

Project report

Afghanistan – health, education and gender

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Summary: The Norwegian Centre for Telemedicine has investigated options for telemedicine in Afghanistan, which is recovering after almost 25 years of war. A survey is done, gathering Internet information and received information through e-mails and meetings with different key persons and through a fact finding mission to Kabul in August 2003. The results are presented in two reports, this one and another report on information and communication technology (ICT) in Afghanistan. The country has one of the highest maternal and infant mortality rates reported globally. 75 % of the rural population has no access to health care service, and 40 % of the health facilities in rural areas have no female health providers - an absolutely necessity in Afghanistan where traditions and culture prevent many women from being seen by male doctors. The Ministry of Health has developed a strategy for health services in the country, which is to be implemented by non-governmental organizations. Education of health care personnel at all levels is a challenge. Different project alternatives for telemedicine are discussed, based on the information gathered here together with the other report on ICT in Afghanistan.

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Preface

This report aims at presenting existing information about health and education of health care personnel in Afghanistan, as well as the government's strategies and plans for the nearest future. The women's situation is shortly described, with some implications for health. The purpose of writing the report has been to gather the information collected, to identify needs where telemedicine could be beneficial, and to conclude with some recommendations. In the process many different organizations have been contacted, some of them are included in this report as potential stakeholders. Several initiatives are likely missing and some information can be outdated or even incorrect. This is partly due to the many existing initiatives which is differently announced, and partly due to lack of available information channels in Afghanistan.

Thank you to everyone who has provided information and introduced us to key persons and in different ways has facilitated our survey. Special thanks to Norwegian Church Aid by Per Westborg, who provided office facilities and assistance in Kabul during our visit.

The Norwegian Centre for Telemedicine financed this feasibility study, giving employees, one medical doctor and one chartered engineer in physics, the opportunity to spend time on this project.

27. January 2004

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Abbreviations

AKDN	Aga Khan Development Network
ANHRA	Afghanistan National Health Recourses Assessment
ARTF	Afghanistan Reconstruction Trust Fund
BPHS	Basic Package of Health Services
CBHP	Community Based Health Provider
CHW	Community Health Worker
ICG	International Crisis Group
ICRC	International Committee of Red Cross
ICT	Information and Communication Technology
IMEI	Intermediate Medical Education Institute
IMR	Infant Mortality Rate
IOM	International Organization for Migration
IRIN	Integrated Regional Information Networks (part of OCHA)
ISAF	International Security Assistance Force
MCH	Mother and Child Health Care
MD	Medical Doctor
MMR	Maternal Mortality Rate
MoH	Ministry of Health
MoHE	Ministry of Higher Education
MoWA	Ministry of Women's Affaires
MSH	Management Sciences for Health
NGO	Non-Governmental Organization
NST	Norwegian Centre for Telemedicine
OCHA	UN Office for the Coordination of Humanitarian Affairs
PPA	Performance-based Partnership Agreement
TB	Tuberculosis
TBA	Traditional Birth Attendant
UNESCO	United Nations Educational, Scientifical and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Development Fund for Women
UNOPS	United Nations Office for Project Services
USAID	The United States Agency for International Development
WHO	World Health Organization



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Figure 1. Map of Afghanistan [1]

1. Introduction

1.1 Background

The Norwegian Centre for Telemedicine (NST) (www.telemed.no) is a department at the University Hospital of North Norway (UNN). It is a public, non-profit resource centre that aims to gather, produce and provide knowledge about telemedicine both nationally and internationally. NST has been using the following definition: "*Telemedicine is the investigation, monitoring and management of patients and the education of patients and staff using systems which allow ready access to expert advice and patient information no matter where the patient or relevant information is located.*" (European Health Telematics research programme Advanced Informatics in Medicine, 1991)

NST has been involved in several fact finding missions on telemedicine to third world countries, like Nepal, Kyrgyzstan, Cuba, Georgia, Sri Lanka, South Africa, and it has also several completed and on-going projects in Northern Russia. In 2002 the World Health Organization (WHO) designated the NST as its first [Collaborating Centre for Telemedicine](#).

The University of Tromsø (UiT) has from its early history had a commitment for the third world countries. Over the years quite a few teachers and students have been involved in projects in the developing world. Master of Public Health was established some years ago, and last year The Centre for Peace Studies was started, with a two-year master program in Peace and Conflict Transformation. Tromsø Mine Victim Recourse Centre is a joint effort between UNN, Trauma Care Foundation and WHO. The Centre for International Health is a collaboration centre between UiT and UNN, recently established to coordinating the international involvement in medicine and health, developing competence, and giving administrative support to employees within international project participation and building of networks.

NST has a commitment to spreading its competence and developing new projects. Afghanistan's health situation is among the worst in the world, with a very high maternal and child mortality and a huge lack of health care personnel, especially at the female side. After the fall of Taliban in the autumn 2001, an internationally supported transitional government is at work to rebuild the country, to establish functioning infrastructures and to re-establish a state's functions. Torill Iversen, a female medical doctor with altogether three years experience among Afghans in the 1980-90ies, was employed to investigate whether it is feasible to use telemedicine in education of health personnel in Afghanistan. Siri Birgitte Uldal, a chartered engineer in Physics, has contributed to the mapping of infrastructure and technology. Her results are presented in another report, "Information and Communication Technology in Afghanistan" [2].

1.2 Objectives

NST's aim with this survey is to investigate whether telemedical solutions can play an important role in the reconstruction of a national health care system in Afghanistan.

The survey has several components:

- Investigation of the infrastructure and technological development in Afghanistan (see separate report [2]).
- Mapping the health situation and the health care structure
- Exploring the gender situation and its effect on women's health
- Finding the national policies and priorities for health, education of health care personnel, and infrastructure.
- Establishing contact with the Government of Afghanistan and WHO in Kabul; as well as potential collaboration partners in the country
- Considering different options for telemedicine

2. Methods

In this survey the information has been gathered in different ways:

- Search by internet; databases and web sites.
- Meetings, telephone dialogues, and correspondence by e-mail to different key persons
- Gathering reports and policy papers from different key agencies
- A fact finding mission to Kabul 17 August – 6 September 2003.



Figure 2. Ethnic groups in Afghanistan [1]

3. About Afghanistan

Afghanistan is a landlocked country in south-central Asia about twice the size of Norway, with about 25 millions inhabitants.^a The country is divided in 32 provinces and more than 340 districts. There are many different ethnic groups (see Figure 2); the most numerous are the Pashtuns, the Tajiks and the Hazaras. The country has two official languages, Pashto and Dari, and about 40 minority languages. The central and eastern parts are mostly rugged mountains with peaks up to 7000 meters above sea level, while plains dominate the northern and south-western areas. The weather is arid to semiarid with cold winters and hot summers. For more factual information, see Appendix: Basic data.

3.1 General situation

After decades of devastating conflict, Afghanistan lacks the basic population and housing data necessary for development planning and the democratic process. The only attempt to conduct a national census, in 1976-79, was never completed. To address this shortcoming, UN Population Fund (UNFPA) was named as the United Nations' lead agency to support preparations for a national Population and Housing Census [3].

ReliefWeb published on 12 May 2003 [4] a good description of today's situation. It is in accordance with many other reports and descriptions from different sources:
"After 23 years of conflict, Afghanistan was in a shambles when the international community stepped in last year to aid the country's reconstruction. War and political repression had left an empty shell of state institutions. A three-year drought was threatening to plunge the country into mass starvation and famine. The vast majority of girls did not attend school. "The economy had pretty much collapsed, and there was widespread poverty and destitution ... compared to now, Kabul was almost a ghost town," World Bank Country Director for Afghanistan Alastair McKechnie recalls. "A lot of the very elementary things that we take for granted just didn't exist. Payments were made in cash as there was no banking system and the Central Bank barely functioned. Security considerations constrained operations....." And also: No postal system in function, no telecommunication but satellite phones, broken roads & bridges, agricultural areas mined, no industry. In Kabul 80 % of houses & buildings were destroyed.

Further citation: *"Since then, Afghans have achieved progress in many areas, though challenges still mark the road ahead. A new government has been installed following a Loya Jirga, a traditional forum for establishing country leadership. Three million children have enrolled in school, 30 percent of them girls. Under the Taliban, an estimated 3 percent of girls attended school, and those were mostly in illegal classrooms in homes. The government has also made strides in vaccinating against measles, TB and polio, and the economy is sputtering back to life in myriad small-scale initiatives by entrepreneurial Afghans.*

^a It is to be remembered that statistics and numbers from Afghanistan vary between different sources, reflecting migration and the lack of mapping opportunities over the last 20 years. Huge parts of the population fled to other countries or were displaced inside Afghanistan, and the last two years 2.5 million refugees have come back to their home country. Much statistics does not exist for Afghanistan, and many of the existing numbers are estimates.

The recovery of the local economy, particularly small-scale business, has been quite remarkable, it has happened throughout the whole country. Village irrigation systems are being repaired. Agricultural production-grains, vegetables and fruit-has rebounded by more than 80 percent as a result of fortuitous weather and the efforts of countless Afghan households. Although by themselves these are small reconstructions-they're not the flashy, big projects-these are the kinds of things that really do have an impact on people's lives.

There are, however, daunting challenges for Solar Year 1382 and beyond (Afghanistan uses a calendar based on the Persian or Islamic Solar Year). Most Afghans still live in dire poverty. A mere 6 percent have electricity; 23 percent have access to safe water. Agricultural production has increased, but 7 million people remain at risk of famine. Most of the country's schools and roads need repair. Security is precarious-the lack of security due to armed groups, ethnic tensions, and factional divides constitutes the biggest threat to reconstruction. A resurgence in poppy cultivation and drug trafficking is another threat. Amid those pitfalls, McKechnie credits the Afghan government with strong leadership and a clear vision in its reconstruction effort. "The government sees reconstruction as going way beyond rebuilding damaged infrastructure. They see reconstruction as the rebuilding of a modern state," he said."

