INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
SEVENTEENTH MEETING (APIRG/17)
(Ouagadougou, Burkina Faso, 2 - 6 August 2010)

Agenda Item 6: **TECHNICAL COOPERATION PROGRAMME IN AFRICA**

6.1 TECHNICAL CO-OPERATION PROGRAMME IN AFRICA

(Presented by ICAO Technical Cooperation Bureau)

SUMMARY

This paper presents the activities of the Technical Co-operation Bureau (TCB) in Africa, and the mechanisms used in the implementation of development projects in civil aviation. States are urged to make greater use of ICAO Technical Cooperation Programme to obtain technical and operational assistance in the field of civil aviation, and to support the projects developed for providing such assistance.

Action by APIRG/17 is at **paragraph 4**

Reference:

Special AFI RAN Meeting Report Doc 9930

1. INTRODUCTION

1.1 ICAO Technical Cooperation Policy emphasizes the importance of the Technical Co-operation Programme in the global implementation of ICAO Standards and Recommended Practices (SARPs) and Air Navigation Plans (ANPs) as well as the development of the civil aviation infrastructure and human resources of developing States in need of assistance from ICAO.

1.2 The services of the ICAO Technical Co-operation Bureau (TCB) comprise the recruitment of international experts and national professionals, the provision of training, the development or upgrading of training institutions, and the procurement of equipment and services. In order to allow the Technical Cooperation Bureau to play its role more efficiently and effectively, ICAO Technical Co-operation Programme is being strengthened at Regional Office level. All the Regional Offices in Africa now have a dedicated officer responsible for technical cooperation.

1.3 The ICAO technical cooperation programme has remained a powerful and cost-effective tool for States, donors, financial institutions and the private industry, that assists with the practical implementation of measures to remedy, in a coordinated way, identified deficiencies in neutrality,

objectivity and transparency. Most of the projects in Africa in recent times are aimed at addressing deficiencies identified by the ICAO USOAP (and to a limited extent USAP) audits.

1.4 According to the latest forecast, it is expected that the Programme implementation for Africa for 2010 would be approximately 16,000,000 USD, of which USD 4,589,000 is expected to be spent on equipment. This figure will be revised at the next Programme revision depending on the progress of implementation.

2. DISCUSSION

2.1 Funding and Implementation Issues

2.1.1 Despite the presence of the political will to move forward towards sustainable, safe and efficient air transportation, many African States continue to struggle with the implementation of international Standards and Recommended Practices (SARPs), due to the unavailability of adequate human, technical and/or financial resources.

2.1.2 Experience has shown that autonomy of civil aviation authorities has helped States to muster funds for projects without being dependent on the donor community. TCB recognizes the importance of supporting States in their establishment of autonomous civil aviation authorities, as full benefits of assistance programmes and the sustainability of project results would be best achieved if beneficiary organizations were empowered and adequately funded, more so since the retention of qualified personnel continues to be a major issue for civil aviation administrations in the Africa region.

2.1.3 Regarding regional cooperative programmes, challenges in implementation include funding difficulties and lack of commitment by some participating States. However, it has been observed that the presence of some highly motivated and committed States in some of the groups has helped to drive the programmes forward. In addition, the association of regional economic communities as support frameworks of the programmes has contributed in the mobilization of funds from the States as well as from the donor community. Such has been the case with the COSCAP projects associated with ECOWAS (for the Banjul Accord Group), UEMOA, CEMAC and SADC

2.1.4 TCB is able to mobilize and coordinate external resources from donors, the industry and other development partners, as well as internal resources in the form of financial and technical support from the ICAO Secretariat and programmes such as the IFFAS.

2.1.5 A new Section designated Project Financing and Development (PFD) has been established in TCB. The PFD's mission is to aid States in mobilizing financial resources from external financing institutions. PFD will offer solutions by developing and implementing strategies and materials for grant applications and proposals for funding to financial institutions. PFD will endeavor to develop and maintain contact with external financing institutions with regard to resource mobilization for technical cooperation projects, as well as maintain regular contact with recipient Governments in order to keep abreast of financing and resource mobilization needs.

