineers with the education of the support staff necessary to make engineers effective additions to society?

Strategy

- a) Initially, short courses for engineering support staff should be given.
(Action – Sparrow & Yamayee).
- b) In the long run, the school of technology should provide this training.
(Action – Sparrow & Yamayee).
- c) Develop a national infrastructure laboratory.
(Action – Sinha & Sargand).

Vital Issue #8

How to recruit and develop faculty?

Strategy

Identify Afghan engineers in Afghanistan and in neighboring countries and beyond for faculty and provide opportunities for upgrading their skill. Develop database of Afghan engineers. (Action – Sparrow & all workshop participants).

Infrastructures Group Report

This subgroup consisted of the following members:

Dennis Engi
Tawab Assifi
Brian Bowen
Alok Chaturvedi
Deepika Dayal
Abdul Ferogh
Greg Hundley
Rabi Mohtar
Rafi Samizay

This first task was to clearly define the vital issues for this topical area. Vital issues are current and future higher-education-related forces that need to be resolved in order to help ensure the sustainability of Afghanistan's socio-politico-economic system. Further, these vital issues are those pertaining to the myriad infrastructures needed to support the sustainability of Afghanistan.

The vital issues defined by this subgroup are:

1. Lack of a multidisciplinary center for infrastructure consulting services.

2. The assessment of the current infrastructure supporting Kabul University is inadequate.
3. The major element of this infrastructure are:
 - (a) Physical facilities (e.g., classrooms, labs, dormitories, power, telephones)
 - (b) Faculty, &
 - (c) Students
4. Kabul University's departments, schools, and colleges are poorly integrated.
5. The coordination of Kabul University with vocational schools is poor.
6. Curricula needed at Kabul University to support sustainable development of Afghanistan is incomplete. Country-wide infrastructures needed to support sustainable development include:
 - (a) Education
 - (b) Electric Power Systems
 - (c) Gas & Oil Storage and Transportation
 - (d) Management, Banking, and Finance
 - (e) Transportation
 - (f) Water Supply Systems
 - (g) Food and Agriculture
 - (h) Public Administration
 - (i) Health Care Delivery
 - (j) Telecommunications

This subgroup was then asked to define a collection of strategies that are needed to ensure that the associated vital issues are properly managed. The collection of strategies for each of the issues is provided below.

Strategies

(1) Lack of a multidisciplinary Center for infrastructure consulting services.

- (a) Identify clients from the public, private, academic and NGO sectors.
- (b) Identify and prioritize needs for each client sector.
- (c) Establish an organizational structure, budget requirements, and facilities.
- (d) Identify and recruit personnel.
- (e) Establish both consulting and training services.
- (f) Develop an implementation plan.
- (g) Include this strategy in the overall package.

(2) The assessment of the current infrastructure supporting Kabul University is inadequate.

- (a) Obtain an invitation from both Kabul University and the Ministry of Higher Education to come to Afghanistan and conduct this assessment.

- (b) Identify appropriate team members, form the team, and develop an organizational structure.
- (c) Obtain funding to support this assessment.
- (d) Perform an assessment of the physical facilities, faculty, administration, budget students, curricula and other needs as appropriate.
- (e) Obtain current Kabul University plans for infrastructural support.
- (f) Identify other groups doing similar assessments.

(3) *Kabul University's Departments, Schools, and Colleges are poorly integrated.*

- (a) Include information about Departmental integration within Kabul University on the list of tasks for the assessment team.
- (b) Obtain the University's Master Plan.
- (c) Meet with each Department.
- (d) Identify the nature of current integrative activities.
- (e) Discover areas for needed integration.

(4) *The coordination of Kabul University with vocational schools is poor.*

- (a) Form a committee to evaluate interfaces between Kabul University and vocational schools.
- (b) Identify the current status (organization, curricula, country needs) of the vocational schools.
- (c) Develop a set of requirements for vocational teacher training.
- (d) Explore development of a department at Kabul University for vocational teacher training.
- (e) Perform an assessment of past experiences in coordinating Kabul University with vocational schools.

