AFGHANISTAN CIVIL AVIATION SECTOR

Definitional Mission Study

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The U.S. Trade and Development Agency assists in the creation of jobs for Americans by helping US companies pursue overseas business opportunities. Through the funding of feasibility studies, orientation visits, training grants, conferences, and various forms of technical assistance, TDA enables American businesses to become involved in the planning stages of infrastructure and industrial projects in middle-income and developing countries. By doing this, the agency provides American firms with market entry, exposure, and information, helping them establish a position in markets that are otherwise difficult to penetrate.

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Executive Summary

Afghanistan has been in a state of chaos since the Soviet Union invasion in 1979. Multinational development agencies estimated in January 2002 that USD 15 billion is required to rebuild Afghanistan during the next ten years. In January 2003, International donors pledged USD 4.5 billion towards the reconstruction of Afghanistan during the next five years, including $1.8 billion that will be released in 2002 to support short-term humanitarian operations.

Afghanistan is a land-locked country with very difficult mountainous terrain. Regional and domestic unrest continues to prevail. Restoring a vibrant and efficient civil aviation sector is a prerequisite for the reconstruction of Afghanistan because it will facilitate the movement of goods and service providers in a safe and secure manner. Air transportation also plays a critical political and social role. Connectivity between Afghanistan's various provinces, and consequently ethnic groups and tribes, can ultimately foster harmony and "nationalism", thereby contributing towards national unity and sustaining peace. Furthermore, air transport plays a critical role in the provision of essential services and food to areas that are inaccessible by road, especially during the harsh winter months.

The Definition Mission report concludes that Afghanistan should be treated as an exceptional case by the United States Trade and Development Agency, in coordination with other U.S. government agencies, such as the United States Agency for International Development, as well as with multinational agencies, such as the World Bank, the Asian Development Bank, etc.

The Consultant recommends five projects that merit TDA support. While they are presented in their order of priority, they all require immediate attention:

1. Introduction of navigational aids and procedures at Kabul International Airport.

2. Technical assistance to the Ministry of Civil Aviation and Tourism to develop a new regulatory framework. [USD 277,656].

3. Technical assistance to the Ministry of Civil Aviation and Tourism in order to develop an operational strategy for the Hajj operation, and to consider the use of Herat (instead of Kandahar). [USD 174,950].

4. Technical assistance to Ariana Afghanistan Airlines Co. Ltd. in order to develop a strategic business plan for the next 2-3 years, as well as a corporate charter and a sound corporate governance structure consistent with its imminent corporatization. [USD 333,034].

5. Feasibility study to evaluate whether a new greenfield airport at Logar would be more desirable than upgrading and modernizing Kabul International Airport. [USD 326,869].

Introduction

Afghanistan has been in a state of chaos since the Soviet Union invasion in 1979. The Soviet army's withdrawal in 1989 eventually led to the fall of the Soviet-backed government in 1992. The country was in total chaos between 1992 and 1996, when the Taliban captured Kabul.

The Taliban restored order in Kabul, yet fostered terrorist organizations, benefited from the trade of opium, and strictly curbed civil liberties. Despite the Taliban's control of 85% of the country, Afghanistan continued to be embroiled in a civil war supported mainly by bordering countries such as Pakistan and Iran, as well as Saudi Arabia, the United Arab Emirates, and the United States.

The notion of nationalism is unattainable in Afghanistan in the near future because of the complexity of Afghan's many ethnic groups and tribal loyalties. One-half of the population is Pushtun, while the remainder are mainly Tajiks, Uzbeks and Hazaras. Furthermore, there are sizable groups of *sunni* and *shiite* muslims.

US-led Coalition forces finally liberated Afghanistan from Taliban rule following the tragic September 11 attacks, and an international effort is currently underway to rebuild the country's basic infrastructure and institutions following 22 years of neglect.

Multinational development agencies estimated in January 2002 that USD 15 billion is required to rebuild Afghanistan during the next ten years.[1] In January 2003, International donors pledged USD 4.5 billion towards the reconstruction of Afghanistan during the next five years, including $1.8 billion that will be released in 2002 to support short-term humanitarian operations. International aid is required in order to rebuild infrastructure, thereby creating an attractive environment for foreign direct investment, import of goods and services, as well as the generation of new jobs.

This Definitional Mission report was prepared by Dr. Waleed Youssef, of The Berkeley Group Inc., on the basis of a two-week visit to Afghanistan at the end of September 2002. The Definitional Mission team also included two specialists from the U.S. Federal Aviation Administration's International Air Traffic Services Program, Mr. Paul Bartko and Mr. Robert Sweet.

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[1] World Bank, Asian Development Bank and the United Nations Development Programme, "Preliminary Needs Assessment for Recovery and Reconstruction", January 2002. Also see *The Economist*, "Reluctant Donors", January 17, 2002.

Civil Aviation Sector Overview

Afghanistan is a land-locked country with very difficult mountainous terrain. Regional and domestic unrest continues to prevail. Consequently, restoring a vibrant and efficient civil aviation sector is a prerequisite for the reconstruction of Afghanistan because it will facilitate the movement of goods and service providers in a safe and secure manner.

Air transportation also plays a critical political and social role. Connectivity between Afghanistan's various provinces, and consequently ethnic groups and tribes, can ultimately foster harmony and "nationalism", thereby contributing towards national unity and sustaining peace. Furthermore, air transport plays a critical role in the provision of essential services and food to areas that are inaccessible by road, especially during the harsh winter months.

The United States was the main contributor to the historic development of the civil aviation sector in Afghanistan. The national carrier, Ariana Afghan Airlines (Ariana), was established in 1955 by an American citizen utilizing four Dakota aircraft. In 1957, the United States International Co-Operation Administration (ICA) formally agreed to finance Ariana. It was incorporated as a limited company with 51% of the shares owned by the Royal Afghan Government, and the remaining 49% of the shares acquired by Pan American World Airways (Pan Am). At the same time, a management contract was signed with Pan Am and two DC-4 aircraft were purchased in order to augment Ariana's existing fleet. About 30 Pan Am employees operated Ariana from Kandahar, resulting in its emergence as the leading regional airline at the time.

