

PROJECT DOCUMENT (REVISION 1)

Project Title: Co-operative Development of Operational Safety and Continuing Airworthiness Programme in South Asia (COSCAP-SA)

Project Number: RAS/97/902

Duration: 10 Years from the starting date of February 1998

Project Cost: US Dollars 4,936,896

Participating Countries: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka

Sector and Sub-Sector: Transport and Communications

Governments' Executing Agency: Departments of Civil Aviation of the Participating Countries

Executing Agency: International Civil Aviation Organization

Starting Date: February 1998

Participating

Governments' Approval:

**Name, Title and Signature on behalf of
the Participating Government**

Date

Government of: Bangladesh

Government of: Bhutan

Government of: India

Government of: Maldives

Government of: Nepal

Government of: Pakistan

Government of: Sri Lanka

The project, the implementation of which commenced in February 1998, is a co-operative agreement between the above States guided by a Steering Committee and executed by the International Civil Aviation Organization by means of a trust fund. It aims at enhancing the safety and efficiency of air transport operations in the region through the establishment of a Regional Aviation Safety Organization. The purpose of the Organization is to overcome deficiencies in the flight safety oversight capability of the participant States by providing a regional core of highly qualified flight operations and airworthiness inspectors to perform the full range of flight safety inspection and certification functions on behalf of the participant States. The project will also enhance the individual oversight capability of each participant State by providing on-site training of national inspectors and conducting systematic assessments of States' flight safety organizations. ***This project revision reflects the decision of the Steering Committee to now institutionalize and gradually regionalize the project expertise and also to expand the scope of the project by including the subject of aerodrome certification and safety. The project duration is increased by 5 years to a total of 10 years.***

(This is a restricted document meant only for use by the project participating Governments and the International Civil Aviation Organization (ICAO). No part of this document may be reproduced or used in any manner by any individual, company or organization without the written approval of ICAO).

PART A CONTEXT

1. **The Convention on International Aviation as the basis for the International Operation and Continuing Airworthiness of Aircraft and Airport Safety.**

The Convention on International Civil Aviation, signed at Chicago on 7 December 1944 (Chicago Convention), sets forth certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner, and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically.

The Chicago Convention also established the International Civil Aviation Organization (ICAO), the objectives of which are to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport so as to ensure the safe and orderly growth of international civil aviation throughout the world.

Flight Safety

Within the Chicago Convention and its Annexes there are defined two levels of responsibility for the oversight of international, commercial air transportation: responsibilities associated with the State where an aircraft is registered (State of Registry), and responsibilities associated with the State wherein an operator has its principle place of business (State of the Operator).

With regard to the *State of Registry*, the Chicago Convention provides that every aircraft of a Contracting State engaged in international navigation shall carry licensed personnel, a Certificate of Registration and a Certificate of Airworthiness. The certificates of competency and licenses for operating personnel and the Certificate of Airworthiness shall be issued or rendered valid by the State in which the aircraft is registered. Furthermore, the Convention stipulates that certificates of competency and licenses for pilots, flight and maintenance personnel and certificates of airworthiness issued or rendered valid by the State of Registry shall be recognized as valid by the other Contracting States, provided that the requirements under which such certificates and licenses were issued or rendered valid are equal to or above the minimum standards which may be established from time to time pursuant to the Chicago Convention. The Convention also provides that every State will undertake to adopt measures to insure that every aircraft carrying its registration mark, wherever such aircraft may be, shall comply with the rules and regulations relating to the flight and manoeuvre of the aircraft there in force.

Annex 6 to the Convention stipulates that the *State of the Operator* will issue an Air Operator Certificate (AOC) or equivalent document for commercial air transport operations after the operator demonstrates that it has an adequate organization, method of control and supervision of flight operations, training programme, and maintenance arrangements consistent with the nature and extent of the operations. Annex 6 then provides that the State will supervise the operator to ensure that it continue to maintain the requirements under which the AOC was originally issued.

The minimum operations and airworthiness standards which State of Registry and State of the Operator must ensure are contained in Annexes 1, 6 and 8 to the Convention. Annex 1 contains standards and practices for personnel licensing. Annex 6 contains the complete international basis for the recognition by States of Air Operator Certificates for the purpose of commercial and charter operations to and from the territories of other States. The requirements for the issuance of Air Operator Certificates contained in Annex 6 are supplemented by guidance material published in the ICAO *Manual of Procedures for Operations Certification and Inspection* (Doc 8335-AN/879/3) and *Manual of Procedures for an Airworthiness Organization* (Doc 9389-AN/919). In Annex 8, the minimum standards define the technical specifications for recognition by States of Certificates of Airworthiness. They include only broad standards which define, for application by competent State authorities, the complete international basis for the recognition by States of Certificates of Airworthiness for the purpose of flight of aircraft of other States into or over their territories. The minimum standards contained in Annex 8 are supplemented

by guidance material published in the ICAO *Airworthiness Technical Manual* (Doc 9051-AN/896).

Aerodrome Safety

On 12 March 2001 the Council of ICAO adopted Amendment 4 to Annex 14 to the Convention on International Civil Aviation - International Standards and Recommended Practices - Aerodromes. The Amendment, *inter-alia*, covered the subject of Certification of Aerodromes. The intent of the added specifications is to ensure the establishment of a regulatory regime so that compliance with the specifications in the Annex can be effectively enforced. It is recognized that the methods of ownership, operation and surveillance of aerodromes differ among States. The most effective and transparent means of ensuring compliance with applicable specifications is the availability of a separate safety entity and a well-defined safety oversight mechanism with support of appropriate legislation to be able to carry out the function of safety regulation of aerodromes.

While it is a **Recommendation** that States should certify aerodromes open for public use in accordance with the specifications (of Annex 14) as well as other relevant ICAO specifications through an appropriate regulatory framework, it is a **Standard** that as of 27 November 2003, States shall certify aerodromes used for international operations. It is also a **Standard** that the regulatory framework shall include the establishment of criteria for the certification of aerodromes.

While it is a **Recommendation** that a certified aerodrome should have in operation a safety management system, it is a **Standard** that as of November 2005, a certified aerodrome shall have in operation a safety management system.

It is also a **Recommendation** that as part of the certification process, States should ensure that an aerodrome manual which will include all pertinent information on the aerodrome site, facilities, services, equipment, operating procedures, organization and management including safety management system, is submitted by the applicant for approval/acceptance prior to granting the aerodrome certificate.

ICAO will be issuing guidance material on the subject of aerodrome certification which will, *inter-alia*, cover the subjects of regulatory framework and safety management system and aerodrome manual.

2. Specific Responsibilities of the State for Safety Oversight of International Operators

Oversight of International Operators

It is implicit within the Convention, its Annexes, and associated guidance material that Contracting States will establish the necessary organizational structure within its Civil Aviation Authority (CAA) or equivalent Government organization to adequately discharge its certification responsibilities. Before granting an Air Operator Certificate, the State must have the necessary legal framework, personnel, and methodology to ensure that the operator meets all of the minimum standards for the operation and maintenance of aircraft as set forth in Annexes 1, 6 and 8. When there are differences between national regulations and practices and the international standards contained in the Annexes, the State is required to notify ICAO in accordance with Article 38 of the Convention. It is further implicit that the State of the Operator will conduct a programme of continuing surveillance of its international operators to ensure that they continue to adhere to the standards upon which the issuance of the Air Operator Certificate was originally based.

Certification and continuing surveillance go hand in hand. The same government infrastructure and oversight capabilities required for certification process will also implement an adequate surveillance programme.

The broad standards contained in Annexes 6 and 8 provide the basis for the development of national operations and airworthiness regulations and rules which would specify the scope and detail

considered necessary by individual States for the oversight of flight operations and the continuing airworthiness of individual aircraft. Thus, it is necessary that each State either develops its own comprehensive operations and airworthiness regulations and rules consistent with the provisions of Annex 6 and 8, or adapt those developed by another Contracting State. A State's operations and airworthiness regulations should contain, at a minimum, provisions to approve operators to conduct international air transport, certify the airworthiness of aircraft, approve aircraft maintenance organizations, license operations and maintenance personnel, and provide safety oversight of flight operations and continuing airworthiness.

As previously discussed, the State of Registry is responsible for ensuring compliance with its operations and airworthiness regulations by those operators and aircraft under its jurisdiction. Each State can exercise this responsibility directly, with its duly trained and experienced human resources, or through a recognized operations and airworthiness agency from outside of the State. Such an outside agency could also serve to ensure compliance with operations and airworthiness regulations by operators, repair facilities, and licensed operations and maintenance personnel.

At the time the Chicago Convention was drafted it was probably assumed that the State of the Operator and State of Registry would normally be one and the same. Today, it is a common practice for an operator based in a State to lease and have operational control over aircraft registered in another State. Because this has, in some instances, made it difficult for States of Registry to fulfill their regulatory obligations under the Convention, Article 83 *bis* to the convention, which came into force following ratification by 98 Contracting States in June 1997, permits a State of Registry to transfer many of its responsibilities to the State of the Operator.

It must be emphasized that while the standards and practices required by the Chicago Convention are applicable only to the international operators of the Contracting States, the capability which a Contracting State must develop in order to ensure compliance with these standards can also be used to oversee flight operations and airworthiness in the domestic context.

Oversight of Aerodrome Safety

It is the responsibility of the State to ensure the safety of operations at its aerodromes by promulgating appropriate legislation and a regulatory framework, establishing a regulatory authority, defining aerodrome certification procedure and establishing an entity for conducting the oversight functions.

3. Recent Global Emphasis on Aviation Safety

Flight Safety Oversight and Harmonization of Regulations

Resolution A29-13 - *Improvement of Safety Oversight*, which was adopted by the 29th ICAO Assembly in 1992, recognized that many contracting States may not have the regulatory framework or financial or technical resources to carry out the minimum requirements of the Chicago Convention and its Annexes and noted that many contracting States might experience difficulty in carrying out their responsibilities under international law for safety oversight of air carrier operations. The resolution called upon all contracting States (i) to reaffirm their safety oversight obligations, especially the important safety provisions contained in Annexes 1 and 6 of the Chicago Convention; (ii) to review their national legislation implementing those obligations and to review their safety oversight procedures to ensure effective implementation; and (iii) with respect to those States able to do so, to provide requesting States with assistance in the form of financial and technical resources to enable such requesting States to carry out their responsibilities for safety oversight of air carrier operations. The 31st session of the ICAO Assembly in 1995 endorsed a voluntary safety oversight assessment programme based upon the previous resolution, and established a mechanism for financial and technical contributions to that programme.