The Afghan's government have put heavy emphasis on poverty reduction. Half of the government's development budget is going to activities that directly benefit the poor [5].



Figure 3. Kabul, August 2003



4. Actual status – challenges, structure and institutions

4.1 Health

While quantitative information on the current health situations in Afghanistan is largely unavailable or based on extrapolations from old sources, it is clear that the health status of the population is extremely poor, especially among women and young children. The generally coverage of primary health care is 35 %, 55 % in the cities and 25 % in rural areas [6]. Insufficient access to basic reproductive and child health services has contributed to one of the highest maternal and infant mortality rates reported globally. These are exacerbated by a very high fertility rate and low levels of contraceptive use. On average a woman give birth to 6.9 children [7]. 40 % of existing health facilities does not have female staff [8], which is a requirement in Afghanistan where traditions and culture prevents women from being seen by male doctors. Even those with access to health facilities are not receiving adequate services due to lack of equipment and skilled staff. There is lack of medical professionals, especially on the female side, and the doctors are mainly localized to Kabul and the other big cities. It is a huge need to build the capacity of the training institutions.



Figure 4. A female physician at work

4.1.1 Maternal mortality

According to a recently report from Afghan Ministry of Public Health, Centres for Disease Control & Prevention (CDC) and UNICEF [9], the maternal mortality rate (MMR: maternal deaths per 100 000 live births) is 1600, varying from 400 in Kabul to 6500 in Badakshan, the highest number reported ever. 13 000 families were visited, 85 000 individuals were interviewed, in four different provinces: Kabul, Laghman, Kandahar and Laghman. The major causes of death amongst pregnant women are haemorrhage and obstructed labour, conditions which can be identified and treated very quickly if there are health care facilities on the ground. Other causes are septicaemia and hypertensive disorders in pregnancy. Among women of childbearing age who die in Afghanistan, almost half (48%) will die from complications of pregnancy and childbirth. The study also reveals that if a newborn's mother died of maternal causes, the baby had only one chance in four of surviving its first birthday. Most of these infants died in the first month of life from acute malnutrition due to lack of breast milk. 87 % of maternal deaths were considered preventable. In Kabul about half of the women received prenatal care and had their babies delivered by a skilled attendant. In other

parts of the country women’s access to health care was substantially lower, in Kandahar and Badakshan none of the women were attended by a skilled attendant during childbirth.



Figure 5. A little girl

4.1.2 Children’s health

43 % of the population is below 15 years of age. On average there is 70% undernourishment among the children [10]. Children under five constitute some 20 percent of the population of 2.5 million people in the five northern Afghan provinces of Balkh, Samangan, Jauzjan, Sar-e Pol and Faryab [11]. These children mostly live in situations defined by poverty, chronic hunger, displacement and violence. A shortage of safe drinking water, as well as poor sanitation and hygiene, add to the already poor health status of many children in Afghanistan. 97 per cent of children under 16 years of age have witnessed violence and 65 per cent have experienced the death of a close relative [12].

The infant mortality rate (IMR) is amongst the highest in the world, standing at 165 per 1,000 live births, and more than 25 % of the children die before the age of five [13]. Half of these die because of waterborne diseases. Major causes of mortality amongst children include diarrhoea, acute respiratory infection, vaccine-preventable diseases, malaria, and micronutrient disorders. General vaccination coverage is 45 % [6]. 46 % of vaccine-preventable childhood deaths are attributable to measles. The 2002 measles vaccination campaign achieved 94 per cent coverage among children aged 6 months to 12 years, saving approximately 30,000 lives [14].

Country	MMR	IMR
USA	8	7
Japan	8	3
Norway	6	4
Nepal	540	66
Ethiopia	870	116
Afghanistan	1600	165

Table 1. Maternal mortality rate and infant mortality rate in some selected countries [15]

4.1.3 Infectious diseases

Polio

Progress toward interrupting wild polio virus (WPV) transmission has continued despite armed conflict and ongoing political instability. Important achievements include a reduction in the number of WPV cases to about ten cases a year from a hundred cases a few years back, further restriction of poliovirus circulation to well-defined zones of transmission, and decreased genetic diversity of isolated wild polioviruses. Although Afghanistan has returned program quality to levels achieved before armed conflict began in late 2001, increasing security problems within the country, particularly in the south and southeast, have limited access to critical areas during supplementary immunization activities and might have compromised the quality of acute flaccid paralysis surveillance [16].

Tuberculosis

Mortality and morbidity figures due to tuberculosis remained alarmingly high in the last two decades, especially among women. Current estimates show that the incidence of active TB cases is 278 per 100,000 and mortality mounts to 15,000 cases per year [17]. The epidemiological profile reflecting the situation of Afghans inside and outside the country is extremely deplorable. Short and casual treatments with inadequate medicine regimes by non-authorized doctors contribute to spread of multi-resistant bacilli. The situation has worsened due to the cessation of TB control activities during the war. Compliance of patients and access to the treatment has become very difficult in an emergency situation.

Malaria

Malaria is endemic throughout the country at altitudes below 2000 m. About 80-90% of malaria cases belong to *P. vivax*, the rest to *P. falciparum*. Malaria has gone out of control in Afghanistan in the past 20 years. The annual number of cases is estimated at 2-3 million, the number of officially reported was 288,070 in 1998. Out of the 20.5 million population of Afghanistan (1998 estimates) more than 12 million live in malaria endemic areas. A field study to evaluate the susceptibility of *P. vivax* and *P. falciparum* to chloroquine was conducted in four sites of the eastern region. The study revealed 100% susceptibility of *P. vivax* while *P. falciparum* indicated an alarming degree of resistance [18].

HIV/AIDS

There is so far no reliable data on the prevalence of HIV/AIDS in Afghanistan [19], and until October 2003 11 cases only have been reported [20]. The main mode of transmission is believed to be blood transfusion and sharing contaminated needles during drug use [20,21], especially among the increasing numbers of heroin addicts [21].

4.1.4 Disabilities

Scores of Afghans are disabled both physically and psychologically. It is estimated that about 800,000 people suffer from disabilities caused by war and natural causes – nearly 4 percent of the population. War, especially mines, has disabled hundreds of thousands, creating amputees, blindness, and paralysis. Weak preventive services have resulted in many disabled because of diseases such as polio, tuberculosis and cerebral palsy [22]. In addition to this, you find many disabled because of malnutrition.

4.2 National health resources

From July to September 2002, Management Sciences for Health (MSH), with funding from the USAID, the European Commission, UNFPA and the Japan International Cooperation Agency (JICA), trained and dispatched more than 160 male Afghan nationals to survey a total of 1,038 health facilities, 2,915 community-based health providers, and 1,445 pharmaceutical outlets in all 32 provinces of Afghanistan. The goal was to develop an accurate picture of available health services and health professionals. The results of the survey were presented in a report published in December 2002, called the Afghanistan National Health Resources Assessment (ANHRA) [8]. (The information given in the paragraphs 4.2.1-5 is collected from this report.) A comprehensive inventory of all known health facilities was conducted, resulted in a total of 912 active and 142 inactive facilities. "Active" in this assessment means that some activity was taken place during the time of the surveyors' visit. It doesn't mean that the facility was offering all the services it should be offering.

Facility type	Number
Regional / National Hospital(H1)	21
Provincial Hospital (H2)	41
District Hospital (H3)	114
Basic Health Centre (BCH) (C1)	353
Sub-Centre (C2)	224
Maternal Child Health Clinic (MCH) (M1 or M2)	70
Mental Clinic/Hospital	2
Physiotherapy Centre	2
Other specialized centres (TB, malaria, EPI etc.)	85
Total	912

Table 2. Numbers of health care facilities

Referral hospitals at provincial and national level made up about 6 % of the total. There is great inequity in the distribution of facilities and services throughout the country, between provinces, and between districts in the same province. On average there are 0.4 beds per 1000 persons (in developing countries the average is 2.7 beds per 1000 persons). 82 % of all reported beds are in referral hospitals. Monthly referral rates were only approximately 5 % within and from districts, probably because of bad roads, low family income, uneven distribution and poor accessibility of health facilities, and absence of standard treatment and referral protocols.

4.2.1 Infrastructure

35 % of the active facilities were damaged to some extent by war (74 %) or natural disasters (26 %). 72 % of the district facilities had access to safe water, 85 % of the more central hospitals. 45% of the district hospitals had some form of electricity. Of the referral hospitals 68 % claimed to have a functioning laboratory, but only 35 % of the districts facilities (32 % offering urine analysis, 31 % haemoglobin checks and 14 % blood group testing). Functioning X-ray service were claimed by 67 % of the regional hospitals, 56 % of the provincial and 19% of the district hospitals. 10 provinces had only one facility that claimed to have a room for major surgery, and Nuristan province had none.



Figure 6. Landscape variations between Kabul and Jalalabad

4.2.2 Services

65 % of the district facilities reported that they provide basic antenatal care, but only 28 % of these have a female health worker and the minimum set of equipment. Half of the district facilities (50 %) did not offer any delivery-related services, and of the other half only 40 % had the equipment to do so. Only 18 % of all district facilities that offered deliveries had all the necessary equipment, and had a female clinician as well. Of all hospitals 24 % claimed to offer caesarean section, but only 18 % had also an emergency laparotomy kit available. Of the community based health providers (CBHPs) 74 % of the female health workers claimed to assist deliveries at home and to occasionally help remove retained placentas, only 6 % of the male health workers claimed the same.