At the same time, the U.S. Federal Aviation Administration (FAA) provided technical assistance to develop ICA-funded airports and airways plans, including modern terminal and maintenance hangars at Kandahar, Mazar-e-Sharif and Herat.

It is noteworthy that senior officials of the Ministry of Civil Aviation and Tourism (MOCAT), many of whom are U.S.-trained and educated, continue to recognize the role played by the United States in developing Afghanistan's airline and airports, and enthusiastically encourage a U.S. –led effort to support the reconstruction of Afghanistan's civil aviation sector.

Kabul International Airport was damaged by rocket attacks between 1991 and 1995. UN sanctions imposed against the Taliban devastated Afghanistan's civil aviation sector. A1998 UN Security Council resolution suspended all Ariana flights (except humanitarian and religious flights), blocked company funds abroad and forbade foreign companies from providing spare parts, supplies and training. At the time, Ariana operated one Boeing 707-100, two Boeing 727-200 and five Antonov 24 aircraft. A second UN resolution in 1999 banned all international flights to the country, closed all Ariana's offices abroad and barred Taliban government officials from

flying out of the country.

Maintaining aircraft became challenging without spare parts and funds. The Antonovs were grounded from domestic service (which was not banned under the UN resolutions). In the meantime, sources of revenue were restricted to overflight charges, which amounted to about USD 22 million [2] – certainly insufficient to maintain the country's airports and equipment and to provide adequate staff training.

Geographic and meteorological conditions create difficult operational challenges in Afghanistan. Kabul International Airport is located at an altitude of 6,000 feet, and has a 3,500 metre runway because of its high reference temperature (which exceeds 30 degrees centigrade). The northern plateau suffers from dust storms that rise over 20,000 feet, while sand storms often lead to disrupting operations at Kandahar airport.

Afghanistan has 22 airports, and a non-functional air traffic control system. Intercity roads are in very poor condition. Because it is a land-locked, mountainous and sparsely populated country, Afghanistan has no alternative but to redevelop domestic and international civil aviation operations.

Six Ariana aircraft were bombed during U.S. air strikes. The airline consequently began service with one Boeing 727-200 and one Antonov AN-24 aircraft. A second Boeing 727-200 was recently purchased from the U.S.

Air India recently donated three (very old) Airbus A-300 aircraft to Ariana. The first aircraft is being flown by Air India crew and maintained in New Delhi. A number of Ariana pilots and mechanics are currently being trained by Air India, and they are expected to begin flying the aircraft in October 2002. The second aircraft is due to be delivered in December 2002, and the third aircraft shortly thereafter.

Following 22 years of war and 14 years of UN sanctions, most experienced aviation pilots, mechanics, air traffic controllers, regulators, policy makers, etc., are close to their retirement ages. Yet the next generation is not adequately trained nor qualified to assume responsibility for Afghanistan's aviation sector. Besides the poor conditions of infrastructure, re-establishing and enhancing existing civil aviation institutions and human resources will be a major challenge for Afghanistan.

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[2] Afghanistan lies along the most direct flight route between Asia and Europe.

Afghanistan's Airports

Afghanistan's airports system consists of two international airports, Kabul and Kandahar, five domestic airports with paved runways (Mazar-e-Sharif, Konduz, Herat, Jalalabad and Chaghcharan) and 15 regional airports (Sheberghan, Maimana, Qilae, Naw, Farah, Zaranj, Bost, Bamyan, Tereen, Khost, Kojaghar, Faizabad, Khwahan, Darwaz, Kron Monjan and Shindan).

The Consultant team conducted field visits to Kabul, Kandahar, Herat, Mazar-e-Sherif and Konduz airports during the week of September 22, 2002. The team was unable to visit Jalalabad and Faizabad airports. The team consisted of two FAA air traffic services (ATS) specialists, who will prepare a separate, complimentary report that outlines their findings and recommendations as they relate to ATS.

Afghan airports are currently under the command of the International Coalition Forces (ISAF) with little or no MOCAT presence or involvement. All civilian aircraft operate under Visual Flight Rules (VFR) and receive some advisory air traffic services. Kabul and Kandahar airports operate under a 10-minute slot control regime (6 aircraft per hour), which will become more problematic during winter as daylight hours shorten.

The study team has defined two development phases in its recommendations. Phase 1 begins immediately, and is designed to secure an operational airport system prior to the winter months (December 2002) and the Hajj pilgrimage (January 2003). Phase 2 will focus on civilian re-certification of the major airports in accordance with ICAO Annex 14, and will cover the subsequent 2-3 year period. This report will generally not address any longer term needs beyond Phase 2.

There is extensive civilian traffic between Afghan airports employing aircraft operated by the United Nations (UNHAS), International Red Cross and Red Crescent (IRCRC) and various non-governmental organizations (NGOs). Those agencies play an important humanitarian role in regional and remote areas, and their operations are expected to continue (perhaps even intensify) during the winter months. In the short term, it is critical to enhance the operational safety of Kabul and Kandahar international airports, as well as a number of strategic regional airports – especially Herat, Mazar-e-Sherif and Faizabad.

None of Afghanistan's airports have runway approach lighting or navigational aids (navaids), with the exception of Kandahar, which has a military lighting system. Navaids will be discussed in more detail in the FAA report.

A brief discussion of the main airports is provided below. This should be read in conjunction

with two ICAO reports that describes in detail the physical condition of the airports. [3] The Consultant concludes that the technical condition of the airports visited, as described by ICAO, are generally accurate for the purposes of this TDA Definitional Mission.

Mazar-e-Sherif Airport

Mazar-e-Sherif is the economic capital of northern Afghanistan. It has a local population of about 500,000, and is located close to Afghanistan's border with Uzbekistan.