2.2. Scope and Types of Projects

2.2.1 Projects are generally developed based on requests from States as well as from deficiencies already identified by ICAO audits among others, or through missions undertaken by the ICAO regional offices, fact-finding and evaluation missions conducted by TCB and the gap analyses carried out under the AFI Comprehensive Implementation Programme (ACIP).

2.2.2 Currently, technical cooperation projects in Africa are mostly associated with the following Strategic Objectives:

- safety (A5, A6, A8 and A9)
- aviation security (B6, B7 and B8),
- efficiency of aviation operations (D1 and D4),
- continuity (E2 and E3) and;
- rule of law (F7).

as reflected in the state specific projects implemented in Botswana, Chad, Gabon, Mauritius Namibia and Rwanda as well as in the regional cooperative type projects - COSCAP, CAPSCA, and CODEVMET. Assistance provided in non-traditional projects such as the Civil Aviation Caretaker Authority for Somalia (CACAS) the UN Department of Peace Keeping Operations (DPKO) projects mainly relate to Strategic Objectives A and D.

2.2.3 Coordination between TCB and other ICAO assistance programmes is achieved through delineation of the scope of activities and enhanced cooperation for the avoidance of duplication and redundancy. Cooperation takes place with other ICAO assistance programmes in Africa such as ACIP. For example, results of gap analyses conducted under ACIP have provided input for the determination of priority actions in the development of new projects and in the revision of existing projects. In the management of the transition from COSCAP projects to Regional Safety Oversight Organizations, the framework agreement for the establishment of a regional safety oversight organizations developed by ACIP has proved to be an efficient tool. Through this process, the COSCAP-Banjul Accord Group project has been transformed into the Banjul Accord Group Aviation Safety Oversight Organization BAGASOO. Similar processes have been initiated for the transformation of the COSCAP-UEMOA and the COSCAP-CEMAC projects into Regional Safety Oversight Organizations, RSOOs.

2.2.4 **S**afety oriented projects still represent the biggest share of TC projects in Africa. With the expansion of the scope of audit to cover all the ICAO Annexes except Annexes 9 and 17, under the Comprehensive Systems Approach, regional cooperative type projects in the areas such as Meteorology (CODEVMET), Aviation Medicine (CAPSCA) are being implemented, in addition to the COSCAPs.

2.2.5 In 2009, at the request of nine States in the West and Central Africa region, ICAO conducted a study for the establishment of a resource sharing programme titled Cooperative Development of AeroMet services for the West and Central region of Africa (CODEVMET-WACAF) The study was funded by the International Financial Facility for Aviation Safety (IFFAS) for the enhancement of aviation safety through improvement of the capability of the participating States to regulate and/or provide aeronautical meteorological services. Under this Phase I project, the aviation meteorology facilities and services in the above mentioned group of States were evaluated, action plans prepared for removal of the existing and identified deficiencies and sets of recommendations forming guidelines for the medium to long-term

(5-10 years) planning and implementation of aviation meteorology services and facilities, developed. A draft of cooperative resource sharing programme document addressing the requirements for removal of the deficiencies along with detailed planning and implementation of medium to long term development is being prepared in the Phase II project which will be considered by the States for approval at special meeting planned to be convened in September 2010.

2.2.6 The Cooperative Arrangement for Prevention of Spread of Communicable disease through Air travel (CAPSCA) project facilitates training of regional, national, government and non-government staff by means of workshops and seminars. It also provides assistance visits to States to help with the implementation of ICAO provisions for the prevention of spread of diseases that constitute a public health risk. Such assistance includes evaluations of preparedness plans at international airports. Evaluations of were carried out in 2009 at Abuja and Lagos airports in Nigeria and at Cape Town and Johannesburg airports in South Africa. A Workshop held in Nairobi in June 2010 brought together, among others, experts from the main partners in the CAPSCA project namely ICAO, World Health Organization (WHO), the International Air Transport Association (IATA) and Airports Council International (ACI). Their various contributions provided needed guidelines and tools for effective pandemic preparedness planning. The Workshop highlighted the need for aviation authorities to have in place a well coordinated plan as required by ICAO and reflected in Annexes 6, 9, 11 and 14 and related guidelines. It is envisaged that the outcome of such training will be the availability of a network of experts on the African continent who will be able to provide assistance to State civil aviation administrations and airport authorities in pandemic preparedness planning for civil aviation. Given the fact that the size of the air transport industry in most developing States is usually small, formation of a cooperative organization by a group of States and pooling of resources for the prevention and mitigation of effects from the spread of communicable diseases offers a practical and cost-effective method of addressing the need for preparedness planning. States are urged to join the CAPSCA Africa Project in accordance with Recommendation 6/27 (Pandemic Preparedness Planning in the Aviation Sector) of the Special AFI RAN Meeting held in Durban South Africa in November 2008.