The most frequent cause of maternal death in Afghanistan is haemorrhage during pregnancy or childbirth, the availability of blood transfusions is an essential factor to prevent such deaths. The survey results show that only 13 % of a total of 176 regional/national, provincial and district hospitals reported to have a blood bank, and 22 % offered blood transfusions and were able to cross-match blood beforehand. 13 out of 32 provinces had no functioning blood bank.

66 % of the facilities claimed to have staff trained in diarrhoea and/or acute respiratory infection management of children, 69 % diagnose malnutrition and 44 % claimed to treat malnutrition.

4.2.3 Health providers

Non-governmental organizations (NGO) play a significant role in providing health care in Afghanistan, especially in underserved and remote areas. A number of national and international NGOs have years of experience and well-established networks. 43 % of all the active facilities were reported to be owned exclusively by NGOs and 39 % by the government. To a great extent the actual day-to-day implementation seems to depend on nongovernmental entities, both on national and international level. It is clear that only close coordination and collaboration between the Ministry of Health (MoH), NGOs, and international agencies will allow for quick improvement of health services throughout the country.

4.2.4 Health personnel

The number of physicians is 2,850 of all 12,107 inventoried health workers in Afghanistan, 0.1 per 1000 people compared to 1.1 on average for all developing countries. There is great inequity between provinces and districts, from 3.1 to 0.01 per 1000 at provincial level.

Counting physicians and other clinical staff as one category, Afghanistan has 0.3 health workers per 1000 people, varying from 0.8 to 0.1, also at provincial level. The pyramid of health workers is very top-heavy: 24 % of all health workers (illiterates included) are physicians. If trained traditional birth attendants (TBAs), community health workers (CHWs) and vaccinators are excluded, the physicians make up 28 % of all health workers. 24 % of physicians are female.



Figure 7. A nurse and a midwife in Kabul

An important human resource pool is the CHWs and TBAs, reported to be 9,318 trained by the different health facilities. It does not mean that all of these are active in their communities. 60% of the total has less than 3 months of training, while 14% has 3-12 months of training. 55% of all CBHPs interviewed were female, mainly because the TBAs are exclusively female

4.2.5 Male/female ratio

The availability of female health workers in health facilities is a particular concern in Afghanistan. During the Taliban era, women were prohibited from working in public places. There were considerable speculations about the extent to which they have returned to work force since the liberation of the country. The availability of female health workers is extremely important in this largely Muslim country with strong taboos against female patients being treated by male health providers. The overall male/female ratio among health providers was 3 to 1 at the time of the survey, in the district hospitals 5 to 1. The province of Nuristan has only one female health worker, making the gender ratio for that province 43 to 1. 40 % of the district health facilities that reported having medical staff, have no female health provider at all.

4.2.6 Health facilities in Kabul

There are several big hospitals in Kabul, including two maternal hospitals, Rabia Balkhi and Malalai. All the hospitals were seriously deteriorated during all these years of conflicts, buildings falling apart, equipment vanished and staff fled or never updated. The condition varies; some have got their buildings repaired and refurbished, getting assistance from different sources. Still, there are much to do, exemplified by Wazir Akbar Khan Hospital, which is a referral hospital and probably one of the better in Kabul. International Committee of Red Cross (ICRC) supports this hospital: The electrical system is in chaos, often break downs, different voltages because of donations from different countries, etc. The wards are overcrowded; there are more patients than beds. The consequences include among others breakdown of the sanitary system and renovation, and the hygiene is poor. Lack of maintenance is common all over the country, for instance here leading to leaking radiators because of frozen pipes, again a consequence of inadequate heating. The staff's knowledge is limited, but worse are attitudes and ignorance. This information comes from an ICRC member who recently has worked at this hospital.



Figure 8. Rabia Balkhi Hospital

The situation is further described through the following examples. The situation varies between different hospitals, according to how much support they have got, and to which degree they have managed to keep qualified staff. All these hospitals are located in Kabul where there is more aid concentrated than anywhere else.

Rabia Balkhi Hospital

During the fact finding mission we visited Rabia Balkhi Hospital. Dr. Nasreen is the director at this hospital that has been rebuilt and refurbished with support from “*the Islamic Transitional Government of Afghanistan with the help of the people of USA and the US Army & Coalition Forces*” in partnership with a local construction organization. Dr. Nasreen provided the following information: It is a 250 bed hospital, employs 97 doctors and 74 nurses and midwives, 41 medical support staff (Lab., x-ray, physiotherapists etc.), 45 persons in administration and 110 cleaners and other support staff. To make it possible they have a kindergarten of 270 children 1-4 years of age. Some of their nurses and other mid-level personnel are trained by the Intermediate Medical Education Institute (IMEI, see paragraph 4.3.1), but refresher courses for their older nurses are very much needed. On

average 50 deliveries take place in 24 hours, included 5-6 caesarean sections a day. During the rehabilitation of Malalay maternal Hospital they assisted with about 100 deliveries a day. In addition to reproductive health there are services in internal medicine, general surgery, dermatology, and ear-nose-and-throat specialties. An interview with a midwife and a nurse gave the impression that the personnel are overloaded by work. The hospital needs more staff; there is also lack of basic materials like lidocaine (local anaesthesia) and sutures. The staff confirmed that a blood bank is functioning in Kabul.

The Indira Gandhi Paediatric Hospital

The Indira Gandhi Pediatric Hospital is the only children's hospital in Kabul. A report from 2001 tells about deterioration over the years of war [23]. The conditions on the unsupported wards were very poor. There was a lack of basic equipment and hygiene facilities. The wards were overcrowded, dirty and poorly kept. The malnutrition wards were overflowing with two or three children per bed. In the neonatal unit six out of ten babies were dying every day. The Unit and side wards have later been refurbished by Afghan Connection. According to their web site bathrooms and lavatories have been tiled and upgraded. Wards and furniture have been painted, and the neo-natal unit is refurbished and re-equipped [24].

The Khair Khana Hospital

The Khair Khana Hospital, built in 1981 by the Soviet Union, fell into disrepair during 20 years of civil war. Once filthy, overcrowded and woefully under-equipped, now it has a clean delivery room and an up-to-date operating theatre where Caesarean sections can be performed. Its capacity has doubled, and the hospital now handles some 30-40 deliveries per day. The facility serves a poor, densely populated area with a population of 1 million. It has the last year been rebuilt and refurbished with support from the Government of Italy and UNFPA, the United Nations Population Fund. Khair Khana Director, Dr. Abdul Marouf Nadeem says: *"In the past we didn't have instruments for surgery; now we have instruments for all kinds of surgery, and we have the possibility of helping all kinds of patients. We didn't have ultrasound machines; now we have three. We didn't have incubators or radiography machines, but now we have them. We didn't have a kitchen or a good laundry. At the beginning of 2002, we had just five or ten doctors at this hospital. Now we have 60 doctors, 70 nurses, 240 staff in all, including obstetrics and gynaecology experts and a general surgeon"*, he adds. The hospital will in addition to gynecology and obstetrics handle general medicine, internal medicine, outpatient and emergency cases. It also has a laboratory and pharmacy. During the eight months the hospital was closed for renovation, some 70,000 patients went instead to a 72-bed Danish Emergency Mobile Hospital, supported by UNFPA with about \$2 million in funding from the Governments of Denmark and Luxembourg. Counsellor Batori says that the \$2 million Italy provided for the reconstruction was "not a donation; it is an investment in human dignity." [25]

4.3 Education

The literacy level in Afghanistan is low, about 27-50 % for men and 5-20 % for women [7,26]. The numbers varies between different sources, reflecting the difficulties in obtaining reliable information. In parts of the country there has been a general resistance against schools and education from old times, but efforts during the twentieth century partly changed this. Schools were built, and institutions of higher education were established, known for their

high standards. The Kabul University had occupied a pre-eminent place in South and Central Asia as an esteemed institution of higher learning, and was the focal point for higher education in Afghanistan. The University established a Women's Faculty for teacher training in science and social studies in 1947, and by 1960 this had become integrated into a co-educational training facility. By 1990, 60 % of all students at Kabul University, and one-third of all tertiary students were women [27]. Two decades of war and conflict has been a major cause of the disruption to what had previously been a well developed system of higher education.

The Soviet occupation and following war resulted in scattered population, flight of teachers and destructed buildings in the countryside. The civil war which wracked the country through the early 1990s resulted in enormous collateral damage to many buildings in the cities as well as loss through looting throughout the country. The country suffered a huge brain-drain. During Taliban times girls older than nine years of age were not allowed to attend schools. Since the fall of Taliban the numbers of students and teachers returning to schools have increased considerably as a result of a donor-assisted Back-to-School Campaign, with 3 million students enrolled and another 1.5 million looking for schooling opportunities. In 2003 about 32 per cent of boys and 8 per cent of girls had access to primary education [12]. More than 70 % of the school buildings need repairs [5]. Many villages have no school buildings at all, and the teaching is done in mosques, ruins or under trees. In wintertime it is impossible to keep the schools going, the temperatures may go down far below zero. Many areas have no qualified teachers, in some schools there are teachers who themselves have been only 3-4 years in school. There is no fixed curriculum; the students often have no books, writing on small home-made blackboards. To get the primary education up and going is a main priority for the government and many of its supporters, like the World Bank Group, UN-organizations and many NGOs. This includes physical rehabilitation of schools combined with teacher training courses and teaching materials.

The conditions are similar in higher education as well. Most university professors left. All physical facilities were either destroyed or became unsuitable for any quality work. In the spring of 2002 with the help of UNESCO, 20000 candidates took the university entrance examination. In August 2002 there were 26754 students enrolled with 20532 male and 6522 female students in 20 institutions of higher education, eight universities and twelve institutes. The present level of higher education in the country is extremely low [28].