(5) *Curricula needed at Kabul University to support sustainable development of Afghanistan is incomplete.*

- (a) Assess the needs for each critical infrastructure.
- (b) Estimate the number of professionals currently in-country who can service these needs.
- (c) Close the gap between the needs and the available professionals through:
 - Training.
 - Recruitment from outside of the country, and
 - Coordination with NGOs

Actions and Owners

A preliminary investigation using a Vital Issues Process (VIP) similar to the one conducted at Purdue on February 11, 12, and 13 will be initiated in Afghanistan during late March and a more completed investigation during May and June of 2002. This process will be focused on the identification and prioritization of infrastructure-related

needs for the country and on the identification and involvement of key stakeholders. Special attention will be given to the educational infrastructure with an emphasis on higher education. Stakeholders to be involved in the Process will be drawn from the Afghan Government, the private sector, non-governmental organizations, and from academe. In addition to the involvement of key stakeholders and the prioritization of infrastructure-related needs, the expectation is that much of the information articulated in the above strategies will be collected through this process and through extensive collaborative discussions between the Purdue team and our Afghan collaborators. An advance team consisting of Professors Baha, Engi, and McNamara will be responsible for the preliminary investigation during late March. A much more complete team will conduct the more extensive investigation during the May-June timeframe. The more complete team will consist of members responsible for each of the infrastructures identified above.

Technology Group Report

Participants in the Technology Group of the Afghanistan Workshop were the following:

Zarjon Baha
Mark Bannatyne
Fred Emshousen
Soorgul Wardak

Vital Issue 1 - Communications for non-practicing graduates.

Strategies (See Action/Ownership for related activity).

- Create a “Technology Learning Center” at a base such as Kabul University.
- Establish regional Technology Learning Centers at sites throughout Afghanistan
- Produce professional development seminars.
- Create an intranet system that links all departments at Kabul University first and then connects other Technology Learning Centers and polytechnics throughout the nation.

Action/Ownership

- Establish a resource library at Kabul University.
- Create a guest lecture series where topics can be delivered in person, video, CD Rom, satellite connection, etc.
- Duplicate all items in “a” at regional centers as they are established.
- Develop courses and workshops for graduated professional in order to assist in upgrading their expertise.
- Establish an intranet system first at Kabul University between departments and then to other schools and regional centers.

The Departments of Industrial Technology and Computer Graphics Technology within the School of Technology, Purdue University, West Lafayette campus would supervise all of the items shown in this section.

Vital Issue 2 - Technological/Computer literacy

Strategies (See Action/Ownership for related activity)

- Establish programs that are directed at “training the trainers”.
- Establish computer labs.

Action/Ownership

- Provide instruction in basic computer skills workshops.
- Develop course materials and curriculum based on identified needs of the target audience
- Provide rotating schedule of courses.
- Identify computer “donors”. Donors could be universities and businesses from diverse nations that will give their old computers that are still viable to Kabul University and the Technology Learning Centers).
- Secure a permanent facility in which to house the computer lab.
- Ensure that there is an adequate power supply available for the support of the computers in the lab(s).

The Departments of Computer Program Technology and Computer Graphics Technology within the School of Technology, Purdue University, West Lafayette campus would supervise all of the items shown in this section.

Vital Issue 3 - Employment

Strategies (See Action/Ownership for related activity)

Identify the needed workshop areas within:

- Manufacturing
- Construction
- Communications
- Transportation

Action/Ownership

- Conduct a workforce analysis that is coordinated with the appropriate Afghanistan government ministry.
- Create a forecast report on the future workforce needs of the nation.
- Share all data generated with the appropriate Afghanistan government ministry.
- Share data gathered with vocational school program for curriculum development.

- Share data with international agencies (NGOs).