At the Directors General of Civil Aviation Conference on Global Strategy for Safety Oversight held in Montreal from 10 to 12 November 1997, a recommendation was made that ICAO establish an International Universal Safety Oversight Programme (IUSOAP) to replace the voluntary safety oversight assessment programme. The ICAO Council approval to adopt the IUSOAP was endorsed by ICAO Assembly Resolution A-32-11 in October 1998. The IUSOAP is a regular, mandatory, systemic and harmonized programme of safety audits of States. Over a three year period commencing 1 January 1999, all ICAO Member States will be audited in the areas of Licensing (Annex 1), Air Operations (Annex 6), and Airworthiness (Annex 8). The IUSOAP Safety Audits completed to date have enhanced States' awareness of Safety Oversight and furthered strengthened the need for co-operative approaches to assist with the development and implementation of corrective action plans.

Aerodrome Safety

The Council of ICAO(149/20) requested the Secretary General to pursue urgently, in consultation with the Air Navigation Commission, the potential expansion of the ICAO Safety Oversight Programme to include aerodromes, in addition to the three areas covered till then (Annexes 1, 6 and 8). The above mentioned Global Conference of DGCA's recommended that new criteria be developed which would require the regulatory oversight of aerodromes, amongst others, since a number of States did not have suitable legislation in this regard. The Conference also recommended that the proposed expansion of the ICAO Safety Oversight Programme beyond the three areas currently covered (Annexes 1, 6 and 8) be under the consideration of the Council until it would find an appropriate time to diversify. (The decision of the Council on this subject is expected soon).

The fact that the ICAO Council has now adopted Amendment 4 to Annex 14 will require the States which do not already have the legislative and regulatory framework for the certification of aerodromes and aerodrome safety oversight mechanism in place, to move urgently in this direction.

In the Foreword of the draft Manual on Certification of Aerodromes which was sent by the Secretary General of ICAO under the State Letter AN 4/1.1.46-00/71 dated 12 July 2000 it has been recognized that a State, due to a limited number of aerodromes under its jurisdiction, or due to a lack of technical and financial resources, may not find it feasible to establish a full organizational structure dealing with aerodrome certification, compliance and enforcement. A State in this position should not, however, diminish the stringency of its regulations in any way. It may consider entering into a cooperative arrangement with another State, or participation in a suitable regional cooperation arrangement. The ICAO Regional Office accredited to the State may be of assistance in establishing such an arrangement under the Technical Co-operation Programme of ICAO.

4. History of the Cooperative Safety Oversight Initiative in the South Asia

4.1 At the 30th Conference of the Directors General of Civil Aviation, Asia and Pacific Region held at Penang, Malaysia, from 8 to 14 September 1994, the need for greater attention to aviation safety was highlighted. This was followed by an ICAO regional seminar on Aviation Safety held at New Delhi from 6 to 10 February 1995, which was attended by 76 participants from 23 countries and 3 international organizations. Following the support expressed by the participants at the seminar, which recognized the need to pursue regional co-operative arrangements to improve flight safety, ICAO developed a model project document "Co-operative Development of Operational Safety and Continuing Airworthiness under ICAO Aviation Safety Oversight Programme". The draft model project document, presented at the 31st DGCA's Conference held at Suva, Fiji from 2 to 8 August 1995, proposed cooperative agreements between defined groups of countries in the Asia and Pacific Regions, to be executed by the International Civil Aviation Organization by means of a trust fund, and aimed at enhancing the safety and efficiency of air transport operations in the region by establishing Regional Flight Safety Certification and Inspection Organizations. The model project document received the

overwhelming support of the States.

4.2 At the Meeting of Directors General of Civil Aviation of the SAARC countries which was held in Colombo on 29 and 30 November, 1995, the ICAO draft model project document on cooperative flight safety oversight was discussed. Participants agreed in principle that a cooperative effort could answer the needs of many of the States present, and committed to hold a meeting of Directors General of South Asia at a future date for the sole purpose of examining such a project in detail.

4.3 The resultant meeting, hosted by the Civil Aviation Department of Nepal, was held in Kathmandu on 30 September and 1 October, 1996. Fourteen representatives from seven South Asian states attended: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka were represented, in most cases by their Directors General of Civil Aviation. An ICAO delegation headed by the Regional Representative for the Asia and Pacific Region was also present, along with the Senior FAA Representative and the Manager of the FAA Flight Standards International Field Office from Singapore, the Secretary General of the European Joint Aviation Authority (JAA), the Deputy Vice President of Product Integrity from Airbus Industrie, and representatives from the UNDP, various embassies, and Nepalese operator organizations and airlines. The meeting concluded by agreeing that steps would be taken to formulate a project which would implement a cooperative organization among the participants, as follows:

-  *The detailed assessment by ICAO of the needs of each of the participating States and the identification of objectives designed to address those needs. Needs would be determined through a compilation of the data available from the self-evaluation questionnaires circulated by ICAO, from information available through ICAO Safety Oversight Assessments, and from the conclusions of previous ICAO-administered projects in the area.*
-  *The formulation of a draft project document by ICAO reflecting the needs and resultant objectives discussed above and containing a budget for implementation of the project in a phased approach over a 5 year period of time. The most critical needs would be addressed during the first phase, and it was agreed that sources of funding must be identified and committed for the first two phases before implementation of the project would commence. Additional phase(s) would be implemented as the project progresses and as additional funding becomes available.*

 *The immediate formation of a Steering Committee to include the Directors General of the participating States or their designated representatives. The purpose of the Steering Committee will be to guide the project through the final steps of its formulation. It was agreed that the first meeting of the Steering Committee would take place after the first draft of the project document is circulated and the members of the Committee have sufficient time to consider its provisions with appropriate levels of their Governments. The intent of meeting will be to finalize the provisions of the Draft Project Document and to finalize commitments for funding. It is intended that the Cooperative Safety Organization will be staffed and functional as early as possible in 1997.*

It was further agreed that the Co-operative Safety Organization which is implemented through the project document will be hosted by Nepal, which will provide the necessary working spaces, office equipment, and clerical support to implement at least the first two phases of the project. The Co-operative Safety Organization was considered to have been founded at the conclusion of the meeting with establishment of the Steering Committee.

4.4 On January 7 and 8, 1997, the first formal meeting of the Steering Committee was hosted by the ICAO Regional Representative at the Regional Office in Bangkok. This meeting was attended by the Directors General from Bhutan, India, Maldives, Nepal, and Sri Lanka together with the Deputy Director General from Pakistan and representatives from the FAA, Airbus Industries, and the ICAO Technical Co-operation Bureau (TCB).

The first meeting of the Steering Committee concluded by formally agreeing to the objectives, outputs, and activities contained in the draft project document, together with the methodology used to compute apportionment of project costs amongst participating States. It was decided, *inter-alia*, that training of national counterparts would commence during the sixth month of the project. Minor modifications were made to operator and inspector data which resulted in small adjustments to the allocation of project costs. These revised costs would be used by Steering Committee members to continue their approaches to their respective governments for funding. The DGCA Nepal was unanimously elected as the Standing Chairman of the Steering Committee and a provisional office was established in Kathmandu immediately following the meeting. At the eighth meeting of the Steering Committee held in Maldives on 29 and 30 May 2001 it was unanimously decided that while the project office will remain located at Kathmandu, Nepal, the Chairman of the Steering Committee be rotated on an annual basis, in alphabetical order, among the Directors General of the participant States. Accordingly, the Chairman of the Civil Aviation Authority of Bangladesh was unanimously elected as the Chairman of the Steering Committee for the ninth and tenth meeting of the Steering Committee.

5. Brief Account of Project Implementation to the early part of the Year 2001 and Steering Committee Meetings Conclusions

(A Summary of Steering Committee Meetings (2nd to 7th) Conclusions is at ANNEX I)

5.1 The Flight Operations Expert/Chief Technical Advisor commenced employment on 16 February 1998 and arrived in Kathmandu on 19 February 1998.

5.2 The first activity was to establish priorities for approval of the Steering Committee to reflect the fact that the project was not fully funded. While the COSCAP-South Asia Project Document outlines the objectives, outputs and activities to be achieved in broad terms, a COSCAP-SA Workplan was prepared to identify solutions on how the various activities could be completed. A number of Working Papers were also prepared to assist the Steering Committee in the determination of priority activities to be conducted within the present budgetary limitations. As additional contributions were received, activities were completed based on the priorities defined by the Steering Committee.

5.3 It was also apparent that inspector manuals to provide guidance on the certification, administration, and inspection of air operators were needed on a priority basis. Work was initiated on producing a Flight Operations Inspector Manual (Manual of Certification, Administration and Inspection) and the Manual was completed prior to the 2nd Steering Committee Meeting.

5.4 The 2nd meeting of the Steering Committee was held in Kathmandu, Nepal on 29 and 30 April 1998. The Steering Committee identified training of National Inspectors and staffing of the Airworthiness Expert, Regional Flight Operations Inspector and Regional Airworthiness Inspector positions as high priority activities (these positions were staffed over the next year). The Steering Committee have met every six months and the 3rd, 4th, 5th meetings have reviewed the progress to date and revised the priorities as required.

5.5 At the 6th and 7th Steering Committee Meetings it was concluded that the benefits of a regional co-operative effort had been clearly demonstrated and it was concluded that COSCAP-SA be established as a permanent sub-regional entity. At the 7th Steering Committee meeting another important decision taken was to include the subject of Aerodrome Safety Oversight in the project. It was decided that ICAO should prepare a Revised COSCAP-SA project document to cover a further period of 5 years.