In the field of health and medical education, the majority of the good standard doctors left the country, as well as the professors and teachers at the universities. For many years the teaching capacity at university level has been low, consisted mainly of earlier students with little or no clinical experience. It has been an almost total lack of books and teaching material, as well as models, visual aids, laboratories etc., and no opportunities for upgrading knowledge [29] (also confirmed by many students and staff). Over the last twenty years the international community has contributed to education of traditional birth attendants and community health workers. It has been some few efforts to train mid-level personnel, like laboratory technicians, x-ray technicians, nurses, anaesthetists etc., for people who have got some years in school, as well as refresher courses for doctors and nurses. Medical Refresher Courses for Afghans (MRCA) in Peshawar, Pakistan, started by Solidarité Afghanistan in the eighties and co-financed by the Commission des Communautés Européennes and others played an important role in this. But the needs have been so much higher.

The MoH has prioritized training of midlevel health professionals. Organizations such as UNICEF, Aga Khan Development Network (AKDN), WHO as well as numerous NGOs are assisting in this endeavour. The medical faculties are organized under Ministry of Higher Education (MoHE).

4.3.1 Current structure of medical education

Today there are nine so-called Medical Schools in Afghanistan. At least five of these have been founded during the war for political reasons more than based on needs. Out of these nine medical schools only two has its own building and fairly good infrastructure (Kabul and Jalalabad), while others even does not even have a proper curriculum. For example some of the schools have in total 12-15 teachers running the whole faculty. (UNESCO, Kabul)

Medical Faculty of Kabul University

The Dean of Faculty, Dr. Cheragh Ali Cheragh provided the following information: The Faculty has today 4200 students, which is far above the capacity. Of these about 22 % are females. For years there has been no formal regulation of uptake and no entrance exams, and most of the students are not qualified for academic studies. The overall need for new doctors over the next five years has been estimated to approximately 700 for the whole country, while today there are about 10 000 medical students totally, the political universities included. (This information was confirmed by three other sources within MoHE and UNESCO.) Efforts have been done to change this, and from 2003 there is a central uptake where qualifications count, for students at all medical faculties. In Kabul only one hundred students were accepted this fall. This has not been well accepted among rich or powerful families who try to get their sons in by force, preferable at Kabul University, when given a seat in other cities.



Figure 9. Entrance of Kabul Medical Faculty

At Kabul University the International Security Assistance Force (ISAF) has contributed to reconstruction of buildings, WHO builds up a laboratory, and Loma Linda University (USA) has given books and some support to the Pathological Department. A University in Lyon has

sent teachers for 15 days courses in statistics and microbiology. This is all the support they have got, according to the Dean of Faculty.

The connected Alia Bad Teaching Hospital is destroyed. The main need is teaching capacity [29]. They lack teachers in physiology, microbiology, anaesthesiology and radiology. In gynaecology two young ladies teach, who both lack clinical experience. The Dean wants collaboration with universities abroad to build up a professional level in teaching, preferably professionals who can be present, strengthening the teaching staff as well as teaching directly, for periods of at least six months and more. Afghans from exile is wanted for teaching, but there is lack of funds for salaries. It is a common problem in the whole country that salaries for public officials are very low and not regularly paid, resulting in short and irregular working days in the public functions, and private work taking more or less the time and capacity of teachers at all levels, health care personnel and others.

The medical faculty is not connected to internet or e-mail. The best way to get in touch is either to contact them directly or through MoHE.

Intermediate Medical Education Institutes

The MoH has established schools for medical personnel on intermediate levels (training nurses, midwives, dentists, technicians in lab. and x-ray, pharmacists, and a course in public health), called Intermediate Medical Education Institute (IMEI). The midwifery course goes over two years, while the others are three-year courses, all for students with at least 12 years schooling completed. The head quarter is located in Kabul, and it has branches in all regions and some provinces. AKDN has been a main actor in this, especially contributing to revising curricula and upgrading of teachers (on the spot and by short courses at their university in Karachi). The IMEIs in Kabul and in Jalalabad were visited during our fact finding mission. Students were not present because of summer holidays.

Kabul IMEI

Dr Shah Mahmood Popal is the head of the Kabul IMEI, which also gets support from John Hopkins University (nursing and midwifery). WHO supports the training of technicians, dentists and the course in public health. Most of the teachers are Afghans, but they have got a few teachers from AKDN's university in Karachi, Pakistan, for computer courses and English. Dr. Popal informed about a well functioning school with well developed curricula and good teaching capacity. USAID / IOM contribute by building dormitories, which is essential for getting students from outside Kabul.

Jalalabad IMEI

Jalalabad IMEI gets support from different NGOs. According to the head of the school, Dr Fazal Muhammad Ibrahim, the midwifery course has 70 students, supported by the Norwegian Afghanistan Committee. Ibn Zina supports the nursing course, while International Medical Corps (IMC), Sandy Gall Afghan Association, and GWC, Japan contributes to the other courses. A course in physiotherapy is held at Jalalabad IMEI, while public health is not included here. The organizations contribute mainly to repair of buildings, furniture and equipment, and even a computer office. Altogether the school has 650 students. All teachers are Afghan MD doctors, graduated in Afghanistan. They need upgrading and training, capacity building is a big need. According to the principal, however, the biggest need is dormitories, which should be gender separated in order to be able to receive students from other parts of the country. Nobody has given any promises so far for this purpose.

Herat IMEI

Medical coordinator Jørgen Bjarnesen at the Danish Afghanistan Committee (DAC) has given some information from Herat: There is a school that gives 3 years courses in midwifery and nursing. 25 % of the students are women, mainly attending the midwifery course. DAC provides some teaching here. At the nursing course the majority of students are men. The professional standard is characterized as paramedics or even lower level.

Training of lower level health personnel

During the years of war and instability different governments have not put priority on health and education. Several of the NGOs have taken this responsibility, and they have mainly organized courses for TBAs, CHWs and health educators (see paragraph 4.2.4). Information is limited about how many has received this kind of training and which effect this has had in the society.

A workshop for health educators

Several partner NGOs held a workshop for health educators in August 2003. Participants came from many different provinces, and we got an interview with some of them, female health educators from Malistan, Mazar-e-Sharif, Parwan, Jaghori and others. They have freedom to work; they are trained to do health education. They teach themes like pregnancy, family planning, breastfeeding, weaning, malnutrition, diarrhoea, oral rehydration therapy, hygiene and more. They get access to households, but lack teaching aids, like flip charts and wall charts. Their main obstacle is lack of referral facilities for women with illnesses or pregnancy related complications. Their unison message was: *"We can give health messages, but it doesn't help sick people. There are no clinics, no doctors, no facilities for women to get help, and no transportation to go where treatment is available. Credibility is sometimes a problem when we cannot help people", they said. "Please train female staff to treat our women!"*

4.4 Gender

It is estimated that only one to two percent of the women in Afghanistan have identity cards. This means that almost 98 % of women are people without formal papers, citizenship and formal identities [30]. Traditions and culture say that women should not be seen by men outside their own families, as this will bring shame to the whole family, illustrated by a proverb saying: *"A woman is good either at home or in the grave"*. This means that it is a big degree of gender segregation in the society, and for many families a woman participating in public life means disgrace. Because of this, it has been a resistance towards education for girls and employment for women, mostly in rural areas. In the cities and in some rural families the women had more freedom, and before the Taliban seized power, Afghan women made up 50 % of government workers, 70 % of schoolteachers and 40 % of doctors in Kabul [30].

The Taliban banned girls from schools and women from work outside their homes. After the fall of Taliban women participated in the peace process, Ministry of Women's Affairs (MoWA) is established, women are appointed to serve in the Government, they are returning to the workforce, and women and girls are again allowed access to education. In spite of this progress, many challenges to women's participation in the society remain: In many parts of the country women face violence; they are primary victims of insecurity, which limits their

access to public life and threatens their lives and dignity; restrictions to fundamental freedoms and human rights continue to be applied to women by local leaders [31]. The central Afghan government is not yet in a position to protect the human rights of women and girls, especially outside Kabul. Serious human rights abuses against women and girls by warlords all over the country are documented [32].



Figure 10. Women in a Kabul street

Two years after the Taliban's ouster, many Afghan girls and women are still deprived of education and work opportunities. Today about 32 % of the boys and 8 % of the girls have access to primary education [12]. Human Rights Watch reported at ReliefWeb (16 Jan 2003): "Newly announced rules on female education in the western Afghan province of Herat prohibit men from teaching women or girls in private educational courses and uphold strict gender segregation in all schools. Because of a shortage of female teachers, the restrictions will result in a severe limitation on the ability of women and girls to receive proper education."

Widespread illiteracy also reduces many Afghan women's chances of finding employment. Some women have been left in such a desperate situation that they have become beggars or were even forced into prostitution. There is also concern about the fate of the country's 2 million war widows [33]. In a society that discourages an active role for women and plagued by widespread unemployment, many Afghan war widows struggle to feed their children.

The conservative attitudes also affect women's health, Habiba Sarabi, the Minister of women's affairs, told IRIN: "*The root cause behind maternal mortality is more than lack of health services: cultural backwardness and patriarchal societies prevent women from accessing health centres, she said. Sarabi emphasised that many men in rural areas still refused to allow female relatives near a doctor, despite the presence of nearby clinics. "There are many such societies which do not like sending women to the doctor, as they regard doing so a shame," she said, declaring that in addition to health education, vast public awareness and literacy programs could be useful in reducing maternal mortality* [34].