The aircraft operating areas (runway, taxiways, apron) of Mazar-e-Sherif are asphalt-paved, but are in poor condition due to neglected maintenance. The runway was heavily bombed during recent fighting, and 600 m. at the end of the 3,200 m. runway is unusable. A parallel taxiway links one end of the runway to the ramp, but is in poor condition. Bomb craters at the middle of the runway have been patched with asphalt, and it is uncertain whether unexploded ordinance was removed before such craters were filled at Mazar-e-Sherif and generally at other airports, with the exception of Kandahar.

Mazar's passenger terminal is in reasonable condition, and was recently painted. Although it lacks passenger handling facilities, a VIP room is comfortable. The Consultant does not recommend any investment in the terminal building during Phase 1, with the exception of rudimentary passenger check-in counters and security screening equipment.

Because of its sizable population and its regional role as a northern hub for Afghanistan, the Consultant recommends the immediate repair of the runway during Phase 1. A cost estimate to repair the runway was submitted to MOCAT by a local contractor three months ago suggests that the runway can be restored to its original length (of 3,200 m.) at a cost of USD 140,682.

Due to its importance as a regional hub for northern Afghanistan, the Consultant recommends the repair of the runway at Mazar-e-Sharif. However, the Consultant recognizes that the project does not satisfy TDA funding requirements, but nevertheless urges TDA to make every effort to secure the necessary funding from other sources.

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[3] International Civil Aviation Organization (ICAO), Priority Rehabilitation of Civil Aviation – Phase I, Afghanistan. Project Document, February 2002. Also, ICAO Kabul Office, Report on Survey of Provincial Airports, Ministry of Civil Aviation and Tourism and ICAO. Undated document, but based on survey carried out from 9 to 19 June 2002.

Konduz Airport

Konduz Province is an agricultural area located 60 km from the border with Tajikistan, and is referred to as the "bread basket" of Afghanistan. Konduz City has a population of 60,000, with about 100,000 in the surrounding areas. It is located 200 km east of Mazar-e-Sherif, but the roadway is in very poor condition to Pol-e Khormi, located approximately half-way to Mazar-e-Sherif. It is estimated that the current 6-7 hour drive between Konduz and Mazar-e-Sherif can be reduced to 3.5 hours if the road between Konduz and Pol-e Khormi is paved and reconditioned.

The aircraft operating areas at Konduz airport are in very poor condition, with multiple hairline and large cracks, as well as FODs consisting of small stones and dust. Several bomb craters have already been repaired, and runway centerline markings have recently been painted (since the ICAO visit).

Passenger terminal facilities are in good condition, and have been recently painted. However, the unpaved roadway linking the airport to the city, located 10 km away, is in very poor condition.

In light of the agriculture-based economy of Konduz, the Consultant believes that improving the roadway to Pol-e Khormi should be a higher priority than restoring civilian operations at Konduz airport. The Consultant therefore recommends no investment in Konduz Airport during Phase 1, but instead the use of Mazar-e-Sherif airport to serve Konduz. During the winter period, a C-130 aircraft can be employed for essential and emergency supplies.

The Program manager at the United States Agency for International Development (USAID) in Kabul has informed the Consultant that funds have been allocated by USAID and the World Bank to rehabilitate the roadway between Konduz and Pol-e Khormi.

Kandahar Airport

Kandahar International Airport is the second largest airport in Afghanistan, and a critical military facility for U.S. forces that also houses Taliban and Al-Qaeda prisoners. It is unlikely that Kandahar will revert to civilian use during Phase 1; in fact, the U.S. military expects to use the airport for at least another 18 months.

The U.S. forces have been rehabilitating the aircraft movement areas at Kandahar Airport, and expect to complete the program by wintertime.

The only exception may be to use Kandahar as the main hub for Hajj operations by erecting temporary passenger facilities (e.g., tents). This request has been conveyed by the study team

between MOCAT and the military attaché at the U.S. Embassy in Kabul, as well as by the President of Ariana to the U.S. Ambassador.

Herat Airport

Herat is located in western Afghanistan, bordering Iran. It is an important economic center in its own right, with a population of about 250,000. The airport is protected by the local Afghan army, and is by far the best maintained regional airport visited by the study team.

Aircraft operating areas at Herat are asphalt- paved, but are in poor condition due to multiple hairline and large cracks. In light of the importance of Herat as a regional hub, the runway should be paved during Phase 1.

The terminal area consists mainly of military offices, with little area for passenger handling. While a daily domestic flight between Herat and Kabul would not require significant passenger facilities, passenger security screening, (manual) passenger check-in facilities and heating facilities are required. A VIP lounge can also be used, and some military offices can be relocated in order to provide more room for passengers.

The feasibility of using Herat airport as the hub for Hajj operations (in lieu of Kandahar) should be examined in more detail.

Kabul Airport

Kabul is the political capital of Afghanistan. While the city largely survived the bombing, strategic infrastructure such as Kabul Airport was heavily damaged.

The aircraft operating areas are in poor condition, with multiple hairline and large cracks. The passenger terminal is inadequately small and poorly equipped, and the Consultant estimates a maximum hourly capacity of less than 100 passengers at a low service level (IATA Level of Service D or worse). Passenger check-in is conducted manually, and there is no separation between domestic and international passengers. There is only one baggage claim belt and one departing passenger access doorway connecting the terminal holding areas to airside for use by both domestic and international passengers.

Kabul Airport is located close to the city center, and is surrounded by mountainous terrain which does not permit the application of an Instrument Landing System (ILS). The airport has no approach lighting, and can therefore only be used during daylight hours under VFR conditions.

Kabul Airport is currently served by Ariana, Pakistan International Airlines, as well as a number

of UN, ICRC and other NGO aircraft. The priority during Phase 1 should be to introduce proper navigational aids for approaching aircraft, as well as procedures for arriving and departing aircraft. The FAA report will discuss these requirements in more detail.

A new airport greenfield site has been identified at Logar, located about 35 km from the existing airport. While the study team did not visit the proposed site (for security reasons), we were informed by MOCAT that the new site can accommodate a precision approach landing system.

The consultant is reluctant to recommend significant investment at the existing airport site, given its approach constraints, and instead recommends a technical and financial feasibility study to evaluate whether a new airport to serve Kabul should be constructed at Logar.