PART B JUSTIFICATION

1. Present Situation

1.1 Common Obstacles to Effective Government Flight Safety Oversight

The common obstacles as described in the original project document still exist, though to a relatively smaller extent due to the project activities undertaken so far. These are:

- 1.1.1 For developing countries whose airlines are just getting off the ground and for newly industrialized countries whose rapid expansion in the field of commercial aviation has considerably outstripped their capacity to regulate, the task of initiating or strengthening safety oversight capabilities is not easy. There are two common barriers to establishing flight safety organizations which are patterned after the model described in the ICAO *Manual of Procedures for Operations Certification and Inspection* and *Manual of Procedures for an Airworthiness Organization*. First, most developing countries do not have an adequate basic air law and/or code of air navigation regulations. Second, and most difficult to overcome, is the inability of developing countries to recruit and retain suitably qualified inspectors.
- 1.1.2 The existence of a basic aviation law and promulgation of detailed regulations pertaining to the operation and maintenance of aircraft must precede any effort to establish or improve upon a State's flight safety certification and inspection organization. Civil Aviation Regulations or equivalent documents, along with the enabling legislation of the country, must specifically provide for the certification and continuing surveillance of airlines, airmen, and maintenance organizations.
- 1.1.3 The basic aviation law must contain the legal foundation for the CAA to inspect certificate holders on a continuing basis in order to ensure their ongoing ability to exercise the privileges inherent in their licenses and operating certificates. Specific provisions should permit unimpeded access by government inspectors to the operations, maintenance, and training facilities and to the flight decks and cabins of the country's airlines. The law must also empower the CAA or equivalent organization to investigate suspected violations of civil aviation regulations, and to impose penalties upon certificate holders for non-compliance. In the absence of the preceding, a flight safety organization lacks the legal

authority to certify and inspect, has no detailed and specific national standards to promote, and no effective means to compel operators to comply with any standards which do exist.

- 1.1.4 For Civil Aviation Authorities, obtaining qualified people to be trained as airworthiness and flight operations inspectors is not an easy task. There is usually a wide gap in salary and other emoluments between what a government regulatory body can offer to such personnel and what they may expect if employed by private industry. For example, because of the difficulty in attracting fully qualified airline maintenance personnel to serve as airworthiness inspectors, many governments must recruit engineers and other technical people directly from the universities. Although these individuals have the necessary academic credentials, their lack of practical experience in airline maintenance diminishes the effectiveness of their efforts, particularly in the beginning of their careers.

1.2 Specific Obstacles related to the Recruitment and Retention of Flight Operations Inspectors

The specific obstacles described in the original project document still remain valid, though to a lesser extent, in the COSCAP Countries due to the Governments' efforts to overcome these. These obstacles are:

- 1.2.1 For a CAA, the recruitment, training, and retention of flight operations inspectors is particularly difficult. Within most developing countries there is typically a shortage of pilots with airline transport licenses and experience in large, transport category airplanes. Inducing a fully-qualified pilot to accept a civil service salary in lieu of the remuneration offered by an airline is a nearly impossible task.
- 1.2.2 On the surface, it would appear that one solution for a CAA would be to recruit and train airmen, such as former military pilots, who meet the basic qualifying criteria to obtain an ATPL but lack experience in airline flight operations. Although this is a costly and time-consuming process which ideally includes initial pilot training for a type rating in a modern, transport category airplane along with education in the duties of a flight operations inspector, it has been successfully employed in more developed countries where government inspector and airline pilot salaries are near parity. The problem with this approach in developing and newly industrialized countries is that once the government provides the necessary training to qualify a pilot in airline flight operations, the pilot almost invariably uses that training to find more lucrative employment with an airline. Even if the government requires the pilot to commit to a specified term of service with the CAA after training is completed, he or she is likely to leave as soon as that obligation expires. In this scenario, the CAA becomes a revolving door to an airline job, and stability and continuity within the flight safety organization is affected.
- 1.2.3 The use of military pilots who are still on active duty is even less effective in the long term. There is little likelihood that they will be given sufficient technical or administrative training as government flight operations inspectors while with the CAA, and the limited term of their appointments diminishes continuity within the flight safety organization.
- 1.2.4 In some countries, pilots are seconded from airlines to the CAA, either on a split-duty basis or dedicated to the CAA for a set period of time. While this may be an acceptable solution to temporarily increase the size of the inspector work force, such inspectors will, at least initially, require extensive training and close supervision by career CAA inspectors who are knowledgeable in regulatory practices and procedures.
- 1.2.5 A related practice adopted by some CAAs is to permit government flight operations inspectors to serve as part-time line pilots with the airlines that they inspect. Since they

are compensated by the airline in proportion to the extent of their flight duties, this often leads to a situation where the inspector spends more time working for the airline than the government and compromises the independence and impartiality of the inspection process. Of equal concern is that no person in the airline is in a position to properly evaluate the inspector's competency as a line pilot. He is essentially in the position of qualifying himself as a captain, often without benefit of the same level of training and mandatory performance evaluation required of the airline's own pilots.

- 1.2.6 Since all of the above solutions are intended to circumvent the inability of the government to adequately compensate and retain qualified inspectors, the logical solution would seem to be in correcting the disparity between government and airline salaries. However, when a government considers amending its salary structure in order to accommodate a single technical specialty, it invites a host of problems including the possibility of a demand for parity with private industry by all civil service employees. There are a variety of mechanisms by which additional remuneration may be achieved without adjusting base salaries, but these are complex undertakings which also have consequences throughout the state's civil service system

1.3 **Safety Oversight capabilities within the Participating Countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka)**

- 1.3.1 **Bangladesh.** Bangladesh has one major operator flying 5 DC-10s, 3 F-28s, and 3 A-310s, and 2 other small operators flying a total of 5 aircraft. The basic air law is dated 1984 and was last amended in 1992. Most major operations and airworthiness provisions are covered in the national regulations. There are 2 flight operations inspectors who are rated on transport category aircraft and who have received formal training on the duties and responsibilities of a government flight operations inspector. There are 6 experienced government airworthiness inspectors, who have completed a formal course of training in inspector duties. The CAAB's personnel licensing function is a part of the Flight Operations and Airworthiness units; examination papers are developed locally.

- 1.3.2 **Bhutan.** Bhutan's single airline operates two BAE146 aircraft. The State's basic air law has recently been amended. All major operations and continuing airworthiness provisions are addressed in the national regulations. The CAA has one flight operations inspector who serves as a part-time crew member with the airline. He is thus rated on the BAE-146 and has undergone a formal course of training for his inspection and certification duties. The airline is monitored continuously by the CAA. Bhutan has two airworthiness inspectors, one of whom is fully qualified by virtue of a formal course of training and necessary on the job experience. Examinations developed by other States are used for personnel licensing.

- 1.3.3 **India.** With 29 operators flying a total of 186 aircraft, India has by far the largest commercial aviation environment of the participating States. There are a total of 1017 aircraft on the State's registry. The State's basic air law is dated 1934 and amended most recently in 1995. Aircraft Rules of 1937 and CAR's cover the full range of operations and airworthiness provisions. The Flight Operations Inspectorate has positions allocated for twelve operations inspectors all of which are currently filled. Operations inspectors are seconded from Air India/Indian Airlines and still serving as part-time crew members, and one career DGCA inspector with an ATPL on general aviation aircraft is employed. All have received formal training on job functions. The CAD employs a total of 133 airworthiness inspectors, all of whom have received formal training on job functions related to their particular specialties. India has a fully-developed licensing organization which publishes its own written examinations.

- 1.3.4 **Maldives.** Island Aviation operates one DHC-8 and one D-228 aircraft. There are four other operators who currently fly a total of 30 aircraft. A revised, draft basic air law is currently before the Attorney General for adoption by the State. CARs as amended from time to time cover the required range of operations and airworthiness matters. There is one flight operations inspector, rated in the D-228. She has undergone a formal course of training on inspector job functions. The CAA employs two airworthiness inspectors who have both undergone a formal course of training for inspector duties. Personnel licensing functions are limited to the endorsement or conversion of foreign licenses.
- 1.3.5 **Nepal.** Nepal has 18 operators flying a total of 40 aircraft. The Civil Aviation Act was promulgated in 1959 and associated rules are dated 1962. Major operations and airworthiness provisions are covered. Nepal has 4 pilots serving as inspectors, all are rated on the DHC-6, one on the ATR42 and one on the D-228. Two have received formal training on government inspector job functions. There are 4 fully qualified airworthiness inspectors. Nepal has a personnel licensing function which constructs its own written examinations.
- 1.3.6 **Pakistan** Pakistan has the second most complex commercial aviation environment of the participating States, with 4 operators flying a total of 64 aircraft. The State's basic air law is dated 1994. There are national regulations covering the full range of flight operations and continuing airworthiness matters. The CAA employs 8 flight operations inspectors with ratings in large, transport category aircraft. Most have completed a formal course of training on inspector job functions. There are 15 airworthiness inspectors with aeronautical engineering degrees, some with industry experience. The CAA has a fully developed personnel licensing function which develops its own written examinations.

1.3.7 **Sri Lanka.** Sri Lanka has a moderately complex commercial aviation environment with one large and three small operators flying a total of 20 aircraft. Their Air Navigation Act is dated 1950 and is presently being amended. National regulations cover the full range of relevant operations and airworthiness matters. A fully-qualified flight operations inspector is currently employed by the CAD. Five airworthiness inspectors are currently employed within the Aircraft Inspection Division, and there is a formal programme of regular surveillance of operators. The State develops its own AME examinations and its own pilot license examinations at the Private level. Other exams are obtained from the U.K.

2. **Manpower Requirements for Effective Oversight in COSCAP – SA States**

The details of data and calculations are included in Annex II of this project document. Appendix A to Annex II shows the Operator Data for COSCAP States; Appendix B to Annex II shows the formulae for the computation of annual flight operations surveillance man hours; Appendix C to Annex II shows the calculations of the required flight operations man-hours by operator for each State and Appendix D to Annex II tabulates the State-wise required person-hours for operations and airworthiness surveillance and the State-wise percentage of the total requirement for the region.

3. **Present project status - Summary of the major achievements of the project as of 31 March 2001**

3.1 **Training of national counterparts** has been the main priority of the COSCAP-SA Project as per the top priority given to it by the Steering Committee.. Where training was required outside the expertise of COSCAP-SA experts, the project has had success in obtaining donor support for the provision of training. Subject Matter Experts (SME) from the FAA conducted two Dangerous Goods courses; Transport Canada provided three Cabin Safety Courses in the region, two Designated Check Pilot Courses and two Aviation Security Training Workshops; Boeing Aircraft provided two Safety Promotion Courses and two Aircraft Performance Courses; and Airbus Industrie provided funding to prepare and deliver the 1st Advanced Inspector Training Course, two Non Destructive Training Courses, two JAA Licensing Courses (JAA provided the instructor and some funding for the course), and a Simulator Evaluation Course.