The current Afghan government officially encourages gender equality and has welcomed initiatives to create jobs and education opportunities for women. In preparation for the general elections in June 2004, efforts are being done to prepare and facilitate women's participation. The newly approved Constitution explicitly guarantees that men and women have equal rights and duties before the law. Still, the peoples' attitudes do not change overnight, and as the MoWA and NGOs dealing with women's rights, has said earlier, the country's deep conservatism means they have to take a careful and low-key approach to the issue.



Figure 11. A street in Kabul

The barring of women by the Taliban from most employment and secondary school education paradoxically galvanised Afghan women activists. The underground schools and literacy programs they established have given rise to many of the NGOs now active in Kabul. However, many are dependent on donor support, channelled through large international NGOs. The small grants that they receive restrict their capacity for growth and limit their activities to vocational training, literacy programs, and other activities that have marginal impact on women's economic empowerment. Woman activists, particularly those who attempt to educate and mobilise women around issues related to political participation, also operate in a difficult environment. Some interviewed by International Crisis Group (ICG) recounted threats they have received [35]. A renewed and expanded international commitment to security is urgently needed if the limited gains women have made in Kabul are to be institutionalised and emulated in other Afghan cities.

5. Government, policies and strategies

5.1 The Ministry of Health (MoH)

The MoH is led by the Health Minister Dr. Suhaila Siddiq. Dr. Feroz is the technical deputy minister. The ministry has three departments: The Department for Health Care and Promotion, led by Dr. Fahim, the Department for Policy and Planning, led by Dr. Stanekzai, and the Department for Administration, led by Dr. Sherzai.

5.1.1 The national health strategy

The MoH has developed a strategy for development of a national health service in the country, called “A Basic Package of Health Services for Afghanistan” (BPHS), presented March 2003 [36]. The concept of the BPHS is that all the services in the package should be available as an integrated whole, rather than being available piecemeal or as individual services or only through vertical programs.

The BPHS will be offered at four standard types of health facilities, ranging from outreach by community health workers, to outpatient care at basic health centres, to inpatient services at comprehensive health centres and district hospitals. The content of the package consists of the following components:

- Maternal and newborn health (antenatal -, delivery -, and postpartum care, family planning and care of the newborn)
- Child health and immunization (Extended Program of Immunization services, integrated management of childhood illness)
- Public nutrition (micronutrient supplementation, treatment of clinical malnutrition)
- Communicable diseases (control of tuberculosis and malaria)
- Mental health (community management of mental problems, health facility based treatment of outpatients and inpatients)
- Disability (physiotherapy integrated into primary health care services, orthopedic services expanded to hospital level)
- Supply of essential drugs

The MoH will collaborate with its partners to ensure that all existing and newly planned health facilities will offer the necessary services to take care of the most vulnerable groups (women and children) and are appropriately equipped and staffed. The extremely high maternal mortality rate illustrates a silent emergency, which the MoH wants to deal with immediately. Essential obstetric care should be available throughout the system, and emergency obstetric care must be made available at all referral facilities. A plan has been drafted for this and will be implemented aggressively. It involves training of midwives and auxiliary midwives in several cities throughout the country. But reasonable access to the most basic health services cannot be ensured through facility-based care only. More than 90 % of the deliveries are in the homes, so training of female community based health providers is essential. Diminishing the high infant and child mortality rate in Afghanistan is another priority of the MoH. The implementation of the BPHS will ensure the necessary equipment and supplies, as well as necessary capacity building [8].

The MoH has a department called Human Resources which deals with training. They have prioritized training of mid-level health professionals, while the education of medical doctors is placed under Ministry of Higher Education.

Of the more than 1400 NGOs in Kabul, about a hundred are involved in different health activities. They run clinics and even small hospitals, there are some few community health programs around, and NGOs have training courses for most levels of health care personnel, though small scale. A “Health Coordination Network”, chaired by Mark Timlin from Hope Worldwide, is established in Kabul, including the different NGOs and MoH.

The MoH has not enough capacity to implement the BPHS throughout the country. Much of this is planned to be accomplished through performance-based partnership agreements (PPAs) with NGOs [37]. MoH is concerned about standardization and fairness, it is therefore looking into a grants mechanism that should allow for rapid expansion of health services in presently underserved areas and ensure that interventions are in line with the MoH priorities as determined in the BPHS [8].

5.2 The Ministry of Higher Education (MoHE)

The MoHE is led by the Minister Mohammad Sharif Fayaz.

The country’s higher-education sector is in the doldrums with university campuses lacking books, equipment and qualified academics. In June 2003 a national workshop was held in Kabul on higher education in Afghanistan, a collaboration between MoHE and UNESCO [28]. The three-day workshop touched upon issues such as institutional management, strategic financial management, and methods of mobilizing non-traditional resources for higher education. The present level of higher education in the country is extremely low.

Some of the recommendations:

- Increase the quality of higher education. A curriculum reform is essential.
- Provide up-dated, quality textbooks
- Affiliate Afghan universities with foreign universities to break the isolation of the Afghan higher education system. This should include fellowships and exchange programs for university teachers, particularly women
- Train administrators and professors in Afghanistan and abroad in modern management and administration, and teaching learning processes
- Establish a major teacher-training program
- Provide facilities and equipment (computers, laboratories, audio-visuals, and transportation)
- Reorganize the higher education institutions

From UNESCO some information is received about the conclusions regarding the medical education: MoHE plans to do radical changes in organization and content of the medical education. A medical university should be established, with faculties in general medicine, nursing, dentistry and others. The medical faculties at some universities should be organized as faculties under the national medical university, and some of the medical faculties at other universities will be shut down. A work group was established to create a national curriculum.

Minister Mohammad Sharif Fayaz has appealed for increased international assistance, especially in the areas of information technology for distance-education programs [38].

5.3 The Ministry of Women's Affairs (MoWA)

The MoWA, established in December 2001, and led by the Minister Habiba Sarabi, is the logical vehicle for developing strategies to embed gender in the planning activities of the line ministries. It has shifted its mission from welfare activities to activities that promote women's involvement in the country's economic growth. The ministry's economic department is working to get more women involved in business and has created an Afghan Women's Business Council, which provides business skills training for women, in cooperation with UNIFEM. It has, however, been hobbled by lack of professional capacity and a hierarchical structure that impedes collaboration between its departments, according to a report from ICG [35]. This stems in part from its absorption of a communist-era women's association, whose vocational training mission is ill suited to current challenges. The steps needed to make it more effective include re-staffing to develop research, program development, and budgeting capabilities; creation of links between its departments; and establishment of health, education, and gender advocacy and training departments.

Donor assistance, both to government and civil society, has been directed toward quick-impact, high visibility projects. Relatively little research has been done into their sustainability and accessibility to women, particularly in rural areas. The MoWA, assisted by the UNIFEM and funded by a U.S.\$2.5 million grant from USAID, plans to establish community development centres in fourteen provincial capitals, with a goal of expanding them to cover all 32 provinces. Gender and development specialists in Kabul are sharply divided on the utility of these centres. Some argue that the international community should have first directed resources to studying local modes of organizing and conducting broader consultations with women in the provinces. Other donor-supported activities, including sewing centres and women's shelters, have similarly been established without detailed research [35].



Figure 12. A training course for auxiliary midwives

6. Organizations

As described in this report, the organization of public structures in Afghanistan has disintegrated over the last decades. The newly established government do a great job to re-establish the society, getting infrastructure and public services up and going, but it has limited recourses. Most of the health care in the country is provided by non-governmental organizations (see paragraph 4.2.3), and the relevant UN organizations play a significant role in the development of a national health care structure in collaboration with the government. To do good work in the country, it is necessary to cooperate with some of the organizations already on the ground; like international organizations that have been working in Afghanistan over years and have experience and resources, and local NGOs that know their countrymen and work more freely with less risk. Many of these NGOs are not easily available by e-mail, to be able to access them you need to be in the country. Among the international organizations there is a big turnover of expatriates, which make planning from a distance a bit difficult. This chapter gives a short description of some important organizations and potential stakeholders.

6.1 UN-organizations

6.1.1 World Health Organization (WHO)

Afghanistan belongs to the Regional Office for the Eastern Mediterranean (WHO-EMRO). In 2001 an initiative was taken to discuss telemedicine and e-health in the region [39]. Some recommendations were made, but status since then is not known.

WHO Afghanistan is in the forefront of humanitarian action in the country. Especially to be mentioned is their battle against polio which makes a very good progress (see paragraph 4.1.3). Other areas are guidelines and protocols for the management and treatment of tuberculosis and malaria, preparedness for disasters and epidemics, health education, and health related courses for different levels of health personnel. WHO pursued its support to the MoH in strategic directions for the development policies for the health care system overall, and to specific programs like reproductive health, human source development, water and sanitation, and Information-Education and Communication [40].

6.1.2 United Nation Children's Fund (UNICEF)

Since autumn 2001, UNICEF has worked in partnership with the Afghan Transitional Authority and other relief agencies to provide humanitarian aid, help re-build the country's schools, tackle malnutrition and immunize children against preventable diseases. UNICEF believes that placing children, youth and women at the centre of the recovery process is the best investment for Afghanistan's future [41]. For these reasons, UNICEF's immediate priorities have been to:

- Continue life-saving humanitarian aid, especially health supplies, safe water and clothing
- Provide ongoing support for the official return to school of at least 1.78 million children
- Support catch-up learning for girls and boys in home-based settings now
- Reduce child malnutrition through special supplementary feeding campaigns
- Help carry out nation-wide immunization campaigns to protect children

In the longer term, UNICEF is also working on improving the capacity of the interim and transitional administrations and other national partners to:

- Ensure the survival of children and women, especially the most vulnerable
- Enhance the overall health care network, especially services for pregnant women and children
- Help create programmes to address years of childhood trauma associated with war
- Contribute to national landmine awareness and other public safety campaigns
- Work closely with Afghan authorities to ensure a legal code that protects children and women from exploitation
- Build the capacity of the interim and transitional administrations and other national partners to ensure effective management and equitable resourcing of services to women and children.