All of the items shown in this section would involve the Afghanistan Ministry of Planning (or, appropriate ministry identified), and the Dean's Office of the School of Technology, Purdue University, West Lafayette campus.

Vital Issue 4 - Appropriate Technology

Strategies (See Action/Ownership for related activity)

- Examine similar technology in other nations similar to the needs of Afghanistan, and do a comparison study.

Action/Ownership

- Conduct a survey of technology present in the nation, i.e. industrial, agriculture, business, personal.
- Conduct a parallel survey as indicated in "a" in neighboring countries.
- Coordinate survey and data collected with government and international agencies in a written report.

All of the items shown in this section would involve the Afghanistan Ministries, and the Department of Industrial Technology within the School of Technology, Purdue University, West Lafayette campus.

Vital Issue 5 - Human Elements

Strategies (See Action/Ownership for related activity).

- Identify cultural issues to ensure that the technology introduced is not inappropriate for the individuals and situations where it would be implemented.

Action/Ownership

- Coordinate efforts with the Ministry of Culture (or, appropriate ministry) to identify regional needs and customs.
- Share data collected with international agencies for dissemination to educational institutions in an effort to create culturally sensitive programs.

Identify proper technologies to match the data collected for each area.

All of the items shown in this section would involve the Afghanistan Ministry of Culture and Public Relations (or, appropriate ministry), and the School of Technology's International Programs Committee, Purdue University, West Lafayette campus.

Other Vital Issues for Which Strategies and Action/Ownership Items Were Not Generated:-

- Electrification of villages and outlying areas where Technology Learning Centers will be established.
- Security of those systems put in place to safeguard the audience, and the programs so they may be offered in an uninterrupted schedule.
- Trust in the people of the nation that they will become participants in the efforts to re-build Kabul University and other sister institutions named in this proposal.
- Dedication of resources secured for this project to be used in the nation of Afghanistan and not depleted in efforts outside the nation.

Appendix 1 – Workshop Participants

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Afghanistan Minister of Higher Education
His Excellency Sherief A. Fayez
Kabul, Afghanistan

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**Appendix 2 – Letter of Commitment from the Afghanistan
Ministry of Higher Education**

***Afghanistan's Interim Authority
Ministry of Higher Education
Kabul, Afghanistan***

Dr. Mirosław Skibniewski
Interim Dean
International Programs
Young Graduate House
Purdue University
West Lafayette, Indiana 47907

Dear Dr. Skibniewski:

This letter is to affirm the commitment of Kabul University and the Afghanistan Ministry of Higher Education to participate with Purdue University in a university linkage program to be supported with resources provided through the Association Liaison Office for University Cooperation in Development (ALO). The proposal that has been written will permit our two institutions to work together towards the goal of strengthening our educational and research programs as we begin the process of post-war recovery in Afghanistan. Kabul University has an historic, but now inactive, link to Purdue University through our Faculty of Engineering. The proposed activity outlined here will build on that historic relationship and expand it to include additional areas of mutual interest in Agriculture, Technology, Management, and Education for Kabul University and other provincial colleges in Afghanistan.

We look forward to the successful review of our proposal and the opportunity that this will provide for us to restore and expand our institutional partnership as we move forward in the post-war era. The Chancellor of Kabul University and I are fully committed to this partnership and will do all that we can to insure its success.

Sincerely,

Sherief Fayez, Ph.D.
Minister of Higher Education, Afghanistan

Appendix 3 – Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

THIS AGREEMENT, entered into this 14th day of February, 2002, by and between Purdue University of West Lafayette, Indiana 47907, U.S.A. and the Ministry of Higher Education of Afghanistan and the institutions of higher education in Afghanistan (the “Ministry”).

WITNESSETH THAT:

WHEREAS, Purdue University and the Ministry desire to promote the enrichment of the academic programs of Kabul University and other Afghan colleges and universities.

WHEREAS, Purdue University and the Ministry desire to strengthen and expand the mutual contacts between them; and

WHEREAS, Purdue University and the Ministry desire to provide for an exchange of faculty and other collaboration.