In total 1845 candidates from South Asia civil aviation administrations (CAA) and airlines have participated in COSCAP-SA training courses. The training programmes developed and provided are: Basic Flight Operations Inspector Course (six), Basic Airworthiness Inspector Course Phase I (five) and Phase II (five), Dangerous Goods Course (two), Cabin Safety Course (three), Advanced Inspector Course (four), CAT II/III Workshop (two), Basic Audit Course (four), Reliability Monitoring (three), Modifications, Repair and Leasing (one), JAR145 (six), Designated Check Pilot Course (seven), Aircraft Performance Course (two) and Aviation Security Workshop (two).

In addition to formal training, COSCAP-SA experts have provided a total of 283 days of On Job Training (OJT)/Technical Assistance to CAAs of South Asian States.

Of special significance is the enormous savings that has resulted in training costs. If specialized training in these areas, at specified institutions/training centers, were to be received individually, not only the costs would have been prohibitive but the number of people trained would have been insignificant. And that training would have had less impact as its transference to a large body of people would have been difficult.

3.2 In order to establish uniform standards and procedures for certification and surveillance a number of **Inspector Manuals** have been produced by COSCAP-SA staff and provided to States - such as Airworthiness Inspector Manual, Manual of Air Operator Certification, Administration and Surveillance, MMEL/MEL Policy and Procedures Manual, Designated Check Pilot Manual, Inspector Qualification and Training Manual, and Aviation Enforcement Procedures Manual.

(It is however to be noted that amendments to these manuals will be required from time to time in order to take into account the changes in hardware and introduction of new technologies).

3.3 A total of 286 days were devoted to the conduct of **On-Demand certification and surveillance** of flight operation and continuing airworthiness in the COSCAP States.

(As the training requirement diminish, this activity will increase.)

3.4 **Development of the expertise of one Regional Flight Operations Inspector and one Regional Airworthiness Inspector** recruited for the project for its regional sustainability was undertaken through their proactive participation in the project activities under the guidance of the internationally recruited experts.

(This activity will continue in respect of the above two inspectors).

3.5 **To summarize**, the main task of the COSCAP organization so far has been towards putting into a sound footing the efforts which are currently in place in most States by overseeing a cohesive programme of operator administration and surveillance, providing competent supervision of the inspectors currently employed by the States, and by performing certification and surveillance functions directly on behalf of the States to the degree required. Continuation of this effort is required to further build upon the foundation laid so far and to implement the latest decisions of the Steering Committee.

4. Expected End of Project Situation

4.1 For the participating countries, the project will have systematically addressed all of the weaknesses in COSCAP - SA States in flight operational safety oversight and certification, certification and oversight of airworthiness of aircraft and certification and safety oversight of airports. Form of Agreement between the States and Rules and Procedures for the funding, management and operation of a permanent South Asia Regional Aviation Safety Organization (SARASO), for which preparatory work has been in progress, will have been developed and put in practice. This cooperative organization will provide a cost-effective means for the participating governments to offer a level of remuneration that will enable them to recruit and retain a core of highly-qualified Regional Inspectors.

4.2 SARASO will be capable of performing, on demand, the full range of flight operations and airworthiness certification and aerodrome certification and surveillance activities to international standards. Certification and inspection will be done in accordance with regionally-developed procedures conforming to ICAO SARPs and guidance material and will be conducted in a manner fully acceptable to the international aviation community. It will augment the existing resources of each of the participating States to the degree required for the effective discharge of their responsibilities under the ICAO Annexes and, in addition, will provide a continuing resource for the training of the State's inspectors and the oversight and development of their individual flight safety organizations to the extent which they see fit. A cohesive and long-term programme of operator administration and surveillance will have been established along with a regular programme of analysis of inspection findings for trends and the timely accomplishment of follow up activities.

4.3 The basic air laws and operating regulations and personnel licensing practices of each participating State will have been reviewed, and recommendations provided for their development or

modification as necessary to conform to the ICAO standards and, to the extent possible, achieve harmonization throughout the region.

4.4 In support of the regional Aviation Safety Organization, manuals will have been developed and/or updated on a regular basis, to standardize certification and inspection procedures and standards throughout the cooperating States. These standards will be based upon elements contained in the Chicago Convention, its Annexes, and related publications.

5. Implementation Strategy

The project has already been well established as a Cooperative Flight Safety Organization among the States of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. It is an ongoing technical co-operation arrangement under the umbrella of ICAO's Technical Co-operation Programme, capable of independently performing required certification and surveillance tasks on behalf of a developing Member or assisting a State's flight safety organization only to the extent required to produce competent results. States which substantially lack oversight capability in one or both technical specialties (flight operations and airworthiness) rely upon the regional team to perform the full range of regular and on-demand inspections of their operators. States which have a substantial capability but lack the depth or experience to meet all of their regulatory responsibilities call upon the team to supplement their organizations as required, and rely upon the team for ongoing technical advice and to perform regular audits of their organization and procedures.

Based on the performance and success of the project, to date, participant States have decided to maintain the organization indefinitely as outlined in this document, in order to continue to take advantage of its supplementary, advisory, and auditing functions.

6. Funding Modality for the Project

6.1 The project will continue to be financed via a trust fund managed by ICAO in a manner that has been agreed to by participants. The project is funded through contributions made by the participant States. Supplemental funding is also received from third party donors including countries, aircraft manufactures, and international organizations.

6.2 A revised formula for sharing the cost by the participant States is given in Annex III. The formula is based on the principle that the cost to a State should be apportioned in accordance with the benefit it receives. Referring to Table I of Annex III, the following cost-sharing percentages have been established:

Bangladesh	14.76%
Bhutan	9.45%
India	19.85%
Maldives	12.77%
Nepal	14.76%
Pakistan	15.64%
Sri Lanka	12.77%

7. **Reasons for continued implementation of the project by ICAO**

The International Civil Aviation Organization (ICAO) is the UN Specialized agency which issues Standards and Recommended Practices (SARPS) covering all significant aspects of international aviation for application on a worldwide scale by all of its member States.

ICAO has extensive experience in dealing with the civil aviation development in the Asia and Pacific Region. The ICAO TCB has a unique capability for the global recruitment of highly-qualified technical experts and for the impartial administration of complex projects for development of the civil aviation substructure. The ICAO Regional Office in Bangkok, which has considerable technical expertise in the region, will also assist the Project.

PART C DEVELOPMENT OBJECTIVE

To contribute to the social and economic development of the participating countries by improving their capability to maintain suitable and efficient airworthiness, flight operations *and aerodrome* regulatory systems as per related provisions contained in the Convention on International Aviation and its related Annexes (Annexes 1, 6, 8 *and 14*).

PART D PROJECT ELEMENTS

[In this Part the elements of the project – all Immediate Objectives, Outputs and Activities for project including the additional ones (*in italics*) are described. The status of implementation as on 31 March 2001 has been indicated against each activity *in bold fonts*.]

Note: The following abbreviations are used to identify the parties responsible for each of the activities which appear under the outputs below. (Responsible parties are listed in parentheses after each activity):

ACSTE	Aerodrome Certification and Safety Training Expert
AWE	Airworthiness Expert
CTA	Chief Technical Adviser
G	The Governments of the participant States
FORE	Flight Operations Regulatory Expert
PLE	Personnel Licensing Expert
RAI	Regional Airworthiness Inspectors
RFOI	Regional Flight Operations Inspectors
RFSI	Regional Flight Safety Inspectors (RAI and RFOI)
RFSO	Regional Flight Safety Organization
SARASO	South Asia Regional Aviation Safety Organization
SARAST	South Asia Regional Aviation Safety Team
SC	Steering Committee

IMMEDIATE OBJECTIVE 1

Establishment of a regional capability to conduct flight operations and airworthiness certification and surveillance in accordance with ICAO Annexes 6 and 8 and the guidance material contained in the ICAO Document 8335 *Manual of Procedures for Operations Certification and Inspection* and ICAO Document 9389 *Manual of Procedures for an Airworthiness Organization and Institutionalization of COSCAP-SA into South Asia Regional Aviation Safety Organization (SARASO)*.

1.1 Output 1.1

A Steering Committee (SC), comprised of the Chairmen/Directors General of Civil Aviation Administrations or their designated representatives from the participating States, the Director, Technical Co-operation Bureau of ICAO or his representative, and the ICAO Regional Representative or his nominee, will be established as soon as practicable during the “pre-implementation phase” of the project in order to complete such tasks as the finalizing of funding modalities and selection of international experts from a short list provided by ICAO. After the international experts are fielded, they will become an integral part of the Committee. Concerned donor organizations and other interested parties will be invited to attend meetings of the Steering Committee and to comment upon strategic decisions which are taken.

Activities

- 1.1.1 Appoint Government Representatives to Steering Committee. (G) **(Completed)**
- 1.1.2 Liaise to finalize project funding modalities in consultation with their governments and to consider candidates for international expert positions (Steering Committee and ICAO). **(Completed)**
- 1.1.3 Upon the request of the Steering Committee, to field highly-qualified and experienced international experts in the fields of Flight Operations, Airworthiness, Air Law and Personnel Licensing. (ICAO). **(Flight Operations Expert-CTA and Air Worthiness Expert recruitment Completed. Additional short-term expertise obtained from organizations such as FAA, Airbus/EAFAS, Transport Canada, JAA/Airbus. Short-term expertise will continue to be obtained, as required, from donors.)**

1.1.4 Meet at regular intervals and as required in order to make strategic decisions regarding the direction of the project, monitor the progress of project implementation, and to facilitate commonality of regulations, certification, surveillance, and procedures between the participant states. (Steering Committee). **(Implemented/ On-going)**

1.1.5 *Finalize the Workplan for each year of the project period. (CTA and Steering Committee) (Completed to the year 2001; Annual plans are prepared from year to year based on the decisions of the Steering Committee taking into account the availability of funds)*

1.1.6 *Coordination with Steering Committee members for effective implementation of project activities (Steering Committee Chairman and CTA) (Implemented/On-going)*

1.2 **Output 1.2**

A Regional Flight Safety Organization (RFSO) will have been established which is capable of performing the full range of flight operations and airworthiness certification and surveillance tasks and of assisting the participant States in developing their individual regulatory capabilities.