ICAO Report and IATA Response

An International Civil Aviation Organization (ICAO) team visited Afghanistan in June 2002 and completed a technical report of Afghanistan's main airports. Its findings were criticized by the International Air Transport Association (IATA) because it advocated excessive investment in the airports system.

The Consultant believes that ICAO is correct in defining all requirements needed for Afghanistan to comply with ICAO rules and regulations, especially Annex 14. The weakness of the ICAO report, in our opinion, is that it did not attempt to phase the necessary investments over time. This lead IATA to reject the ICAO findings, and to prudently caution against immediate investment in all airports, since this would lead to increased user fees, and in turn to stifling air transport growth in Afghanistan.

The Consultant also believes that IATA appears to be more focused on improving overflight facilities rather than airside infrastructure and Terminal Maneuvering Areas (TMA). Although overflight fees are a valuable revenue source for MOCAT, they will not contribute directly, and in the same manner, towards the economic and social development of Afghanistan.

Available Sources of Funding for MOCAT

MOCAT has access to funds for the development of Afghanistan's civil aviation sector. About USD 22 million were accumulated in a trust fund during the United Nations embargo (1999-2002) from overflight charges, and have recently been released to the account of the Ministry of Finance

- yet remain earmarked for civil aviation sector investments.[4] Furthermore, Ariana estimates a net profit of USD 8.5 million from Hajj operations (January/February 2003). Approximately USD 8 million of the USD 22 million funds have been allocated by the Cabinet for an ICAO-led airport improvement program, but we understand that the project is currently on hold and may in fact be cancelled.

[4] There are conflicting reports about whether these funds are earmarked for civil aviation investments. The Consultant's conclusions are based on a conversation with Mr. Larry Seals, advisor to H.E. Dr. Ghani, the Minister of Finance and Reconstruction.

Consultant Recommendations

The Afghan civil aviation sector is in very poor condition, and is in critical need of technical and financial support. As a result of 23 years of war, Afghanistan's airports today lack all the basics: navigational aids, precision approach, air traffic services and procedures, ICAO-compliant airport infrastructure (e.g., runways, taxiways, terminal), basic regulatory and operating institutions and generally a lack of trained and skilled management and staff.

The international community has pledged USD 4.5 billion towards the reconstruction of Afghanistan, but the success of those efforts in this landlocked country characterized by mountainous terrain will depend on the availability of a safe and reliable civil aviation sector.

The Consultant furthermore believes that Afghanistan should be treated as an exceptional case by TDA, in collaboration with other U.S. Government agencies, and that TDA should expedite assistance to the Ministry of Civil Aviation and Tourism and Ariana. The FAA and Pan Am played an important role in building Afghanistan's airports and national airline since their inception, and developing them into the leaders in the region. The role of the United States in civil aviation is recognized with extreme gratitude by senior officials of the Ministry of Civil Aviation and Tourism (MOCAT) and Ariana Afghan Airlines. Their residual loyalty towards the United States is astonishingly high, despite very generous offers from Airbus and other European manufacturers, including the (indirect) donation of three widebody Airbus aircraft, interim crew to operate the aircraft, and Afghan crew training at no cost to Ariana. It is astonishing that Ariana and MOCAT still wish to maintain a Boeing fleet, despite all these "seductions" – for lack of a better term.

Afghanistan is in dire need for technical aviation assistance. The TDA/FAA mission was eagerly awaited by MOCAT and Ariana, and Afghan expectations for and trust in TDA assistance are high. At the same time, the potential for U.S. exports of goods and services - especially aircraft, ATC equipment and architecture and engineering (A&E) contracts - are equally substantial, since American goods and services are credited for Afghanistan's regional leadership, historically, in civil aviation. Unless the U.S. Government acts quickly and generously in providing technical assistance and funding to MOCAT and Ariana, there is substantial risk that the Afghan aviation sector will be forever penetrated by European suppliers.

All airports in Afghanistan require the rehabilitation and pavement of their aircraft operating areas. However, such activities will not lead to any U.S. export potential, which is the primary criteria used by TDA to finance projects.

In the meantime, the Consultant has identified five projects that may be supported by TDA, which are presented in the priority deemed by the Consultant.

Priority 1: Kabul International Airport Navigational Aids

Kabul Airport is the main international gateway for land-locked Afghanistan. It has a difficult flight approach, and Visual Flight Rule conditions introduce a significant amount of risk for aircraft that operate in Afghan airspace.

Imminent winter conditions will exacerbate safety, and will reduce operational reliability. The Consultant therefore believes that introducing navigational aids and procedures at KBL should be the first priority for the Afghan civil aviation sector. The FAA report will focus in detail on this priority matter.

Priority 2: Technical Advisor – Regulatory Framework

The prevailing civil aviation law dates to 1982, and lacks the proper regulatory framework to enable the reconstruction of a vibrant civil aviation sector in Afghanistan.[5] MOCAT has established a committee whose mandate is to develop a new regulatory framework and civil aviation law, but it consists of technical staff with little or no experience in public policy and aviation economics. The Deputy Minister recognizes the limitations of the Ministry, and has requested technical assistance in order to support the committee's drafting of a new civil aviation law. The Consultant believes that a new regulatory framework is a critical basis for redeveloping a safe, secure and cost-effective air transportation system for Afghanistan.

The new regulatory framework should at a minimum introduce minimum levels of safety, security and regulatory oversight. It should define the different civil aviation institutions needed to reconstitute the civil aviation sector, as well as their functions, and should define the roles and responsibilities of the Government, Ariana, and other users, as well as the inter-relationship between MOCAT and other Government ministries and entities. The new law should also support the re- building of Ariana while at the same time paying due attention to national economic development priorities; in other words, a period of limited protectionism followed by airline liberalization.

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[5] Official Gazette, Issue No. 519, The Democratic Repbulic of Afghanistan, Ministry of Justice, November 6, 1982.