NOW THEREFORE, it is mutually agreed as follows:

Purdue University and the Ministry shall jointly develop programs, procedures, protocols, and funding sources to ensure that the full range of resources available at a land-grant institution such as Purdue University be accessible to help re-establish the institutions of higher learning in Afghanistan.

IN WITNESS WHEREOF, Purdue University and the Ministry have executed this Agreement as of the date first above written.

Purdue University

The Ministry of Higher Education of
Afghanistan

Date _____

Date _____

By _____
Martin C. Jischke
President

By _____
His Excellency the Minister of Higher
Education Sherief A. Fayez

By _____
James S. Almond
Vice President for Business Services
and Assistant Treasurer

Appendix 4 – Request for ALO Support

Afghanistan's Interim Authority

Ministry of Higher Education

Kabul, Afghanistan

Ms. Joan Claffey, Director
Association Liaison Office for
University Cooperation in Development
1307 New York Avenue, NW, Suite 500
Washington DC 20005-4701

Dear Dr. Claffey:

I am pleased to write to you during my stay here at Purdue University where, during the past two days, I have been part of a consultation workshop on rebuilding Kabul University so that it can more fully contribute to the post-war development of Afghanistan. Purdue University arranged for my travel here so that I could participate in this important event. Together with 14 senior Afghans currently residing in the United States, I have enjoyed this intellectually stimulating and immensely satisfying event, which was organized by four of the Schools at Purdue University (Agriculture, Engineering, Management, and Technology).

We are now moving on to plans for follow-up to the Purdue workshop. In late March 2002, my Ministry is leading a weeklong workshop in Kabul that will focus on reviewing and assessing the curriculum at Kabul University. The goal of this workshop will be a complete revision of our curriculum and ultimately a "blueprint" for our future educational programs at the university to permit us to do our share as part of the future rebuilding of the country. We cannot do this curriculum revision alone. It is a priority of mine that Purdue University has a significant presence at the Kabul workshop. Specifically, I have invited a five-person team (representing the following Schools: Agriculture, Education, Engineering, Management, and Technology) to join us in Kabul. I would be pleased if ALO might consider sending a representative of your office to this workshop as well. We have secured some external funding to support the workshop but I need your help to bring the Purdue team to Kabul. Would you consider a request for an unsolicited and non-competitive grant to support this team's travel next month? I believe that a total of \$25,000 (\$5,000/person x 5 people) would be sufficient for our needs for a two-week visit. I hope that you will agree with me that this workshop is fully consistent with the mission of ALO.

Please communicate directly with David Sammons (765-494-6876) or Tom Sparrow (765-494-7043) at Purdue with regard to this request. I sincerely appreciate the financial constraints under which you operate but believe that this will be a good use of your resources. Moreover, it will provide ALO with a "seat at the table" as we begin the immensely difficult and tremendously important job of rebuilding higher education in Afghanistan.

Sincerely,

Sherief Fayez, Ph.D.
Minister of Higher Education, Afghanistan

Appendix 5 – Communication from Kabul University

**KABUL UNIVERSITY
THE CHANCELLOR OFFICE
Jamal Mena, Kabul City**

Thursday, January 11, 2001

Alhaji Mawlawi Pir Mohamad Ruhani
Chancellor of Kabul University
Kabul, Afghanistan

Fax: 0092091-287655

President Martin Jischke
Purdue University
Hovde Hall of Administration
West Lafayette, Indiana 47907-1301

Dear President Jischke,

As you know, Purdue University and Kabul University had ten years of very fruitful cooperation (1963 - 1973) when Purdue University was an active member of the USET (United State Engineering Team) consortium. USET was helping our School of Engineering at that time. As a result it became one of our best schools at the university. Through this partnership, we were able to send many staff for education to Purdue University, and here in Kabul, several Purdue professors helped in our programs. All those individuals here who were closely associated with Purdue University had nothing but praise for its high standards and outstanding reputation.