Activities

1.2.1 Provide accommodation to RFSO. (Host Government- Nepal) **(Completed)**

1.2.2 Procure office equipment (CTA, Host Government, ICAO) **(Completed)**

1.2.3 Assign administrative and clerical staff (Host Government) **(Completed)**

1.2.4 Develop a manual for standardization of flight safety organization's administrative manual (CTA) **(Manual under preparation –Steering Committee initially accorded low priority-now upgraded to medium priority)**

1.2.5 Recruit highly qualified personnel from within the region for training and development as Regional Flight Safety Inspectors. (SC and ICAO) **(One RFOI and one RAI recruited as permitted by the availability of funds, and are in position.**

1.3 **Output 1.3**

Uniform standards and procedures for certification and surveillance of flight operations and continuing airworthiness will have been established which are acceptable to all participating States for application at a regional level.

Activities

1.3.1 Obtain and review manuals, orders, instructions, and other guidance material for flight operations and continuing airworthiness and surveillance which are currently in use by States with highly-developed regulatory systems and by other organizations such as aircraft manufacturers. (CTA, AWE) **(Completed)**

- 1.3.2 Survey manuals, orders, instructions, and other guidance currently in use by participant States for certification and surveillance of flight operations and airworthiness. (CTA, AWE) **(Completed)**
- 1.3.3 Based upon a review the above documents, develop draft procedural manuals for flight operations and airworthiness certification and surveillance (both commercial and general aviation) to be used by the RFSO and, as required, by the individual flight safety organizations of the participant States. (CTA, AWE) **(Completed)**
- 1.3.4 Review draft manuals and provide recommendations for modifications and comments relevant to the finalization of the documents. (G) **(Completed)**
- 1.3.5 Review Steering Committee comments, recommendations and modify the draft documents accordingly. (CTA, AWE) **(Completed)**
- 1.3.6 Re-submit the final documents for approval by the participant States. (CTA) **(Completed)**
- 1.3.7 Publish and distribute manuals (CTA, G) **(Completed, however the manuals will be kept amended in future as necessary)**
- 1.3.8 *Assist, on request, States to develop State specific Manuals based on the generic manuals. (CTA, AWE). **(Implemented/on-going)***

1.4 Output 1.4

Regional Flight Safety Inspectors (RFSIs) will have been trained and qualified on the full range of flight operations and continuing airworthiness certification and surveillance tasks (initial and recurrent) on an on-going basis.

Activities

- 1.4.1 Design, amend as necessary and implement a comprehensive training and qualification programme for inspectors to qualify them in the full range of aviation safety job functions. (CTA, AWE) **(Implemented)**
- 1.4.2 Develop and maintain training and qualification records for each RFSI. (CTA, AWE) **(Implemented)**
- 1.4.3 Conduct job function training workshops for RFSIs. (CTA, AWE) **(Implemented)**
- 1.4.4 Provide on-the-job training to inspectors during actual certification and surveillance activities. (CTA, AWE). **(Implemented)**
- 1.4.5 Participation of national inspectors and airline personnel in Activities 1.4.1, 1.4.3 and 1.4.4. (CTA, AWE). **(Implemented)**

1.5 Output 1.5

On-demand certification and routine surveillance of airworthiness and flight operations will be conducted on behalf of the participant States.

Activities

- 1.5.1 Develop an annual surveillance programme in consonance with the surveillance activities of the individual states and based upon the activities contained in ICAO Documents 8335 and 9389. (CTA, AWE, SC) **(Implemented/On-going)**
- 1.5.2 Assist States in accomplishing annual surveillance programme. (CTA, AWE and RFSIs) **(Implemented/On-going)**
- 1.5.3 Develop specific administrative procedures for providing on-demand certification tasks to the participant States and incorporate them in the organization's administration manual. (CTA) **(On-going)**
- 1.5.4 Perform certification activities as required in accordance with the policies established in 1.5.3. (CTA, AWE, RFSIs) **(On-going)**

1.6 Output 1.6

A South Asia Regional Aviation Safety Team (SARAST) will have been formed to identify regional safety concerns. Solutions will have been identified and rated and recommendations provided to States on a safety improvement strategy.

Activities

- 1.6.1 Draft Terms of Reference and modalities for a South Asia Regional Aviation Safety Team (SARAST) for approval of the Steering Committee. (CTA, Steering Committee.)
- 1.6.2 Meet on an as required basis to review safety issues in the region and identify solutions for review by the Steering Committee. (CTA and Working Group Members.)

1.7 Output 1.7

A Memorandum of Understanding (or a more formal Agreement as considered appropriate by the States) between the COSCAP-South Asia participant States for the establishment of SARASO.

Activities

- 1.7.1 Establish an Institutionalization Working Group comprising of representatives of the COSCAP-SA States with CTA as its Secretary. (Steering Committee)
- 1.7.2 Draft a comprehensive Memorandum of Understanding or Agreement covering all essential elements such as SARASO governing body, location of the SARASO headquarter, organizational structure, emoluments of SARASO staff and their service conditions, duties and delegated responsibilities to SARASO for providing surveillance and audits, financing arrangements (States' annual contribution levels), immunities etc. and other relevant legal provisions. (WG)
- 1.7.3 Send the draft MOU or Agreement to the COSCAP-SA States for review, comments/further inputs. (Steering Committee)
- 1.7.4 Finalize the Draft MOU or Agreement and send to the States for signatures. (WG, Steering Committee)
- 1.7.5 Draft Headquarter Agreement between SARASO and the Host Government and, obtain approval of the participant States and enter into Agreement. (Steering Committee)

- 1.7.6 Any other activity considered essential by the States towards establishment of SARASO. (Steering Committee)

IMMEDIATE OBJECTIVE 2

To assist the participant States in developing their air regulations and standards and to improve their independent oversight capabilities and their ability to fully participate in the regional cooperative organization.

2.1 Output 2.1

The basic laws and operating regulations for the national control of flight operations and continuing airworthiness within each State will have been reviewed and recommendations made for the drafting of new legislation and regulations, or the modification of existing instruments, to ensure compliance with relevant ICAO Annexes and manuals and to promote the harmonization of regulations within the region.

Activities

- 2.1.1 Draft Terms of Reference and modalities for a Regional Regulatory Harmonization Working Group for approval of the Steering Committee. (CTA, FORE, Steering Committee).
- 2.1.2 Survey the basic air laws and operating regulations relating to flight operations and continuing airworthiness in participating States to learn where deficiencies exist in participating States and to estimate to what extent harmonization in the region may be achieved. (CTA, FORE, RFSI)
- (Partial Implementation-completion - awaiting the assignment of FORE)**
- 2.1.3 After review by Working Group members, provide detailed recommendations to participating States concerning the establishment or modification of operating regulations so that they ensure compliance with International Standards and Recommended Procedures (SARPS) and are harmonized between States to the maximum extent possible. (CTA, FORE, RFSI)

2.2 Output 2.2

The systems employed by the participating States for the qualification, testing, and licensing of airmen, flight operations officers, cabin attendants, maintenance personnel, and designated airworthiness inspectors will have been evaluated, and recommendations provided for improvement and harmonization.

Activities

- 2.2.1 Survey the licensing practices of the participating States (PLE assisted by RFSI)
- 2.2.2 Provide recommendations to participating States for improving their licensing practices and for harmonizing requirements and procedures with other States.(PLE).
- 2.2.3 *Develop and present to the Steering Committee for approval of Licensing Standards and Procedures for use by Member States (PLE).*

2.3 Output 2.3

The individual capabilities of the participant States to perform flight operations and airworthiness certification and surveillance functions will have been enhanced.

Activities

- 2.3.1 Conduct seminars on flight operations certification and surveillance and continuing airworthiness certification and surveillance in each of the participating countries. (CTA, AWE, RFSI) **(On-going)**
- 2.3.2 Provide on-the-job training to national inspectors of the participant States, during working missions to the States for the purpose of providing on-demand certification services and carrying out the annual surveillance programme. (CTA, AWE, RFSI) **(On-going)**
- 2.3.3 As a quality control measure and tool for improvement, perform regular assessments of individual States' certification activities. Provide recommendations for improvements to States as necessary. (CTA, AWE, RFSI) (Outside the scope of this project, ICAO's IUSOAP completed audit in all States. Follow up and further assessments for quality control to be conducted on regular basis by the States. This project, and after its institutionalization, SARASO, will assist the States in this task, on an as-required basis.

IMMEDIATE OBJECTIVE 3

To assist the participant States in meeting their obligations in regard to the certification of aerodromes.

3.1 Output 3.1

Uniform aerodrome certification regulations and procedures will have been established which are acceptable to all participating States for application at regional level.

Activities

- 3.1.1 Obtain and review the ICAO Manual on Certification of Aerodromes which has drawn upon the regulations and procedures of several States with highly developed regulatory systems and also as required, orders, instructions, and other guidance material for aerodrome certification regulatory system, certification regulations, certification procedures, regulatory authority and safety inspections flight which are currently in use in such States. (CTA, RFOI) **(On-going)**
- 3.1.2 Based upon a review of the above documents and generally following the guidance material given in the above ICAO Manual, develop a draft Airport Certification Manual for SARASO participating States containing essentially chapters on Aerodrome Certification Regulatory System, the proposed common Aerodrome Certification Regulations to be promulgated by the States under the relevant provision in their respective basic aviation law, Aerodrome Certification Procedure and the proposed Regulatory Authority in each State and submit the draft generic manual to the project participating States. (CTA and RFOI)
- 3.1.3 Conduct in-country workshop for the regulatory and airport authorities on the subject of aerodrome certification regulations and procedures and safety management system.(CTA, ACSTE, RFOI)

- 3.1.4 Review the draft Airport Certification Manual developed for the region under Activity 3.1.2 and provide recommendations for modifications and comments relevant to the finalization of the documents at the in-country seminars referred to in Activity 3.1.3. (G)
- 3.1.5 Review Steering Committee comments and recommendations and modify the draft manual accordingly. (CTA, RFOI, ACSTE)
- 3.1.6 Re-submit the final documents for approval by the participant States. (CTA)
- 3.1.7 Publish and distribute manuals. (CTA, G)
- 3.1.8 Assist, on request, States to develop State specific Manuals based on the generic manuals. (CTA, RFOI).