2.2.7 TCB provides technical and project management support to the UN DPKO in rehabilitation and construction works in several of their missions in Africa. These projects are linked to the GANP as they *inter alia* improve the physical characteristics of the runways and address identified deficiencies in ATM, CNS and SAR. Current assistance projects with the UN DPKO include;

- United Nations Mission in the Central African Republic and Chad, MINURCAT (Chad) - technical and project management support in rehabilitation and construction works at 6 airports/airfields, to include development of designs to enable float the bids, completion of tender documents for determined work packages, invitation to tender, evaluation and award of works, and the supervision of construction.

- African Union/United Nations Hybrid operation in Darfur, UNAMID (Dafur, Sudan) - In consultation and coordination with the Sudan Civil Aviation Authority provide support in the execution of the airfield rehabilitation projects, ranging from the preparation of technical specifications, statement of works, invitation to tender, contract award process, site supervision, oversight of contractor's quality control, review of contractor's invoices and acceptance & certification of completed works.

- United Nations Mission in Sudan, UNMIS (Sudan) support in construction of aprons at Khartoum, El Obeid and Juba Airports, Malakal runway and apron extension, installation of ICAO Standard lighting facilities (runway lights and apron lights) 8 airports and introduction of GNSS procedures at 12 airports entailing design and implementation of approach/ arrival and departure procedures, Air Traffic Management improvement and air traffic control training.

2.3 Future Prospects

2.3.1 It is envisaged that TCB will continue to play its complementary role to the Regular Programme and other ICAO initiatives in providing support to States in the implementation of ICAO SARPs and ANPs aimed at ensuring the safety, security and efficiency of international civil aviation.

2.3.2 As one of the main instruments of ICAO to assist States in remedying the deficiencies identified through ICAO's audit activities, TCB will provide support to States and regional groupings in the implementation of corrective actions and in the building of capacity for effective continuous oversight.

2.3.3 The inclusion of the regional economic groups as major partners and support frameworks of the programmes of cooperation presents wide opportunities for collective action in addressing the needs for compliance with SARPs, implementation of ANPs and development of civil aviation in general. The cooperative approach used in the COSCAP Projects has been adopted in the area of aviation security with the Cooperative Aviation Security Programme (CASP). The proposal for the CASP-SADC has been approved. Implementation will start as soon as the necessary funds are mobilized.

2.3.4 The project outlines shown in the Appendices A and B of this paper are further evidence of the movement towards a regional cooperative approach in the implementation of assistance projects. The project outlined in Appendix B constitutes the draft of the Regional project for assistance to States in the implementation of performance based air navigation (PBN) systems developed in accordance with Recommendation 6/28 (Implementation of a Global ATM System ICAO technical cooperation project) of the Special AFI RAN Meeting of November 2008.

2.3.5 With the transition of COSCAPs to RSOOs there is potential for future role for TCB in providing administrative and technical support to the new organizations as is being provided to the BAGASOO under an arrangement with the Banjul Accord Group.

2.3.6 The issue of lack of trained and qualified human resources has been significantly highlighted in the safety and security audits. In response, an increasing amount of training is being included in new projects, particularly specialized and on-the job training. With regard to enhancement of training capacity in the AFI region to meet the requirements of the regulators and the service providers in the various fields especially in the face of new technologies, the meeting will recall that ACIP has as one of its objectives to promote and facilitate cooperation among existing regional aviation training centres. TCB in close collaboration with ACIP is poised to provide support in this endeavour, similar to its past association with many of the civil aviation training centres, some of whom were established with assistance from TCB. TCB has also been involved in the establishment of TRAINAIR Course Development Units in many of the training institutions in the region.