Export Potential

While providing technical assistance to the committee responsible for drafting the new civil aviation law will not have any direct export benefits for U.S. companies, it will nevertheless have the following indirect benefits:

- It will sustain goodwill between MOCAT and the United States, which will ultimately lead to the acquisition of airport and navigation equipment, information technology, future acquisition of consulting and advisory assistance (accounting, safety and security, etc.).

- It will develop a proper regulatory framework to support Ariana's corporatization efforts, and in turn will enhance its prospects to acquire new Boeing (737, 757, 767) aircraft. This will be discussed in more detail under "Priority 4".

Environmental Impacts

The proposed civil aviation law should provide guidelines for mitigating any adverse environmental impacts associated with civil aviation operations.

The proposed Terms of Reference and budget for this recommendation is presented in Appendix 1.

Priority 3: Technical Assistance - Hajj Operations

MOCAT estimates that 25,000 travelers will travel to Jeddah during the January/February 2003 Hajj period. Passengers will mainly originate from Herat, Mazar-e-Sherif, Kabul and Faizabad. Accommodating Hajj will be a challenging task, since: (i) it will take place during the winter season, yet all airports operate under Visual Flight Rule (VFR) conditions due to a lack of approach lighting and navigational aids at all airports; and, (ii) Ariana has a limited number of aircraft, limited maintenance facilities, and consequently limited capacity to transport pilgrims in addition to sustaining its existing scheduled operations.

According to MOCAT, Kandahar is the only Afghan airport capable of providing nonstop service to Jeddah, Saudi Arabia, using the existing Ariana fleet. Hajj service from other airports will require a technical stop, thereby reducing the efficiency of Ariana and its ability to transport the allotted number of pilgrim. Because Kandahar is one of the main military bases used by U.S.

forces, requests have been made by the Afghan Government for permission to use Kandahar as the main hub for Hajj flights.[6]

To facilitate U.S. military approval to use Kandahar as a Hajj hub for Afghanistan in a safe and secure manner, MOCAT will require a plan for managing the Hajj operation. This will consist of: (i) scheduling of Hajj flights and managing the traffic flow of pilgrims; (ii) identifying passenger and baggage handling, and security screening requirements at the four major airports, as well as at Kandahar; (ii) identifying requirements for temporary structures with adequate facilities and heating to serve as passenger terminals in Kandahar and other regional airports; (iii) establishing a proper liaison program with the U.S. military; (v) determining whether Ariana's existing fleet and capacity are adequate to serve all pilgrims, as well as any additional aircraft requirements; and, (vi) repairing the VSAT link at Kandahar[7].

The study should also examine the feasibility of using Herat in lieu of Kandahar as a Hajj hub for Afghanistan.

Export Potential

Only one baggage and passenger screening device is operational in Afghanistan – at Kabul. We estimate that MOCAT will need to acquire at least 12 screening devices (two for each airport, as well as two pairs for Kandahar) at a cost of a few million dollars.

Environmental Impacts

There are no adverse environmental impacts envisaged. All operations will take place during daytime, and most airports (with the exception of Kabul) are located some distance from the city centers.

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[6] The Minister of Civil Aviation and Tourism was killed last year during Hajj because of cancelled flights, etc. The Consultant believes that it would be politically prudent for the United States to facilitate the successful staging of this year's Hajj operations. It would also be desirable to use Herat, since the current Minister of Transportation is the son of the prominent Governor of that province.

[7] This will be discussed in detail in the FAA report. Equipment components are located in Kandahar, but have been dismantled. IATA is willing to repair it upon securing the approval of the US military, and MOCAT is able to operate the equipment remotely from Kabul (thereby avoiding placing MOCAT staff at Kandahar).

The Terms of Reference and budget for this recommendation is provided in Appendix 2.

Priority 4: Strategic Business Plan – Ariana Afghan Airlines

Ariana currently operates two B727-200s, and has taken delivery (in protest) of one Airbus A300-B4, with two additional aircraft to be delivered later this year. Ariana management is determined that the carrier should remain a Boeing operator, especially B-727, B-737 and extended range B-767.

Nevertheless, Ariana lacks a qualified management team, and is unable to develop a business strategy and plan without external technical assistance. Management is re-initiating routes that were historically profitable (two decades ago), despite the emergence of strong regional competitors, such as Uzbekistan Airlines, that have since filled the void left by Ariana's demise. It is the judgement of the Consultant that routes currently being pursued by Ariana based on their historic profitability (e.g., Kabul – Moscow – London) are no longer profitable.[8]

Despite the dynamism of the President of Ariana, Captain Azimi, a Boeing 727 pilot, he lacks the proper management team and skills to develop a strategic business plan for Ariana. Furthermore, and as a department of MOCAT owned by various Government agencies, Ariana experiences tremendous interference in day-to-day management from a number of Government Ministries - especially MOCAT, Foreign Affairs, Justice and Finance. Captain Azimi secured the approval of President Karzai for the corporatization of Ariana, which should in turn enable Ariana's management to develop and implement a strategic business strategy without external interference, and therefore to rebuild its organization. A new regulatory framework (discussed in Priority 2 above) will also enable Ariana to reconstitute itself during a period of, say, 5 years, before the domestic aviation market is liberalized. This in turn would provide its management with the autonomy to acquire new aircraft and equipment, and would enable it to select Boeing aircraft for its fleet.

The Consultant recommends that TDA fund a technical assistance study to assist Ariana to in developing a strategic business plan for the next 2-3 years, which would identify new markets, estimate market demand and traffic, assess regional competition, define aircraft requirements, determine organizational requirements and staffing needs, examine ancillary revenue sources, and develop a pro-forma financial analysis. The study would also develop a corporate charter

[8] This is especially true in the case of fifth freedom traffic, and in particular the transport of Non-Resident Indians (NRIs) from North American and western Europe to Delhi and Mumbai.

and to define a sound corporate governance structure consistent with its corporatization.

Once a sound strategic business plan is developed, TDA may consider in the future providing technical assistance aimed at implementing the business and strategic plan. Because the management of Ariana lacks adequate skills and expertise in key areas, including finance, sales and marketing, technical (maintenance) and operations, it would be desirable to assist Ariana by providing an interim management team to work with Captain Azimi, and perhaps to train a new management team. Finally, and because all functions at the airline are performed manually, Boeing is willing to donate surplus computers, as well as to set up an Information Technology (IT) system.