3.2 Output 3.2

The individual capabilities of the airport operators and the regulatory authorities in participant States on the subject of aerodrome certification will have been enhanced.

Activities

- 3.2.1 At the conclusion of seminar in each State, discuss with the operator of the airport (Airport Authority/ owner or the senior management of the Government owned airport) proposed to be taken up first for certification, the details to be included in the Aerodrome Manual for that aerodrome required to be prepared by him as an attachment to the certificate application.(ACSTE, CTA, RFOI,DGCA Regulatory Officials)
- 3.2.2 Collection of the data/information required to be included in the Aerodrome Manual for the airport for which certification application is to be filed. (Airport Operator)
- 3.2.3 On-site review of the airport specific data/information collected by the airport operator under Activity 3.2.2 and provision of on-the-job advice to the operator in the finalization of the Aerodrome Manual to accompany the certification application. (ACSTE, DGCA Regulatory Officials)
- 3.2.4 Assist the DGCA regulatory officials in the field verification of the contents of the Aerodrome Manual and aerodrome safety inspections. (ACSTE,CTA, RFOI).
- 3.2.5 Advise the DGCA regulatory officials on aeronautical study, if any required. (CTA, RFOI)
- 3.2.6 Advise DGCA regulatory official(s) on the issuance or otherwise, or, as warranted by the circumstances, the issuance of a conditional aerodrome certificate. (CTA,RFOI)

PART E PROJECT INPUTS

1. Governments/Donor Inputs in Cash or Kind

1.1 Personnel

- 1.1.1 Regional counterparts to the international advisers are selected for the regional

organization by the participant States for recruitment and appointment by ICAO.

1.1.2 The host Government of Nepal is providing an Administrative Assistant/Secretary to the project. Additionally, the project utilizes the services of one Clerk and one Driver.

1.2 Accommodation

Adequate project office space for regional counterparts, administrative and support personnel have been provided by the host country free of cost to the project. Participant States other than the host country shall provide temporary office accommodations and administrative support for project staff during their missions to the participant States, free of cost to the project.

1.3 Official Travel and Missions

Funds are required to cover the cost of travel and daily subsistence allowance for project personnel for duty travel related to certification, surveillance, project coordination, assessments, training of States' national personnel. (To the maximum possible extent, the participating countries will arrange free air travel of these personnel on duty). The cost to the project for these activities is shown in Line 15 of the Project Budget. Additionally, funds have been earmarked in line 16 of the budget for missions by officials of the project implementing agency to facilitate their on-site monitoring and backstopping of the project and to also cover, on some occasions, the cost of daily subsistence allowance for the experts/instructors from the donor countries/organizations in providing on-site training in the South Asia region to the nationals of the project participant countries.

1.4 Equipment

The Project Budget (line 49) includes the provision of the additional essential office supplies:

- floppy disks and printer supplies.
- PC Pentium III, 450 MHZ, 64 MB Ram with 8 GB HD, 15 in. SVGA Monitor, 1set
- Laser Printer 1
- Notebook PC Pentium III, 64 MB AM with 6 GB HD 1
- Portable Inkjet printer 1
- 500W UPS 1
- Floppy disks, Miscellaneous office supplies 1 Lot
- Operation and Maintenance cost of equipment

1.5 Miscellaneous

The Project Budget (line 59) provides for reporting costs, sundries and ICAO support costs.

2. ICAO Services

2.1 Personnel

ICAO recruited and fielded the International Flight Operations Expert/CTA, the International Airworthiness Expert (NORAD funded), one Regional Flight Operations Inspector and one Regional Airworthiness Inspector. It will further recruit and field an Personnel Licensing Expert (EC funded), a Flight Operations Regulations Expert (EC funded) and an Aerodrome Certification and Safety Expert. Estimated costs for the recruitment and fielding of these personnel are shown in line 11 of the Project Budget. Detailed job descriptions of the experts are in Annex V. (Job descriptions of the experts already recruited and working on the project are not attached.)

The project host country (Nepal) is providing some administrative support to the project. Estimated costs for support staff utilized by ICAO are indicated in line 13 of the project budget.

2.2 Management

ICAO will provide overall management services for the project; its administrative support costs are included in line 55.01 of the Project Budget.

PART F RISKS

Due to the design of this project (advance funding by participating States, close monitoring at the highest level within the civil aviation authority of each State, diversity of project goals, flexibility to adjust to the evolving regulatory environment, and the fact that the project has been firmly established), there are few risks to the project meeting its objectives, subject to timely receipt of States' and donors contributions.

The Project has been in operation since February 1998 and States have realized the benefits of the assessment and work programme supplementing function of the regional organization. This document has been developed at the behest of States as it was decided that the benefits of a regional co-operative effort had been clearly demonstrated and COSCAP-SA is to be established as a sub-regional permanent structure.

It must be recognized that there is a risk that individual participants will not meet their annual contributions in a timely manner. It is expected that this risk will be low as timely financial contributions to the project will be a prerequisite to the success of the programme.

PART G PREREQUISITES

(i) While the Project has already been established for a number of years with contributions from all Member States; for the continuation of the Project, participant States must provide their cash contributions to the project in advance, annually or in a lump sum.

(ii) It will be a prerequisite of this project that participant States:

a) Ensure that, national inspectors recruited for training as regional flight safety inspectors, upon completion of their training, are released to remain with the regional organization for at least five years, and

b) Undertake the appointment of necessary national counterparts for in-country training by project experts.

PART H PROJECT MONITORING AND REPORTING

1. Project Reviews

1.1 Steering Committee (SC)

The cooperative organization is guided by a Steering Committee (SC) consisting of the

Chairman of Civil Aviation Authorities/Directors General of Civil Aviation Administrations of the participating countries or their delegated representatives (supplemented as required by other States' representatives with expertise in specific aviation specialties), the Director, ICAO Technical Co-operation Bureau or his representative, and the ICAO Regional Representative or his nominee. Representatives from donor organizations and other interested parties are invited to attend committee meetings. The Chief Technical Advisor is an integral part of the committee. Dialogue between committee members is coordinated by CTA and will, to the maximum extent possible, take place by electronic means (fax, e-mail, and telephone conferences). The Steering Committee will meet on a regular basis to review the progress of the project, adjust the work plan as necessary along with methodology and apportionment of costs, and to discuss matters related to harmonization of regulations and standardization of certification and inspection policies, procedures, and standards.

1.2 Tripartite Review (TPR)

In the likely event that third party donor(s) provide funding for some or all of the project outputs, the project will be subject to a formal Tripartite Review (a joint review by the Steering Committee, executing agency, and the donor States or Organizations) as soon as possible after the first year and thereafter at least once every 12 months. The Chief Technical Adviser of the project shall prepare and submit to each tripartite review meeting a Project Performance Evaluation Report (PPER), which will describe the progress of the project in terms of its stated objectives, activities, and outputs. Additional PPERs may be requested by the Steering Committee, if necessary, during the course of the project.

2. Project Reports

2.1 Technical Reports

Technical reports shall be prepared - one for each of the technical specialties upon completion of the activities related to that specialty. All technical reports, either in part or whole, shall be treated as confidential and shall not be made available to non-participating countries without the concurrence of the participating States.

2.2 Project Terminal Report

At the completion of project activities by assigned international project experts, a Project Terminal Report will be prepared by the Chief Technical Adviser of the executing agency. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by the executing agency at least two months prior to end of the activities of the international experts.

PART J. PROJECT BUDGET

The Project Budget is set forth in the pages which immediately follow. Kathmandu is considered to be the headquarters for the organization.

LIST OF ANNEXES

Annex I	Summary of Project Steering Committee Conclusions – Not included here
Annex II	Safety Oversight and Certification Manpower Requirements in Project States
Annex III	Formula for States' Sharing of Project Cost

Annex IV	Project Workplan
Annex V	Job Descriptions

ANNEX II

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Flight Safety Oversight and Certification Manpower Requirement in Project States

1. The current operator and regulatory environment within the seven South Asian States was analyzed in the original project document for the purpose estimating the man hours necessary to provide adequate flight operations and airworthiness oversight. A nominal figure of 1,760 available man- hours per year per full-time inspector was used as the base line for all manpower computations. This figure was derived from 22 working days per month over 12 months, less 15 national holidays, 20 days annual leave, and 9 days sick leave.
2. Manpower requirements for Flight Operations surveillance necessarily took into account a number of variables, including aircraft types, number of flight crew members and other operations personnel, training requirements, and the number of line stations and regular aerodromes used by operators. The Operator Data included in the original project document is by and large the same and is given in **Appendix A**. The formulae which were used for determining flight operations surveillance man hour requirements for various inspection activities are shown in **Appendix B**. Using these formulae, operations surveillance man hour requirements for each State were calculated as reflected in **Appendix C**. This requirement remains by and large the same and has therefore been retained in the original project document.

It has been the experience of ICAO that operator surveillance in South Asia will consume approximately 50 per cent of an inspector's time, with the remaining 50 per cent devoted to routine operator administration and certification tasks.

These percentages were used to calculate each State's total Flight Operations manpower requirement.

3. Manpower requirement for Operator Continuing Airworthiness surveillance and administration had been based upon the number of operators and number and types of aircraft operated. For general operator surveillance, a formula of approximately one inspector per 1 large or 12 small operators or a total of 30 registered aircraft has been used as a rule of thumb. As with operations, surveillance is estimated to consume approximately 50 per cent of airworthiness/aircraft inspector's time with the remainder taken up by operator administration and certification activities, including renewal of certificates of airworthiness. Total airworthiness and Operations (aircraft/operator) inspection

manpower calculations appear in **Appendix D**.

4. The main task of the Project has been to improve the efforts currently in place in the States by instituting and overseeing a cohesive programme of operator administration and surveillance, providing competent supervision of the inspectors currently employed by States, and by performing certification and surveillance functions directly on behalf of the States to the degree required. It is estimated that these core functions can reasonably be taken up by cooperative organization which employs two Flight Operations Inspectors and one Airworthiness Inspector.
5. Presently the COSCAP programme in South Asia has employed one Regional Flight Operations Inspector and one Regional Airworthiness Inspector so an additional Regional Flight Operations Inspector is required to establish full capability.