UNICEF estimates that there are a total of 8,000 former child soldiers in Afghanistan, many of whom have already left the fighting forces informally over the past year. All are in urgent need of assistance to fully reintegrate to civilian life, especially in the area of education and sustainable income-generation. UNICEF is working with a number of NGO partners including Child Fund Afghanistan, AREA, Save the Children - Sweden and BRAC to provide community-based rehabilitation projects that will allow former underage soldiers and other vulnerable to re-enter education, or learn a new skill or trade that will assist them to financially support themselves and their families, and provide opportunities and alternatives to military life [42].

6.1.3 United Nation Population Fund (UNFPA)

UNFPA is participating in Afghanistan's reconstruction as part of the integrated United Nations assistance mission. It is working with the Ministry of Health, in collaboration with United Nations partners and NGOs, to improve reproductive health care and reduce maternal mortality. Maria Dradi arrived in June 2003, as Chief of Operations. She told that UNFPA has made a Reproductive Health National Strategy, on request from MOH. In January 2004 it was not published yet.

In addition to direct support to the Afghan Ministry of Health, UNFPA works closely with a number of NGOs working to improve women's health in Afghanistan. NGOs play a significant role in providing health care in Afghanistan, especially in underserved and remote areas. A number of national and international NGOs have years of experience and well-established networks. UNFPA is helping them increase access to quality reproductive health services and emergency obstetric care, providing needed supplies, and supporting training activities [3].

6.1.4 United Nations Development Fund for Women (UNIFEM)

UNIFEM's immediate work in Afghanistan will focus on the following areas [30]: UNIFEM will work with MoWA to develop its national strategy and to mainstream gender into the work of other Ministries. UNIFEM will also assist MoWA to establish regional Women's Centres. The centres will train service providers and women's NGOs to offer community support to women in areas such as education, healthcare and employment. To assist returning internally displaced people and refugee women to reintegrate into their

communities, UNIFEM will establish women's community centres in several provinces in Afghanistan. The centres will provide a safe place for women to congregate, discuss their needs and receive services such as trauma counselling, psychosocial assistance and legal advice. They will also provide vocational training for women to enable them to earn secure livelihoods and support their families. With 25 years of expertise in gender issues, UNIFEM will provide technical guidance and information to ensure that women and women's groups participate in UN-system responses in Afghanistan. UNIFEM will work with women's NGOs and the media in Afghanistan to raise awareness on women's situation and needs.

6.1.5 The UN Office for Project Service (UNOPS)

UNOPS manages project resources to help developing nations and countries in transition in their quest for peace, social stability, economic growth and sustainable development. Some of the world's most skilled professionals were born in developing countries. Frequently, however, since these professionals choose to settle abroad permanently, their countries of origin can derive no benefit from their expertise. The migration of qualified professionals from developing to developed countries is known as brain drain. This phenomenon reduces the quantity and quality of human capital available to countries working towards sustainable development. Under UNOPS is TOKTEN organized. TOKTEN stands for Transfer of Knowledge Through Expatriate Nationals. Within its framework, qualified expatriate professionals from developing countries return to their countries of origin for short periods of time to share the skills they have gained during their residence in developed countries. TOKTEN consultants perform tasks that might otherwise be performed by international consultants. TOKTEN consultants volunteer their services, often motivated by a desire to play a role in the development process of their country of origin.

6.2 The World Bank

The World Bank grants totalling US\$100 million are financing some of the cornerstones of emergency reconstruction: waste management in Kabul, restoring turbines at power stations, a labour-intensive public works program that has already created several million job days for low-income people. Other grant money is going toward, among other things, the rehabilitation of schools, training for female teachers, establishing a Kabul Distance Learning Centre, creating email connectivity between government ministries and developing a payroll system for civil servants.

The World Bank is focusing its assistance on four broad areas, based on the institution's advantages compared to other donors and partners. Those are improving livelihoods, through job generation and community development; strengthening fiscal strategy and management through budgetary and other advice; public administration reform to improve governance and financial transparency; and enabling a climate for the private sector to grow. The Bank also administers the Afghanistan Reconstruction Trust Fund (ARTF), which is channelling the US\$370 million in assistance pledged by 22 donors so far [4]. Norway has granted 375 millions NOK for Afghanistan for the year 2003, a great deal of it goes through ARTF.^b

^b Information provided by Grethe Løchen, Ministry of Foreign Affairs, Norway, in a meeting May 2003

The World Bank 5 June 2003 approved a US\$ 59.6 million grant to help meet the emergency needs of Afghanistan's rural population, whose health status is among the worst in the world. The grant will support a Health Sector Emergency Reconstruction and Development Project which will assist the Afghanistan MoH in its efforts to reduce the rates of infant and child mortality, maternal mortality, child malnutrition, and fertility. This project will help expand delivery of basic health services and work to ensure equitable access, particularly for women and children. It will help increasing the MoH's stewardship over the sector through a greater role in health care financing, coordination of partners, and oversight of NGOs. Much of this will be accomplished through performance-based partnership agreements (PPAs) with NGOs. The project will support pilot tests by the ministry of important innovations in water treatment and storage and for community health care financing. It will also help build the capacity of ministry workers, at provincial and national levels, to carry out monitoring, supervision, and evaluation. Most importantly, it will build the capacity of Afghan health workers to provide and manage health services. The project will be implemented over a three year period by the MoH [37].

6.3 International Security Assistance Force (ISAF)

ISAF, the peacekeeping mission in Afghanistan sanctioned by the UN Security Council (UNSCR 1386) on Dec. 20, 2001, is now operated under the auspices of NATO. ISAF was established to assist the transitional government of Afghanistan in maintaining security so that the government and the UN personnel can operate in a secure environment. ISAF is involved in reconstruction and the development work in the country as well, and in fact leads the networks of NGOs.

The security situation is a growing problem. Terrorist attacks have increased in numbers the last half a year. Terrorism seems to target foreigners and NGOs in particular. On a general basis, foreigners are advised not to leave Kabul. The warnings put a lot of restrictions on the reconstruction and developing work, as well as emergency aid, around in the provinces, even by NGOs that have had a presence in Afghanistan for the last twenty years.

6.4 Non-governmental organizations

After Taliban's fall, a big influx of new organizations, embassies and security forces have come to Kabul. Many of the newer NGOs feel unsafe to go to other provinces, with the result that much of the aid given is concentrated in Kabul and nearby areas. By the summer 2003 1400 NGOs were based in Kabul, which made up quite a chaotic situation; double aid somewhere and poor coordination, while remote places with substantially bigger needs hardly got any assistance. A few organizations have had projects going through all tumults the last twenty years, and they are still able to work in far away places by their local staff and network.

Afghanistan has more than 80 international NGOs and about 25 national NGOs involved in health [20]. Here is a short description of some organizations operating in Afghanistan, that may become potential partners or advisers, or in other ways may contribute or have an impact of a potential project.

6.4.1 Afghanistan Tuberculosis Association (ATA)

ATA, led by Dr. Ayob, is an Afghan NGO based in Jalalabad. ATA appear to have successfully implemented their antituberculosis program, including practice of DOTS. This is remarkable, as not all TB programs have been successful in Afghanistan. There are several centres in Laghman, Nuristan and Kunar provinces. ATA train government staff and practising doctors in the region as well as their own staff. All their employed staffs get regular refresher courses, and in addition to curative work ATA also train health educators. There are generators and computers at all centres, but lack of trainers to teach how to use the equipment.^c

6.4.2 Aga Khan Development Network (AKDN)

AKDN brings together a number of development agencies, institutions, and programs that work primarily in the poorest parts of Asia and Africa. AKDN is a contemporary endeavor of the Ismaili Imamate to realize the social conscience of Islam through institutional action. AKDN focuses on health, education, culture, rural development, institution-building and the promotion of economic development. It is dedicated to improving living conditions and opportunities for the poor, without regard to their faith, origin or gender [43]. AKDN are active in Afghanistan in many sectors. To be mentioned here is their involvement in the education of midlevel health personnel (IMEIs), where they provide technical assistance and funding. They are for instance involved in revision of curricula and upgrading of teachers in partnership with WHO and MoH, as well as computer training. The Aga Khan University is central in this work.

6.4.3 Coordination of Afghanistan Relief (CoAR)

CoAR, an Afghan NGO led by Mr. Naeem Salimi, has its roots in NCA, and are part of the network of NGOs with Norwegian Church Aid. They organize more than thirty projects in the northern, western and central areas of the country. 10-11 different donors make this possible. In Wardak they have health programs like mother and child clinic (MCH), basic health units, malnutrition centre, and training of TBAs. Mr Salimi mentioned especially a health education program: Videos which the patients may watch while they are waiting for treatment at the clinics. Dr. Hayat is the person responsible for the program, while Dr. Khadri is a health adviser. Japan supports this TV project financially. A Japanese NGO, Basic Human Needs based in Kandahar, has plans to connect rural clinics to hospitals by HF and VHF, wireless radios.

Mr. Salimi invited us to visit a workshop for health educators held in Kabul 25 – 26 August, as a common effort of nine partner organizations that have health work going in many different provinces. They had managed to gather around 40 women from far away places, not an easy task in today's Afghanistan. The enthusiasm among the women was great, eager to learn more and to listen to each other's experience. An interview with some of them is referred to under the chapter of health (paragraph 4.3.1).