Export Potential

Ariana is interested to acquire Boeing 737, 757 and 767 aircraft. While it is unclear how many it will acquire, nor the total exports associated with implementing its plans, it is safe to assume that the export potential exceeds USD 100 million. Ariana will also require Information Technology (IT) systems, including maintenance management, computer reservations system, yield management, etc.

Environmental Impacts

There are no unusual adverse environmental impacts envisaged, since Ariana is a member of the International Air Transport Organization (IATA), and will operate within international guidelines. In fact, purchasing new aircraft will ultimately mean retiring its existing old fleet of (three-engine) B727s and in turn will lead to reduced noise and NOx emissions.

The Terms of Reference and budget for this recommendation is presented in Appendix 3.

Priority 5: Feasibility Study – Kabul International Airport

After 22 years of war, Kabul International Airport is a derelict facility. It is located near the city center, and surrounding terrain does not allow precision approach instruments, especially an Instrument Landing System (ILS). Furthermore, the passenger terminal is too small to accommodate existing traffic, and basic facilities, such as hangars, maintenance workshops, airfield and approach lighting, navigational aids, aprons, etc., is lacking. Aircraft movement areas, such as the runway, taxiway, require major improvement.

A 1985 study identified a new airport site at Logar, located about 35 km from Kabul. The new

site does not have the terrain constraints of the existing airport site. Considering the sizable investment needed for the rehabilitation of the existing airport, as well as its precision approach limitations, the Consultant recommends that TDA fund a feasibility study whose aim would be to evaluate whether a new greenfield airport at Logar would be more desirable than upgrading and modernizing the existing airport (KBL).

The study should also take into account private finance schemes for the new airport, and the use of proceeds from developing the existing airport site (into commercial and residential real estate) to finance the construction of the new airport, roadway access as well as to upgrade regional airports.

Export Potential

A new airport for Kabul will cost a minimum of USD 150-200 million. Potential U.S. exports of goods and services could account for about 35% of the airport's total capital costs – therefore, USD 50-65 million in potential exports.

Environmental Impacts

The proposed airport site at Logar is located about 35 km from the city of Kabul, whereas the current airport is located within the city. Environmental impact studies will be an integral part of the proposed feasibility study, but it is very likely that the project will lead to reduced adverse environmental impacts.

The Terms of Reference and budget for this recommendation is presented in Appendix 4.

APPENDIX 1 - TERMS OF REFERENCE

Technical Advisor – Regulatory Framework

Introduction

The current civil aviation law dates to 1982, and lacks the proper regulatory framework to allow the reconstruction of a vibrant civil aviation sector in Afghanistan. A new regulatory framework is a critical basis for redeveloping a safe, secure and sustainable air transportation system for Afghanistan.

MOCAT has established a committee in order to develop a new regulatory framework and civil aviation law, but it consists of technical staff with little or no experience in public policy and aviation economics. MOCAT recognizes those limitations, and has requested technical assistance to support the development of a new civil aviation law.

The new regulatory framework should, at a minimum, introduce minimum levels of safety, security and regulatory oversight. It should define the different civil aviation institutions needed to reconstitute the civil aviation sector, as well as their functions, and should define the roles and responsibilities of the Government, Ariana, and other users, as well as the inter-relationship between MOCAT and other Government ministries and entities. The new law should also support the re- building of Ariana while at the same time paying due attention to national economic development priorities; in other words, a period of limited protectionism followed by airline liberalization.

Terms of Reference

Task 1. Review existing civil aviation law dated 1982; discuss its limitations in light of the current operational and regulatory environment in Afghanistan with MOCAT officials. Review three civil aviation laws from other countries that are comparable to Afghanistan.

Task 2. In consultation with various Government Ministries, define the objectives of the Government of Afghanistan with respect to its civil aviation sector, especially as they relate to safety, security, competition, essential air services, public and private sector investment, environment, etc.;

Task 3. Define and describe all requisite institutional functions and organizations required to rebuild a safe, secure and sustainable civil aviation sector, including operational and

regulatory activities, organization structures, human resources, financing mechanisms (regional and international airports), etc.;

Task 4. Define the roles and responsibilities of stakeholders in the civil aviation sector, including MOCAT, Ariana Afghan Airlines, various Government ministries, private aircraft operators, new entrant airlines, international airports, regional airports, small airports, service providers, etc.

Task 5. Prepare a draft of the proposed civil aviation law in collaboration with MOCAT, and circulate and discuss with various Government ministries; Incorporate comments provided by cognizant authorities into a final draft of the civil aviation law.

Time Budget

Person-Days ***Tasks***	**1**	**2**	**3**	**4**	**5**	**Total**
Specialist – Aviation Policy	15	10	15	5	5	**50**
Specialist - Aviation Policy	10	10	15	5	5	**45**
Specialist - Law	10				20	**30**

Cost Budget

Priority 2: Civil Aviation Law				
Professional Fees	Time (Days)	Daily Rate	Subtotal	Total
Specialist – Aviation Policy	50	1,750	87,500	
Specialist - Aviation Policy	45	1,750	78,750	
Specialist - Law	30	2,000	60,000	
Subtotal – Professional Fees				226,250
Other Direct Costs	Units	Unit Cost		
Air Fare	3	8,000	24,000	
Per Diem @ $202	94	202	18,938	
Local Transport, Airport Tax	3	500	1,500	
Translator	1	500	500	
Airport Taxis and Trip Preparation	3	500	1,500	
Misc. including Tel and Fax	3	500	1,500	
DBA Insurance, Medevac	94	37	3.469	
Subtotal – Other Direct Costs				51,406
TOTAL				**277,656**

APPENDIX 2 - TERMS OF REFERENCE

Technical Assistance – Hajj Operations

Introduction

MOCAT estimates that 25,000 travelers will travel to Jeddah during the January/February 2003 Hajj period. Passengers will mainly originate from Herat, Mazar-e-Sherif, Kabul and Faizabad. Accommodating Hajj will be a challenging task, since: (i) it will take place during the winter season, yet all airports operate under Visual Flight Rule (VFR) conditions due to a lack of approach lighting and navigational aids at all airports; and, (ii) Ariana has a limited number of aircraft, limited maintenance facilities, and consequently limited capacity to transport pilgrims in addition to sustaining its existing scheduled operations.