In addition to these core personnel, continuation of the internationally recruited CTA position will be required for a total of 5 years since the commencement of the project, i.e until the end of the year 2002. Other international expert staff will be required for short periods of time (less than one year) in order that programme objectives can be fully achieved.

INTERNATIONAL CIVIL AVIATION ORGANIZATION
OPERATOR DATA FOR SOUTH ASIAN STATES

Country	Certificated Operators	Type Opr.	Aircraft Types	No. Aircraft	No. Capt.	No. Flight Eng.	No. Flight Ops Officers	No. Cabin Attendants	Regular Transit/Line Stations (note 1)	No. Pilot Check Airmen	No. Aircraft Maint. Engineers	No. Operator Maint. Inspectors
Bangladesh	Biman	all	DC-10 F-28 A310	422	64	39		350	31	40	282*	6
	Other (2)	dom sched char	Y-12 other	24	1 70*	-	-	-	-	-	-	-
Bhutan	Druk Air	int sched	BAE146	2	3	6*	2	11	6	1	9	3
India	27 operators - See attached tables and Note 2											
Maldives	Air Maldives	int sched	A300 DO228	12	7	-	3	27	5	3	16	-
	Other (2)	dom	MI8 DHC6	84	14	4	10	16	-	3	23	4
Nepal	Royal Nepal	all	B757 HS748 DHC6 PC6	2161	65	-	14	137	16	21	37	3
	Gorkha	char dom	MI17	2	3	3	3	3	-	2	4	7
	Asian	char dom	MI17	2	2	4	-	3	-	2	4	7

	Dynasty	char dom	AS350	1	2	-	-	-	-	2	-	-
Country	Certificated Operators	Type Opr.	Aircraft Types	No. Aircraft	No. Capt.	No. Flight Eng.	No. Flight Ops Officers	No. Cabin Attendants	Regular Transit/Line Stations (note 1)	No. Pilot Check Airmen	No. Aircraft Maint. Engineers	No. Operator Maint. Inspectors
Nepal	Necon	char dom	HS748 C208	31	10	1	2	21	-	3	16	9
Nepal	Nepal Airways	sched char dom	HS748 Y12 MI17 AS350	2242	18	5	5	12	-	3	27	3
	VVIP	char dom	AS332 Bell206	22	7	-	1	-	-	3	7	-
	Everest	sched char dom	DO228 MI17	32	12	6	5	14	-	5	14	-
	ATSC	char	DHC-6	1	3	-	2	-	-	3	7	-
Pakistan	PIA	all	B747 A300 A310 B707 B737 F27 DHC6 TU154	9.0e+08	287	133	140*	1680	65	101	700*	100
	M/S Shaheen	not known	TU154	2	10	2	2	33	-	-	19	-

	Aero Asia	all	BAC111 B707	61	18	2	-	81	3	-	30	-
	Bhoja Air	sched dom	YAK42	2	7	6	5	-	-3	-	5	-
Sri Lanka	Air Lanka	sched int	A340 A320 L1011	324	57	28	48*	453	30	23	267	5
	Ace Airtours	char dom	MI8	1	1	1	-	-	-	--	-	-
Sri Lanka	Sky Cabs	char dom	C150 C177 PA23 AW12	4111	-	-	-	-	-	1	3	-
	Lankair	char dom	MI8	1	3	3	3	1	-	-	1	1
	Air Taxis	char dom	C206 PA38	11	2	-	-	-	-	-	3	1
	John Keels	char dom	Bell206	1	1		-	-	-	-	1	-
	Lionair	char dom	AN24 PA38	4 1	5	5	2	4	-	1	9	2
	Upali	char dom	C152	1	1	-	-	-	-	-	1	-
	CA Aviation	char dom	PA28 Maxair	12	3	-	-	-	-	1	1	-
	CDE Aviation	unk.	B206	1	unk.	-	-	-	-	unk.	unk.	

Note 1: Where number of transit stations not provided by CAA number was estimated from route information contained in September 96 OAG World Airways Guide.

Note 2: No information on Captains provided by India CAA. Numbers estimated based upon following number of flight deck crews per aircraft: Wide-body long Haul: 8; Regional: 5; Domestic: 4.

asterisk next to data indicates numbers provided by CAA not consistent with other data and not verified. Possible discrepancy taken into account when estimating manpower requirements.

INTERNATIONAL CIVIL AVIATION ORGANIZATION
MANPOWER REQUIREMENTS FOR FLIGHT OPERATIONS OVERSIGHT IN SOUTH ASIA

Formulae for Computation of Annual Flight Operations Surveillance
Man Hours

Type of Inspection	Formula for man-hours per year calculation
Manuals	40 hrs for small operators (small fleet/small aircraft) 80 hrs for large/complex operators (1-2 large aircraft types or large/small mix) 145 hr. for large/complex operators (3-4 large aircraft types)
Operational control	1 inspection of 5 hrs for small operators (5 or less small aircraft) 1 inspection of 8 hrs for large operators (more than 1 large aircraft)
Operations and flight (trip) records	1 inspection of 4 hrs for small operators (5 or less aircraft) 1 inspection of 6 hrs for large operations (6 or more aircraft)
Flight and duty time records	same as above
Training programme	40 hrs for small operators (5 or less small aircraft) 40 hrs per aircraft type (large aircraft/complex operators)
Training and qualification records	1 inspection of 4 hrs for small operators 1 inspection of 6 hrs for large/complex operators
En route cockpit	1 inspection of 5 hrs duration for each captain (small operator/short routes) 1 inspection of 7 hrs duration for 10% of captains (complex operators/long routes)
En route cabin	4 inspections of 4 hrs duration for each aircraft type using cabin attendants
Stations facilities and regular aerodromes	1 inspection of 6 to 8 hrs duration for 50% of regular line stations and aerodromes.
Ramp	4 inspections of 4 hrs. duration for each aircraft type
Airmen proficiency checks	1 observation of 6 hrs duration for each operator check airmen, or if no check airman employed, 1 observation of contracted check for 50% of captains

INTERNATIONAL CIVIL AVIATION ORGANIZATION

MANPOWER REQUIREMENTS FOR FLIGHT OPERATIONS OVERSIGHT IN SOUTH ASIA

Required Flight Operations Surveillance Man Hours by Operator and Country

Job Function	Bangladesh		Bhutan	India			Maldives		Nepal		Pakistan		Sri Lanka	
	Biman	Others (2)	Druk Air	Air India	Indian Airlines	Others (26)	Air Maldives	Others (3)	Royal Nepal	Others (10)	PIA	Others (3)	Air Lanka	Others (8)
Manuals	145	80	80	145	145	1820	80	160	145	360	145	160	145	350
Operational control	8	10	5	8	8	146	5	10	8	40	8	18	8	40
Operations and flight (trip) records	6	8	4	6	6	138	4	10	6	34	6	14	6	32
Flight and duty time records	6	8	4	6	6	138	4	8	6	34	6	24	6	32
Training programme	120	80	40	120	120	720	40	60	160	380	320	160	120	320
Training and qualification records	6	8	4	6	6	138	4	8	6	34	6	14	6	32
En route cockpit	42	35	15	140	130	115	35	70	42	200	196	40	42	80
En route cabin	64	-	16	48	48	200	32	10	16	192	128	64	48	32
Stations facilities and regular aerodromes	90	-	36	117	112	132	30	-	48	-	256	48	90	-
Ramp	48	-	16	48	48	250	32	10	48	224	128	64	48	66
Airmen proficiency checks	240	-	6	60	60	180	18	18	126	126	606	102	138	66

Total Inspection man-hours per OPERATOR	775	229	226	704	689	3977	284	364	611	1624	1805	708	657	1050
Total Inspection man-hours per COUNTRY	1004		226	5370			648		2235		2513		1707	

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Required Person Hours of Surveillance Activity

State	Required Man Hours Operations	Required Man hours Airworthiness	Total Requirement	% of Total Requirement
Bangladesh	2008	1876	3884	5.3%
Bhutan	452	234	686	0.9%
India	10740	28800	39540	53.7%
Maldives	1296	1760	3056	4.1%
Nepal	4470	2866	7336	10.0%
Pakistan	5026	7040	12066	16.4%
Sri Lanka	3414	3637	7051	9.6%
Total	27406 274	46213	73619	100.00%

INTERNATIONAL CIVIL AVIATION ORGANIZATION

REVISED FORMULA FOR STATES' SHARING OF PROJECT COST

There is a wide variance in the complexity of the aviation environment and in the degree of development of safety oversight capabilities among the participating States. Generally, the more complex the commercial aviation environment, the more sophisticated the flight safety organization.

The **original funding formula** was developed based on the shortfall of fully qualified inspectors. At the 2nd Steering Committee Meeting it was recognized that **another formula was required** as States' shortfall of fully qualified inspectors had been eliminated or reduced since the project had been approved.

At subsequent Steering Committee Meetings, after review of a number of options, the Steering Committee decided that a revised cost-sharing formula would be based on the benefits to individual States. The proposal considered two factors that recognize both the scope of aviation activity in a State and the common benefits that the project provides to all States.

One factor used in determining a revised Cost Sharing Formula would be the Benefits to a Specific State. States with significant aviation activity and a large number of inspectors require more support from COSCAP-SA than States with little activity.

The Project Document identifies a number of variables, including aircraft type, number of flight crew members and other operations personnel, training requirements, and the number of line stations and regular aerodromes used by operators that reflect the scope of aviation activity (Reference Operator Data Annex II, Appendix A). Based on the information gathered by CTA during his visits these variables have not changed enough to have any measurable effect on cost sharing. It would be impractical to amend the cost sharing agreement with each change in the workload requirement, as the situation in each State is dynamic rather than static.

Annex II, Appendix B contains a formula to allow for computation of the number of Annual Flight Operations Surveillance Hours that are required. The formula will allow us to transform the Operator Data into the required surveillance workload. The data in essence represents the scope of surveillance activity in each State and in the region and is outlined in Appendix D to Annex II.