^c Information given by Dr Ayob, 1 September 2004

6.4.4 Hope Worldwide

Hope Worldwide has been present in Afghanistan the last few years. The work includes an irrigation program, integrated education programs with construction of school buildings and school supply kits, and MCH clinics. They have institutional feeding program in conjunction with the World Food Program; last year they distributed food to 17 hospitals in the Central Region. In the same network they deliver medicines and train staff. According to an update published on the Internet July 2003 this program improved the healthcare for 2.5 million people in the total catchment's area [44]. Hope Worldwide also provided monitoring and supervision management workshops and on-the-job training for MoH and hospital staff. The MoH certifies all training, so the Hope Worldwide certificate was made to improve the doctors' job prospects. Training of community health workers and traditional birth attendants is done as well.

In Kabul we met with Dr. Mark Timlin and Dr. Sacha Simon, informing us about their involvement in a planned performance-based partnership agreement (PPA, paragraph 5.1.1) that includes the Johns Hopkins University Public School of Health, ADRA International and Faizcaan Welfare Trust (a local organization). They have applied to MoH for managing the delivery of health care to an entire province, in accordance with BPHS. Hope Worldwide is responsible for leading the Health Coordination Network in Kabul, in collaboration with MoH.

6.4.5 Independent Human Rights Commission

Sima Samar, a lifelong human rights activist in the Islamic worlds of Afghanistan and Pakistan, was briefly appointed MoWA of Afghanistan December 2001 when the Taliban regime was overthrown and an interim government replaced it. But traditional tribal political stances against women forced her out of office summer 2002, and she is now head of Afghanistan's Independent Human Rights Commission [45]. The Independent Human Rights Commission was established by President Hamid Karzai last year to keep a check on rights abuses across the country, but has so far made limited impact.

6.4.6 International Assistance Mission (IAM)

IAM is an organization that was established as a private voluntary agency in Afghanistan in 1966 and is registered with the Swiss Government. IAM consists of more than 100 professionals from about 15 countries. The organization has been working in the fields of health, economic development, and education and rehabilitation. They have managed to keep the work going throughout all conflicts, war and tumults over the years. All of the IAM programs had a core focus of training Afghans so that the long-term programs could be handed over to the Afghan people once the situation in the country made this viable. They started an eye hospital in the 70ies, and put priority on education of eye doctors. IAM's work consists now of ten programs: National Organization for Ophthalmic Rehabilitation (NOOR), the primary provider of medical and surgical eye care in Afghanistan; the Physiotherapy School in Kabul (PSK), which has been teaching physiotherapy for the last 15 years; maternal child health care clinics and community based health training programs; schooling for blind children and adults; primary mental health care; as well as community development; English as a Foreign Language (EFL) schools; skills development; and renewable energy source development, i.e. micro hydro power. The Disaster Management Program began in April 2001 with a 2.5 million dollar budget to assist people in drought affected areas of the country. They are planning on micro enterprises as well.

Options for cooperation were discussed with Mr. Tim Mindling, the acting leader, and Ruth Dougherty and Eeva the personal department. IAM are now short of expat staff, and they have new projects approved which they have not started yet, because of lack of personnel. For the time being they have banned new projects. However, they have a lot of experience from the country, many of their workers being there long term.

6.4.7 International Committee of Red Cross (ICRC)

ICRC is one of the bigger NGOs in Afghanistan, involved in primary health care and surgical departments at hospitals in several provinces, among other activities like food programs and agricultural projects. The Finnish group has responsibility for MCH and gynecology in Mazar-e-Sharif, the Danish group has the field of radiology and laboratories, while the Japanese has disaster plans and management as their responsibility. The Norwegian Red Cross has been active in rehabilitation and improvements of the Wasir Akhbar Khan Hospital in Kabul, and they have organized an ambulance system and a communication centre (radio network) in the same city.

6.4.8 International Organization for Migration's Return of Qualified Afghans Program (IOM-RQA)

International Organization for Migration's Return of Qualified Afghans Program assists in the reconstruction, capacity building and development process of Afghanistan [46]. The IOM-RQA Information Office in Helsinki [47] is the office for the Nordic and Baltic states. By the end of September 2003 the IOM-RQA Placement Office in Kabul had assisted approximately 500 qualified Afghans to return to Afghanistan and participate in the reconstruction efforts of the country [47,48].

6.4.9 Management Sciences for Health (MSH)

MSH is a major contributor to MoH and the health services in Afghanistan. They work collaboratively with health care policymakers, managers, providers, and consumers to help close the gap between what is known about public health problems and what is done to solve them. MSH seeks to increase the effectiveness, efficiency, and sustainability of health services by improving management systems, promoting access to services, and influencing public policy.

In a meeting with Dr. Richard Johnson, program manager, and Miho Sato, gender specialist, both active in Rural Expansion of Afghanistan's Community Based Health Care program (REACH) the following information was given: MSH will have the responsibility for implementing the BPHS in 13 of Afghanistan's 32 provinces, which among all the other factors also includes education of health care personnel. Nurses and midwives are more for urban settings, in the districts it means basic health workers, traditional birth attendants and community midwives. A process is going to standardize curricula. They have a close collaboration with MoH, where Dr. Mohamed ElFeraly worked as their health communication advisor. MSH has regional centres with electricity and computers.

6.4.10 Norwegian Afghanistan Committee (NAC)

NAC has had on-going work in Afghanistan since the early eighties, their activities localized mainly to Ghazni, Badakshan, and Ningrahar. The health program includes two hospitals, clinics and health posts, immunization, and training of traditional birth attendants (TBAs). NAC has the responsibility for the three years training course for midwives at Jalalabad IMEI. They also have programs within primary and secondary education, reconstruction projects, a well-functioning environment program, as well as emergency aid. The Kabul office was led by Nils Ole Gaup.

6.4.11 Norwegian Church Aid (NCA)

NCA has also been in the area since the early eighties. In Oslo I met with Anders Tunold, Magna Torvund who few days later went to Kabul as program coordinator, and Thora Holter who is the gender adviser. During our visit in Kabul Mr. Per Westborg took over the leadership, replacing Mr. Geir Valle. NCA's strength has been competence building, and today some of the persons who started their career with NCA, are now in central positions at the ministries. Their competence building also includes local NGOs that first started under NCA, but now are independent, able to run their own programs. Some of these still get part of their funding from NCA, others not. Now NCA's main focus in Afghanistan is water management. This will be organized as a part of a rural development program. They have selected the province of Uruzghan as main focus. Most of NCA's work is done by local partners; they do not run many projects themselves. Some of their partners run health projects.

Svein Stoveland is seconded from NCA to the Ministry of Rehabilitation and Rural Development (MRRD) and the MoH. The ministries are now planning a program which involves water, sanitation and health education, to be implemented into all provinces out into all districts in the country. This is meant to be collaboration where MRRD has the water and sanitation part, and MoH has the health education part, as parallel processes.

6.4.12 Norwegian Refugee Council (NRC)

NRC has over the years had programs in Pakistan focusing on Afghan refugees. In Oslo I had a meeting with the director, Raymond Johansen, and Mr. Amar Bokhari. Their main focus now is counselling regarding human rights and the Afghan's rights in their society, mainly through Information Centres, seven centres in Pakistan and two in Afghanistan so far. The work inside Afghanistan has recently started, and is growing. They also have a program within psychosocial work, as well as vocational training for young people. Through the Information Centres NRC also gather knowledge about who the returnees are, they keep records of education levels, qualified people, areas for specific needs or potentials, as well as mapping what other organizations do where. The office in Kabul is managed by Lisbeth Pilegård. NRC has no health programs.

6.4.13 Swedish Committee for Afghanistan (SCA)

SCA is a non government organization which has been working in Afghanistan for twenty years [49]. The primary objective of SCA is to support peace initiatives and stability in Afghanistan by improving the basic living conditions for people in rural parts of the country.

Support and development aid are channelled to the primary health care, education and agriculture sectors. Improvements in these areas are seen as a prerequisite for development, and as people's basic needs and human right. Special attention is paid to the most vulnerable groups of the society, like women and children.

Almost all Afghan training institutions have collapsed and the health workers are left without support. For this purpose SCA has established three training centres, one per regional office, providing refresher training for MD doctors, other health workers and paramedics. There is also basic and refresher training for CHWs, and mid level rehabilitation workers. Annually some 1200 health workers receive training. For female health workers, a training centre is established in Peshawar [50].

7. Project alternatives – discussion

Several alternatives for telemedicine in Afghanistan has been considered, based on the literature about telemedicine in third world countries, the results presented in this report and in Siri B. Uldal's report about ICT in Afghanistan, discussions with key people in Kabul and other persons who have good knowledge about the country.

7.1 Telemedical consultations

Telemedical solutions in a network between primary health care facilities and the hospitals or between hospitals at different levels are difficult in Afghanistan because of lack of infrastructure. At the few places where this might be an option, like in the cities and their surroundings, lack of competence at the referral hospitals is a problem. Satellite communication is an option, though expensive. It could be combined with other services in addition to telemedicine, or some sort of income generation, as for instance internet-cafes, to cover the costs. It might as well be possible to get a connection between hospitals in Kabul and a foreign country. I do not recommend it in Afghanistan today. Experiences from other countries often shows that even when the technology works well, the use of it is limited, and there are relatively few consultations a year, which means service to a few patients who already have access to some sort of service. In Afghanistan 65 % of the population has no access to health services at all. In my opinion other priorities are necessary to benefit more people.

7.2 Distance education

7.2.1 *At higher levels*

Distance education in form of videoconferencing and Internet is theoretically possible from Kabul [2], though expensive. The universities are in a desperate need for support of all kinds at all levels. For the time being the students' low level of knowledge would limit the benefit of distance teaching from other countries' universities, as well as of academic journals online. Most students are not qualified for academic studies, and teachers in other countries would hardly realize at which level the teaching needs to be done. Distance education might be an option in an established relationship between an Afghan and a foreign university, where the teachers as a start have spent some time teaching in Afghanistan, getting first hand knowledge of the situation. In a few years time distance education with Internet and video conferences may be an option for the universities. Our contact with IMEI in Kabul and Jalalabad was not met with any enthusiasm or interest for the options we described, as they already has come a long way to meet the challenges by help of AKDN and others, in more traditional ways.