According to MOCAT, Kandahar is the only Afghan airport capable of providing nonstop service to Jeddah, Saudi Arabia, using the existing Ariana fleet. Hajj service from other airports will require a technical stop, thereby reducing the efficiency of Ariana and its ability to transport the allotted number of pilgrim. Because Kandahar is one of the main military bases used by U.S. forces, requests have been made by the Afghan Government for permission to use Kandahar as the main hub for Hajj flights.[9]

To facilitate U.S. military approval to use Kandahar as a Hajj hub for Afghanistan in a safe and secure manner, MOCAT will require a plan for managing the Hajj operation. This will consist of: (i) scheduling of Hajj flights and managing the traffic flow of pilgrims; (ii) identifying passenger and baggage handling, and security screening requirements at the four major airports, as well as at Kandahar; (ii) identifying requirements for temporary structure with adequate facilities and heating to serve as passenger terminals in Kandahar and other regional airports; (iii) establishing a proper liaison program with the U.S. military; (v) determining whether Ariana's existing fleet and capacity are adequate to serve all pilgrims, as well as any additional aircraft requirements; and, (vi) repairing the VSAT link at Kandahar[10].

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[9] The Minister of Civil Aviation and Tourism was killed last year during Hajj because of cancelled flights, etc. The Consultant believes that it would be politically prudent for the United States to facilitate the successful staging of this year's Hajj operations. It would also be desirable to use Herat, since the current Minister of Transportation is the son of the prominent Governor of that province.

[10] This will be discussed in detail in the FAA report. Equipment components are located in Kandahar, but have been dismantled. IATA is willing to repair it upon securing the approval

The study should also examine the feasibility of using Herat as a Hajj hub for Afghanistan, and as an alternative to using Kandahar.

Terms of Reference

Task 1. Assess whether Herat can be used as the hub for Hajj operations in Afghanistan. Considerations should include payload/range of aircraft to Jeddah, Saudi Arabia, passenger volumes and schedule, existing and additionally required passenger facilities. The Consultant will also compare the relative advantages of Herat to those of Kandahar.

Task 2. Define the capacity requirements for passenger terminal areas at each of the regional airports, including the hub airport, as well as additional infrastructure and equipment requirements. Define procedures for processing passengers and baggage, as well as communications technology between the various airports, Ariana, etc. Develop contingency plans in cases of delay, emergencies, etc. If Kandahar is the selected airport hub, develop a liaison program with the U.S. military.

Task 3. Define safety and security requirements at all airports, including necessary equipment. Also determine check-in procedures and equipment necessary to process the large number of passengers.

Task 4. Organize a two-day training seminar for local officials responsible for the Hajj operation at each airport, and describe the Hajj management program and procedures.

Time Budget

Person-Days ***Tasks***	**1**	**2**	**3**	**4**	**Total**
Specialist – Aviation Planning	15	10	10	5	40
Specialist - Airport Operations	15	10	10	5	40

of the US military, and MOCAT is able to operate the equipment remotely from Kabul (thereby avoiding placing MOCAT staff at Kandahar).

Cost Budget

Priority 3: Hajj Technical Assistance				
Professional Fees	Time (Days)	Daily Rate	Subtotal	Total
Specialist – Aviation Planning	40	1,750	70,000	
Specialist - Aviation Policy	40	1,750	70,000	
Subtotal – Professional Fees				140,000
Other Direct Costs	Units	Unit Cost		
Air Fare	2	8,000	16,000	
Per Diem @ $202	60	202	12,120	
Local Transport, Airport Tax	2	500	1,000	
Translator	1	500	500	
Airport Taxis and Trip Preparation	2	500	1,000	
Misc. including Tel and Fax	2	500	1,000	
DBA Insurance, Medevac	90	37	3,330	
Subtotal – Other Direct Costs				34,950
TOTAL				**174,950**

APPENDIX 3 - TERMS OF REFERENCE

Feasibility Study – Ariana Afghan Airlines

Introduction

Ariana currently operates two B727-200s, and has taken delivery of one Airbus A300-B4, with two additional aircraft to be delivered later this year. Ariana management is determined that the carrier should remain a Boeing operator, especially B-727, B-737 and extended range B-767.

Nevertheless, Ariana lacks a qualified management team, and is unable to develop a business strategy and plan without external technical assistance. Management is re-initiating routes that were historically profitable (two decades ago), despite the emergence of strong regional competitors, such as Uzbekistan Airlines, that have since filled the void left by Ariana's demise. It is the judgement of the Consultant that routes currently being pursued by Ariana based on their historic profitability (e.g., Kabul – Moscow – London) are no longer profitable.[11]

Despite the dynamism of the President of Ariana, Captain Azimi, a Boeing 727 pilot, he lacks the proper management team and skills to develop a strategic business plan for Ariana. Furthermore, and as a department of MOCAT owned by various Government agencies, Ariana experiences tremendous interference in day-to-day management from a number of Government Ministries - especially MOCAT, Foreign Affairs, Justice and Finance. Captain Azimi secured the approval of President Karzai for the corporatization of Ariana, which should in turn enable Ariana's management to develop and implement a strategic business strategy without external interference, and therefore to rebuild its organization. A new regulatory will also enable Ariana to reconstitute itself during a period of, say, 5 years, before the domestic aviation market is liberalized. This in turn would provide its management with the autonomy to acquire new aircraft and equipment.

Terms of Reference

Task 1. Develop a strategic business plan for the next 2-3 years, focusing on new markets, estimate market demand and traffic volumes and assess regional competition.