3. CONCLUSION

3.1 The ICAO Technical Cooperation Programme remains a powerful and cost-effective tool for States, donors, financial institutions and the private industry in the practical implementation of measures to remedy identified deficiencies in neutrality, objectivity and transparency. TCB complements the Regular Programme and other ICAO initiatives in providing support to States at both national and regional levels and is able to mobilize and coordinate external resources from donors, the industry and other development partners, as well as internal resources in the form of financial and technical support.

3.2 Many African States continue to struggle with the implementation of ICAO SARPs, due to the unavailability of adequate human, technical and/or financial resources. Autonomy of civil aviation authorities has helped States to muster funds for projects without being dependent on the donor community.

3.3 Challenges in implementation of regional cooperative type projects include funding difficulties and lack of commitment by some participating States. Experience has shown that the presence of some highly motivated and committed States in the groups have helped to drive the programmes forward. In addition, the association of regional economic communities as support frameworks of the regional programmes has contributed in the mobilization of funds from the States as well as from the donor community.

3.4 The cooperative approach used in the COSCAP Projects is increasingly being adopted in other areas with the support of TCB. Given the size of the air transport industry in most AFI States, formation of a cooperative organization by a group of States and pooling of resources offers a practical and cost-effective method of addressing common goals.

4. Action by the APIRG/17 Meeting

4.1 **The meeting is invited to:**

a) note the information provided on the activities of the Technical Co-operation Bureau (TCB) in Africa; and

b) approve the draft Conclusion hereunder

Conclusion 17/x

AFI States are invited to note the possibilities of assistance under the ICAO Technical Cooperation Programme presented in this paper and to take advantage of its services while ensuring necessary financial and institutional support to the projects developed for providing assistance. In this regard:

a) AFI States interested in the CODEVMET Project should submit a formal application to ICAO WACAF Office, for enrollment to the project. Appendix A to this working paper refers.

b) AFI States are urged to join the PBN Project. Interested States should submit a formal application to ICAO ESAF Office, for enrollment to the project. Appendix B to this working paper refers.

c) AFI States are urged to join the CAPSCA Africa Project in accordance with Recommendation 6/27 (Pandemic Preparedness Planning in the Aviation Sector) of the Special AFI RAN Meeting of November 2008.

APPENDIX A

THE CODEVMET-WACAF PROJECT

1. CONTEXT

1.1 The APIRG Meeting will recall that the 35th Session of the ICAO Assembly resolved (Assembly Resolution A35-6 refers) that the ICAO Universal Safety Oversight Audit Programme (USOAP) be expanded to cover the safety-related provisions in all safety-related Annexes (all with the exception of Annex 9 — *Facilitation* and Annex 17 — *Security*) and also to implement a comprehensive systems approach for the conduct of safety oversight audits. The subject of Aeronautical Meteorology is to be covered in the comprehensive audit programme.

1.2 The List of Air Navigation Deficiencies in the AFI Region forming part of the records of the 15th and 16th Meeting of the AFI Planning and Implementation Regional Group (APIRG) contains a number of safety critical aviation meteorology (AeroMET) deficiencies that have existed for a long time. Deficiencies have also been identified during the missions to States undertaken by the Regional Officers of the ICAO Regional Office, Western and Central Africa (RO-WACAF).

1.3 Given the need to improve and enhance aeronautical meteorological services provided by the concerned States, it was proposed to provide ICAO technical cooperation in this area through a cost-effective resource-sharing sub-regional cooperative programme called CODEVMET WACAF. It is noted that several similar ICAO executed programmes covering mainly the subjects of airworthiness and flight operations, in the form of COSCAPs, have been established and are in operation in different regions of the world.

2. OBJECTIVES

2.1 The Cooperative Development of Aeronautical Meteorology Services in WACAF Region (CODEVMET-WACAF) has the following objectives:

- Ensuring that safety related meteorological requirements of Annex 3 and 11 to the Convention on International Civil Aviation, guidance material provided in MET related ICAO manuals including PANS-ATM (Doc 4444), and the requirements specified in Doc. 7474 (AFI basic ANP and FASID) Chapter on Meteorology, are met;

- Ensuring sustainable development of the meteorological services to civil aviation in the States, for the provision of timely, reliable and accurate meteorological information to aviation users in an efficient manner;

- Ensuring contingency measures for the provision of meteorological services necessary for the continuity of aviation operations in cases of natural disasters and other disruptions;