It should be noted however, that a State's need for assistance from COSCAP is not related only to the surveillance Activity. If for example a State request one week of OJT for one Inspector, while another State requested OJT for ten inspectors, it would not take ten weeks of OJT to provide the equivalent training to the State with ten inspectors. Also within a State there are different needs between airworthiness and operations. If one were to base the number of days of State Specific Benefits on the chart above, COSCAP-SA inspectors would spend 53% of the time in India. Obviously this amount of time would be excessive both from the point of view of India, which does not require that much assistance and from the point of view of the other States, which require more assistance than the aviation activity suggests.

The COSCAP Project has been in operation for a number of years and is very familiar with the requirements of each State. Based on the experience to date and on an assessment of the needs, the State Specific requirements has been modified as reflected in Table I of the following page.

To assign costs to States based simply on the scope of aviation activity would assume that States receive services from COSCAP-SA proportional to the scope of aviation activity. This is not the case as a significant portion of COSCAP-SA resources is dedicated to producing regulatory/guidance material and training programmes that benefit all States equally. This is not to say that 60% of the time is spent in Nepal as the time to deliver training programmes outside Nepal to candidates from a variety of States would also be included in the 60%. This factor is to be considered in developing a cost sharing formula. The factor should remain fairly consistent in a given year but could be adjusted after the COSCAP-SA Project matures and more time is dedicated to State specific issues. It is estimated that 60% of the COSCAP-SA resources are or will be spent on activities related to general objectives. Based on this estimation each States share of these cost would be – 60% divided by 7 States = 8.6%.

Based on a combination of these two factors a revised cost sharing formula would be as follows:

State's share of costs = State's Specific Benefits (40% of Table I Factored by Need) + Project Specific Benefits 60% (8.6% for each State) Table I that follows on page 3 of this Annex outlines the results of the calculations.

It should be recognized that while States with significant aviation activity/needs would fund more of the Project than States with less aviation activity/needs, they would also receive more support and missions from COSCAP-SA staff.

The cost-sharing formula has as its basic principle that States cost are apportioned in accordance with the benefits they receive. It will be difficult to develop a cost sharing formula that will be 100% accurate. "The regional organisation is established in the spirit of mutual co-operation for elevating the level of flight safety oversight and to provide the safest possible air transportation system within the region as a whole. Cost-sharing arrangements should be finalized based on this premise."

INTERNATIONAL CIVIL AVIATION ORGANIZATION

TABLE I

CALCULATIONS OF STATES' PERCENTAGE CONTRIBUTIONS
TO COSCAP – SA

STATES	ProDoc % of total requirement Surv Man Hrs	COSCAP Determination of % requirement of days available	State specific 40% of total requirement	Project Specific (60%)	Total State Specific + Project Specific
BANGLADESH	5.30%	15.47% (28 days)	6.19%	8.57%	14.76%
BHUTAN	0.90%	2.21% (4 Days)	0.88%	8.57%	9.45%
INDIA	53.70%	28.18% (51 Days)	11.27%	8.57%	19.85%
MALDIVES	4.10%	10.6% (19 Days)	4.20%	8.57%	12.77%
NEPAL	10.00%	15.95% (28 Days)	6.19%	8.57%	14.76%
PAKISTAN	16.40%	17.68% (32 Days)	7.07%	8.57%	15.64%
SRI LANKA	9.60%	10.5% (19 Days)	4.20%	8.57%	12.77%
TOTAL	100.00%	100.01%	40.00%	60.00%	100.00%

**PROJECT PARTICIPATING STATES' CONTRIBUTIONS
TO COSCAP-SA
(from Years 2002 to 2007)**

**Based on Cost-Sharing Percentages Established in
Table 1, Annex III, Project Revision 1**

(in US Dollars)

States	2002	2003	2004	2005	2006	2007
Bangladesh	84,793	74,641	56,162	56,708	57,106	49,254
Bhutan	54,288	47,789	35,957	36,307	36,562	31,535
India	114,034	100,381	75,529	76,264	76,800	66,239
Maldives	73,361	64,578	48,590	49,062	49,407	42,613
Nepal	84,793	74,641	56,162	56,708	57,106	49,254
Pakistan	89,850	79,092	59,510	60,089	60,512	52,192
Sri Lanka	73,361	64,578	48,590	49,062	49,407	42,613
EC	246,620	-	-	-	-	-
Total	821,100	505,700	380,500	384,200	386,900	333,700

INTERNATIONAL CIVIL AVIATION ORGANIZATION**JOB DESCRIPTION**

Title: Flight Operations (Regulations) Expert

Post No: 11-02

Duty Station: Kathmandu, Nepal (with missions to all project States)

Starting Date: January 2002

Duration: 11 Months

Qualification
Requirements:

1. Extensive management or supervisory experience with a Government Department of Civil Aviation, directly associated with the preparation and responsibility for implementation of rules, regulations, operating manuals and flight and ground procedures deemed necessary for flight safety, inspection and certification;
2. Knowledge of legal responsibilities and administrative procedures for the issuance of documents under State of Registry approval relating to supervision of flight operations;
3. Flight crew experience as pilot-in-command on large, turbojet aircraft, with experience as a Government Flight Standards Inspector. Qualification in EFIS equipped aircraft will be an asset;
4. Knowledge of the requirements for personnel licensing, training, and maintenance of competency of flight and ground crews concerned with flight operations. Knowledge of aircraft inspection and airworthiness certification requirements will be a desirable asset;
5. Experience in the preparation, approval and use of Flight Operations Manuals and other flight documentation;
6. Experience in the preparation and approval of flight training and checking programmes.
7. Sound knowledge of ICAO Standards and Recommended Practices and related documentation;
8. Command of English language and proven ability in preparing assignment reports and similar documents;
9. Initiative, tact, sound judgement and ability to maintain harmonious relationships.

Duties:

1. Develop a detailed Work Programme in consultation with Government authorities of the Participant States;
2. Develop and prepare technical drafts of regulatory material and advisory material relating to the inspection, certification and registration of aircraft and components.
3. Conduct a workshop and provide on-the-job training to Inspectors assigned to a regional flight safety organization, in order to qualify them in the preparation and development of regulations and standards.
4. During missions to participant States, provide on the job-training to inspectors in the preparation of regulations and standards.
5. Perform other relevant duties assigned in his field of specialization.

INTERNATIONAL CIVIL AVIATION ORGANIZATION**JOB DESCRIPTION**

Title: Personnel Licensing Expert

Post No: 11-07

Duty Station: Kathmandu, Nepal

Starting Date: July 2001

Duration: 9 months

Qualification Requirements:

1. Ten years experience in the examination of airmen and other civil aviation personnel and in the administrative procedures for the issuance of personnel licenses. Experience as a flight crew member is desirable.
2. Supervisory or management responsibilities in a well established government organization responsible for Personnel Licensing, including familiarity with records and filing systems for the issue, renewal, maintenance, of competency, and medical requirements for civil aviation licensing.
3. Knowledge of ICAO standards, practices, and recommended procedures for a State's personnel licensing system and familiarity with civil aviation regulations for the implementation of a State's licensing system.
4. Experience in preparing and implementing relevant regulatory and guidance material such as a national personnel licensing manual.
5. Initiative, tact, sound judgement, and ability to maintain harmonious working relationships.
6. Command of English language and proven ability in preparing assignment reports and similar documents.

Duties:

1. Review, analyze, and make recommendations for modifications as required to existing national legislation of participant States for the licensing of civil aviation personnel and airmen.
2. Review, analyze, and make recommendations for necessary amendments to participant States' civil aviation licensing organizations and procedures to ensure that they comply with Annex 1 to the Chicago Convention and to ICAO Doc. 9379-AN/916, and to harmonize standards and procedures amongst the participating States to the maximum extent possible.

(Page 2 of 2)

3. Provide advice to officials concerned with interpretation and application of licensing procedures.
4. Perform other relevant duties assigned in the field of specialization.

INTERNATIONAL CIVIL AVIATION ORGANIZATION**JOB DESCRIPTION**

Title : Aerodrome Certification and Safety Training Expert

Post No.:11-04

Duty Station: Kathmandu, Nepal (with two missions to all other 6 project States-
Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka)

Starting Date: October 2001

Duration: 8 months

Qualification Requirements:

1. University Degree preferably in Civil or Electrical Engineering or Transportation Engineering.
2. A minimum of 15 years of experience in a civil aviation sub-discipline, preferably in airport planning/design and or construction or maintenance. (At least 15 years experience in aerodrome operation, flight operation or Air Traffic Control will also be acceptable provided adequately trained in the essential elements of aerodrome engineering relevant to aerodrome inspection).
3. 5 years experience as Aerodrome Inspector in a civil aviation administration.
4. Complete familiarity with ICAO Annex 14 and the relevant guidance material including the ICAO manual on Certification of Aerodromes.
5. Fluency in English language.
6. Ability to produce well structured planning documents.
7. Experience of working in a developing country, preferably in ICAO project desirable.
8. Initiative, tact, sound judgement and ability to maintain harmonious working relationships.

Duties:

Under the direction of the Director, Technical Co-operation Bureau, ICAO , in close coordination with other members of the project team and under the supervision of the Chief Technical Adviser of the Project:

1. Prepare a suitable programme for workshops on the subject of aerodrome certification and inspection covering Aerodrome Certification regulatory system; aerodrome certification regulations; aerodrome certification procedure and regulatory authority and safety management system, the subject matter generally conforming to the guidance material contained in the ICAO Manual on Certification of Aerodromes and also describing the best practices followed in countries where the system is well established. (The module on Safety Management System will be provided by the CTA).
2. Together with the CTA, and the Regional Flight Operations Inspector, conduct workshops in the Project States according to a planned schedule.
3. At the end of each workshop provide detailed advisory assistance to the operator of one international airport per Project State on the data/ information to be collected/collated/compiled by him for inclusion in the Aerodrome Manual. Associate the DGCA regulatory officials in the discussions.
3. During the follow-up mission to each State, review the data/ information collected by the Operator and provide on- the- job assistance to him in the finalization of the aerodrome Manual. Assist the Operator in preparing the Application for the issuance of aerodrome certificate. Associate the DGCA regulatory official (s) as observers.
4. During the same mission, assist the DGCA regulatory official(s) in the scrutiny of the application and in field verification and aerodrome safety inspection.
5. Advise the DGCA regulatory authority on issuance or otherwise of the aerodrome certificate applied for, or, as warranted by the circumstances the issuance of a conditional certificate.
6. Perform any other duties, as required, falling within the field of competence of the expert.