As you may have been aware, among other things in our country, Kabul University, has been subjected to much devastation since the Russian invasion of Afghanistan, December 27, 1979. The curriculum was changed to include materialistic views and the physical facilities, including laboratories and libraries, have been virtually destroyed. At present the government is faced with much more challenging issues and there seems to be very little left to help our university.

We have bright young students who are eager to learn, but with the prevailing condition of the country, we feel we are not able to quench the thirst these young people have for learning at the university. We are hoping that in the near future we will be able to obtain funding from international sources; and later will receive an appropriate portion of our country's resources to be set aside for the improvement of the higher education sector.

This letter is to request the re-establishment of an academic cooperation between Kabul University and Purdue University as soon as possible. At this point it would be premature to discuss specific terms as a basis of future cooperation, but we do need help in all aspects of the university system.

We remain open to any suggestion that Purdue University would have and would work together to determine priorities in this cooperation. A visit of a team from your institutions may be one way to look into the future areas of cooperation. We could reciprocate the visit accordingly and discuss further the details of our cooperation.

I will remain anxious to hear from you a positive response to my request and hope this letter will become the start of a long cooperation between our two institutions.

Sincerely,

Alhaj Mawlawi Pir Mohammad Ruhani
Chancellor of Kabul University

Appendix 6 – Overview of Purdue Proposal

December 19, 2001

Overview of Purdue University Proposal to Rebuild Agriculture, Engineering, Management, and Technology at Kabul University in Afghanistan

A group of Purdue faculty with interest and/or experience in Afghanistan has been exploring how Purdue might become involved in assisting efforts to promote development in Afghanistan following the war. Faculty in the Purdue Agricultural, Engineering, Management, and Technology schools have decided to explore the potential of entering into an institutional capacity building partnership with Kabul University, and/or other relevant Afghan institutions of higher education. The objective of the partnership would be to build the agricultural, engineering, management, and technology programs at Kabul University so that they can provide the intellectual leadership to support agricultural and infrastructure development throughout Afghanistan. This will provide the educational base for training Afghan professionals to work in and lead Afghan development efforts.

The capacity building partnership would focus on four areas: rebuilding the campus facilities, institutional development, faculty enhancement, and extension education. An important first step in rebuilding the university will be to replace or rehabilitate the physical facilities. Purdue faculty will work with university officials to create and implement a plan for campus buildings, laboratories, classrooms, computer resources, field research stations, etc., to assure that physical facilities are adequate for successful operation of the university.

Institutional development would encompass university management, curriculum development, and development of units or centers within the agricultural and engineering schools for applied policy analysis. Purdue faculty and administrators would assist in this process through workshops both at Purdue and in Kabul. Also, Purdue faculty resident in Kabul would provide day-to-day collaboration on these important issues. One important Center would conduct analysis of possible infrastructure investments in Afghanistan (electricity, roads, etc.)

Faculty enhancement would include short and long-term training programs in the U.S. for Kabul University faculty and advanced students. These Afghans would receive their education and then return to Afghanistan to assume teaching and/or administrative positions at Kabul University. Faculty enhancement would also involve Purdue faculty living and working in Kabul along side their Afghan colleagues.

The fourth area would be extension education and short-term skill development training. As Afghanistan resumes its development efforts, individuals with applied agricultural, engineering, and technology skills will be needed to provide on-site management. People with managerial skills as well as technical skills need to be trained to manage development and reconstruction efforts. Purdue faculty will work with Afghan faculty to develop and implement short courses designed to teach Afghans. These people will serve as staff in extension type short courses to train people throughout the country in applied agricultural and engineering skills. In other words, it would be a train the trainers type program in which Purdue faculty in collaboration with Kabul University faculty, would train those, who, in turn would train others in these important applied areas.

This project would need to be 5-10 years in duration, and Purdue is prepared to make the commitment for such a long-term project.