[11] This is especially true in the case of fifth freedom traffic, and in particular the transport of Non-Resident Indians (NRIs) from North American and western Europe to Delhi and Mumbai.

Task 2. Determine the organization structure, staffing requirements and aircraft requirements necessary to implement the business plan. Define a strategy for beneficial collaboration with other airlines, including code share agreements, interline agreements, alliances, etc.

Task 3. Define other sources of revenue, including ground handling and other airport activities, onboard sales, etc.

Task 4. Develop a financial pro-forma that reflects the business plan, and determine the feasibility of the proposed network. Identify sources of financing required to implement the business plan.

Task 5. Develop a corporate charter and corporate governance structure for the newly corporatized Ariana.

Time Budget

Person-Days ***Tasks***	**1**	**2**	**3**	**4**	**5**	**Total**
Specialist – Airline Economics	25	15	10	20	5	75
Specialist - Airline Operations	25	10	10	10	5	60
Specialist - Corporate Governance					20	20

Cost Budget

Priority 4: Ariana Business Plan				
Professional Fees	Time (Days)	Daily Rate	Subtotal	Total
Specialist – Airline Economics	75	1,750	131,250	
Specialist - Airline Operations	60	1,750	105,000	
Specialist – Corporate Governance	20	2,000	40,000	
Subtotal – Professional Fees				276,250
Other Direct Costs	Units	Unit Cost		
Air Fare	3	8000	24,000	
Per Diem @ $202	116	202	23,483	
Local Transport, Airport Tax	3	500	1,500	
Translator	1	500	500	
Airport Taxis and Trip Preparation	3	500	1,500	
Misc. including Tel and Fax	3	500	1,500	
DBA Insurance, Medevac	116	37	4,301	
Subtotal – Other Direct Costs				56,784
TOTAL				**333,034**

APPENDIX 4 - TERMS OF REFERENCE

Feasibility Study – Kabul International Airport

Introduction

After 22 years of war, Kabul International Airport is a derelict facility. It is located near the city center, and surrounding terrain does not allow precision approach instruments, especially an Instrument Landing System (ILS). Furthermore, the passenger terminal is too small to accommodate existing traffic, and basic facilities, such as hangars, maintenance workshops, airfield and approach lighting, navigational aids, aprons, etc., is lacking. Aircraft movement areas, such as the runway, taxiway, require major improvement.

A 1985 study identified a new airport site at Logar, located about 35 km from Kabul. The new site does not have the terrain constraints of the existing airport site. Considering the sizable investment needed for the rehabilitation of the existing airport, as well as its precision approach limitations, the Consultant recommends that TDA fund a feasibility study in order to evaluate whether a new greenfield airport at Logar would be more desirable than upgrading and modernizing the existing airport (KBL).

The study should also take into account private finance schemes for the new airport, and the use of proceeds from developing the existing airport site (into commercial and residential real estate) to finance the construction of the new airport, roadway access as well as to upgrade regional airports.

Terms of Reference

Task 1. Review all recent ICAO reports on Kabul International Airport, and determine the capital cost requirements for upgrading and modernizing it to comply with Annex 14.[12] Determine limitations associated with airport operations, especially navigational aids and the feasibility of an Instrument Landing System (ILS).

Task 2. Review all available technical and financial feasibility studies related to the proposed greenfield airport at Logar. Update available studies in terms of the existing and forecast market for air traffic services in Kabul, changes in aircraft performance capabilities, as

[12] Including: International Civil Aviation Organization (ICAO), Priority Rehabilitation of Civil Aviation – Phase I, Afghanistan. Project Document, February 2002. Also, ICAO Kabul Office, Report on Survey of Provincial Airports, Ministry of Civil Aviation and Tourism and ICAO. Undated document, but based on survey carried out from 9 to 19 June 2002.

well as range/payload requirements.

Task 3. Develop a pro-forma financial analysis of all sources of revenues, capital expenditures and costs associated with constructing a new airport at Logar. Develop a similar pro-forma analysis for the modernization of the existing Kabul airport. Recommend a course of action and discuss with relevant Government authorities highlighting the current navaid limitations of the existing airport.

Task 4. Evaluate the potential for developing the existing airport site for commercial and residential real estate development.

Task 5. Propose sources for financing the proposed Logar airport project, especially those related to private sector investment and participation, multilateral agency sources, revenues from developing the existing airport site, etc.

Task 6. Assess the environmental impact associated with a new airport at Logar, and propose means to mitigate any such adverse impacts.

Time Budget

Person-Days ***Tasks***	**1**	**2**	**3**	**4**	**5**	**6**	Total
Specialist - Airport Economics	10	10	25				45
Specialist - Airport Finance/Development	10	20	30		15		75
Specialist - Airport Planner	15	15					30
Specialist - Environmental		10				15	25
Specialist - Real Estate Development				25			25

Cost Budget

Priority Five				
Professional Fees	Time (Days)	Daily Rate	Subtotal	Total
Specialist - Airport Economics	45	1,750	78,750	
Specialist - Airport Finance/Development	75	1,750	131,250	
Specialist - Airport Planner	30	1,500		
Specialist - Environmental	25	1,500	37,500	
Specialist - Real Estate Development	25	1,750		
Subtotal – Professional Fees				247,500
Other Direct Costs	Units	Unit Cost		
Air Fare	5	8000	40,000	
Per Diem @ $202	131	202	26,513	
Local Transport, Airport Tax	5	500	2,500	
Translator	1	500	500	
Airport Taxis and Trip Preparation	5	500	2,500	
Misc. including Tel and Fax	5	500	2,500	
DBA Insurance, Medevac	131	37	4,856	
Subtotal – Other Direct Costs				79,369
TOTAL				**326,869**

List of Potential U.S. Suppliers

Afghanistan currently lacks all basic civil aviation infrastructure, equipment and know-how. Almost all U.S. suppliers of civil aviation goods and services are eligible to participate in the reconstruction of the sector.

APPENDIX 5 – LIST OF CONTACTS

Ministry of Civil Aviation and Transport

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Mr. A. Q. Qadir
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