7.2.2 *At lower levels*

The surveys described in this report show the huge needs for health care workers at province and district levels, confirmed also in meetings with the MoH and several of the NGOs, as well as in interviews with health educators and TBAs. The majority of people at the present teaching institutions will remain in the cities, this phenomenon is known all over the world. Experiences, from for instance Northern Norway, show that if people get their education in the region where they live, the majority of those will stay and do a job; increasing the numbers of professionals in that region. One of the problems in Afghanistan is

the lack of qualified people to teach in far away places. Here kinds of flexible teaching may be of benefit.

As the infrastructure is far from developed yet and communication lines are sparse, a project that doesn't necessarily need two-ways communication is to be preferred. Radio can be used in general health education, also in training of health care personnel. However, to teach specific and practical procedures to a specific target group, a more direct approach may give a better outcome. An option is to develop digital courses. Such courses must be designed for the target group, for instance no text, only audiovisual presentation when the target group is low-/illiterate. These may be put on CD-ROM or DVD for the present time, to be sent/carried out to far away places. When the communication system is ready for it, these can easily be changed to internet programs. The rural societies normally have neither electricity nor computers, but NGOs around in the country often have that kind of equipment and logistics for that. Several of the NGOs that we were in contact with, were interested in collaboration – such CDs may be shown for classes of health workers at for instance district hospitals and clinics by means of a laptop, a projector and an electrical source of some sort. The benefit of such courses depends on good quality teaching which communicate in a meaningful way to provide the target group with new insights that lead to change of behaviour. This is even more important when you do not have a qualified teacher at the spot.

7.3 Preventive medicine

The need for health education was expressed from the MoH. A lot is done already from different NGOs to train health educators and traditional birth attendants. The importance of preventive health efforts is clear, and we would happily support that. Several reports show benefit of radio programs for enlightenment of the people. Illiterate people can benefit of spoken words, and this may be a better way than computerised programs for today's situation. BBC has for several years broadcasted programs in Pashtu and Dari languages, including general education for ordinary people. An example of this is "New home, new life", a very popular kind of soap opera that contains health education, mine awareness information and a lot of other themes [51]. Radio Education For Afghan Children – REACH - broadcast weekly on BBC World Service's Persian and Pashto Services, have been especially designed to awaken children's curiosity and to stimulate their desire to learn without the help of teachers or books [51]. Radio education can not be a substitute for formal education, but can stimulate the people's thoughts and motivate to further learning.

Touch screens for health education have been suggested - placed at clinics for use by illiterates, with simple pictures and sound, to give health messages for patients and relatives waiting. Touch screens to be placed all over the country will be too expensive within the scope of a project, but to develop a pilot for the government could be an option. For the time being, the logistics of such equipment would be a huge challenge.

8. Recommendations

According to the discussion in chapter 9, we will recommend teaching/training of health care personnel more than consultations. This will affect more people, and the health effects will be far more extensive. The meetings with MoH resulted in an expressed interest for a project focusing on health in rural areas. All kind of health workers are needed. As 40 % of the health facilities in rural areas completely lack female staff, it is a goal to educate female health workers. This is a huge challenge as there is low acceptance in the rural communities for working women. It is a risk in many communities that an exclusive project for women will be rejected, so a project needs to offer courses to both sexes, but with an explicit effort to reach females. From ANHRA [8] it seems that the female community based health providers, including those with only basic training, are the main group of health workers called to assist deliveries in the home. This may not be the choice, but because they are closest by when women deliver at home (as 99 % of them do). This needs to be taken into account when designing interventions to alleviate the high maternal mortality. Offering obstetric care only at facilities will probably have slow or minor effect, unless a link can be made with health workers in the community who are most likely to assist with deliveries.

Exactly which type of personnel at which level, should be defined by MoH. A project should include training of new people as well as staff already at work. Health care personnel with some experience have generally limited knowledge, they will probably benefit from the same curriculum as taught for new workers. In many rural areas it is hard to find literate women who also get permission to work. A CD course may be made for illiterates learning obstetric care, including procedures for intervention by the more common delivery complications. The same course could also be used in training of community midwives, who should be able to deal with some of the complications. Whatever themes to be taught, such courses should be made by Afghans, in local languages and local context. To train people who hardly know how to read and write, methods like storytelling to make the points, short videos to demonstrate practical procedures, pictures, cartoons and other audiovisual methods to be put in CD, need to be explored.

From our experiences of several years of telemedicine collaboration in Russia, local commitment and local involvement is crucial for the success of a project, especially when new technologies are involved. A local project group should be established under or in close collaboration with the MoH, and this group should be in charge of planning the project with some support from NST. To make a program that can continue for future, after ended project, a whole concept should be developed, including ownership, building competence of project participants at all levels; the people who owns the project, making different courses, organizes and runs the courses as well as administration and financing. To secure that the developed program may be of benefit for the whole country, collaboration with MoH is essential, as well as cooperation WHO and the network of organizations.

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APPENDIX

Basic data

Geography [52]

Area: 647.500 square km. **Capital:** Kabul. **Other main cities:** Kandahar (south), Herat (west), Mazar-e-Sharif (north) and Jalalabad (east). **Natural hazards:** damaging earthquakes occur in Hindu Kush mountains; flooding, droughts. **Natural resources:** natural gas, petroleum, coal, copper, chromite, talc, barites, sulfur, lead, zinc, iron ore, salt, precious and semiprecious stones.

People

Population: Estimates range from 22 million to 28.7 million. More than 4 million Afghans live outside the country, mainly in Pakistan and Iran, although over two and a half million have returned since the removal of the Taliban. [53] 45% of the population is below age 15.[7]

Ethnic groups: Pashtun 38%, Tajik 25%, Uzbek 6%, Hazara 19%, minor ethnic groups (Aimaks, Turkmen, Baluch, and others).[53] **Religions:** Sunni Muslim 84%, Shi'a Muslim 15%, other 1%.[52] **Language:** Pashtu 35%, Afghan Persian (Dari) 50%, Turkic languages (primarily Uzbek and Turkmen) 11%, 30 minor languages (primarily Baluchi and Pashai) 4%, much bilingualism.[52]

Education: Adult literacy rate varies greatly between different places in the country, as do official numbers, reflecting the lack of exact data. Official sources for the country as a whole: 16 - 36%: 5-21% for women, 27-51% for men.[7,52] 25% of children attend primary school, 13 % girls and 37 % boys.[7]

Health [7]: Life expectancy for men is 44.2 years; for women, 45.1 years. Infant mortality rate is 165/1,000. 20% of infants have low birth weight. Maternal mortality rate is 1,600/100,000 live births. Average calories per day is 1,744 (avg. U.S. calories/day is 3,699). 70% of the population is undernourished, and 6% have access to safe water.

Government [53]

Type: Afghanistan identifies itself as an "Islamic state." **Formal name of country:** Islamic Republic of Afghanistan. **Independence:** August 19, 1919 (from U.K. control over Afghan foreign affairs). **Organization:** After the fall of Taliban, at an UN-sponsored conference held in Bonn, Germany in early December 2001, agreement was reached between Afghan political factions to create an interim government and establish a process to move toward a permanent government. The Interim Authority was installed on December 22, 2001 with Hamid Karzai as Chairman. The Interim Authority held power for approximately 6 months while preparing for a nationwide "Loya Jirga" (Grand Council) in mid-June 2002 that decided on the structure of a Transitional Authority. Later on a new constitution was presented for discussion at a Constitutional Loya Jirga in December 2003. The adoption of the new national constitution will pave the way for nationwide Presidential elections in Afghanistan, scheduled for June 2004. **Constitution:** The new constitution was signed 4 Jan 2004.

Economy [53]

GDP: US\$ 4 billion, with annual per capita GDP at \$180. **Currency:** Afghani.

Trade: *Exports* opium, fruits and nuts, hand-woven carpets, wool, cotton, hides and pelts, precious and semiprecious gems. *Imports* food and petroleum products, machinery and

consumer goods.

Agriculture: (est. 52 % of GDP): Products - wheat, corn, barley, rice, cotton, fruit, nuts, karakul pelts, wool, and mutton. Food makes up 27% of merchandise exports and 16.6% of merchandise imports.

Industry: (est. 26 % of GDP): Types - small-scale production for domestic use of textiles, soap, furniture, shoes, fertilizer, and cement; hand-woven carpets for export; natural gas, precious and semiprecious gemstones. In the last years factories have been non-functional.

Work Force: Mostly in rural agriculture; number cannot be estimated due to conflict.

Land Use: Arable land 12%; permanent crops 0%; permanent pastures 46%; forests and woodland 3%; other 39% (1993 est.).

Environment [52]

Current issues: Limited natural fresh water resources; inadequate supplies of potable water; air and water pollution; soil degradation; overgrazing; deforestation (much of the remaining forests are being cut down for fuel and building materials); desertification, air and water pollution. **International agreements:** *Party to:* Desertification, Endangered Species, Environmental Modification, Marine Dumping, and Nuclear Test Ban. *Signed, but not ratified:* Biodiversity, Climate Change, Hazardous Wastes, Law of the Sea, Marine Life Conservation.

Deforestation: About 6.8% of Afghanistan's forests are destroyed each year.

Illicit drugs: The world's largest producer of opium; cultivation of opium poppy - used to make heroin - expanded to 30,750 hectares in 2002, despite eradication;