- Ensuring that national legislation of the participating States related to the provision of meteorological services to aviation is harmonized and is aligned with ICAO requirements;

- Promoting greater cooperation between meteorological authorities/ service providers and the concerned State regulatory administrations, ATS providers, airlines and other stakeholders in the State;

- Ensuring that adequate number of suitably qualified and trained meteorological and technical personnel are available in the participating States and that they are provided with the means to sustain and enhance their professional qualifications through recurrent and specialized training courses, workshops etc.;

- Promoting greater harmonization of regulations, policies and procedures concerning the implementation of the requisite MET facilities and services among the Programme participating States and also with neighbouring member States of the Agency for the Safety of Air Navigation in Africa and Madagascar (ASECNA) and ;

- Assisting participating States in developing Quality Management Systems (QMS) in support of Safety Management Systems (SMS) for the provision of AeroMET services, in line with ICAO policies and requirements.

3 IMPLEMENTATION OF THE CODEVMET PROJECT

3.1 CODEVMET Phase 1

3.1.1 In 2009, at the request of nine States of the West and Central Africa region States (Cape Verde, Democratic Republic of Congo, Gambia, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome and Principe and Sierra Leone) ICAO conducted a study for the establishment of a resource sharing programme for Cooperative Development of AeroMet services for the West and Central region of Africa (CODEVMET-WACAF Phase 1) for the removal of AeroMet deficiencies. The study was funded by the International Financial Facility for Aviation Safety (IFFAS).

3.1.2 The CODEVMET Phase 1 Study identified specific air navigation deficiencies in the aeronautical meteorology (AeroMet) field in each State and concluded that the level of implementation of facilities and services of the majority of the participating States was low and very far from satisfactory. Except for Murtala Muhammed International Airport of Lagos which is virtually not in need of assistance, all the other international airports evaluated will need important technical assistance to comply with ICAO SARPs contained in Annexes 3 and 11 to the Convention of International Civil Aviation. The AeroMet observational system of the majority of the participating States was found to be obsolete and this is coupled with difficulties to access quality World Area Forecast System (WAFS) products for efficient provision of aeronautical meteorological services to domestic and international air navigation. Insufficient number of qualified personnel in the forecasting units and maintenance of AeroMet equipment has further aggravated the situation. There is a need for an urgent programme of assistance for training of personnel.

3.1.3 The Study developed action plans for removal of the deficiencies. Sets of recommendations forming guidelines for the medium to long-term (5-10 years) planning and implementation of AeroMet services and facilities were provided**.**

3.1.4 The Study supported the proposal to establish a semi-permanent or permanent resource-sharing and cost-effective cooperative Programme –to be called "Cooperative Development of Aeronautical Meteorology–West and Central Africa (CODEVMET-WACAF Pilot Project (or Phase II))" for the implementation of the above mentioned action plans and sets of recommendations. It is recognized that the weaknesses in most of the participating States are extensive and will require large funding input to eliminate. Approximately 1,200 personnel need to be recruited and trained and more than US$ 16 million will be required to meet the shortcomings in AeroMet systems and equipment.

3.2 CODEVMET Phase II or CODEVMET Pilot Project

3.2.1 This is a pilot project for a continuing Programme for Cooperative Development of Aeronautical Meteorology (AeroMet) Services in WACAF Region or for a successor Organization. A decision on the future format will be taken by the Programme Member States towards the conclusion of this pilot project. The objectives of the Programme and hence of this pilot project are:

- To establish a system aimed at enabling AeroMet Service Providers in Member States achieve compliance with international aviation safety standards as these relate to the provision of timely, reliable and accurate meteorological information to aviation users in an efficient manner, and
- To enhance the capability of the States' regulatory authority in carrying out safety oversight of AeroMet services

3.2.2 The project will be implemented under an institutional framework developed on the basis of ICAO's experience in having executed similar regional cooperative programmes globally.

3.2.3 It is envisaged that at the end of this pilot project, regional capability will have been developed to enable continuation of the Programme or the operation of a successor organization, with the region's own expertise.

3.2.4 The continuing Programme or its successor 'Organization' will result in the States having established harmonized Aeromet related Regulations and Quality Management System in support of AeroMet services safety management system. The Programme will have trained sufficient number of inspectors/trainers capable of performing the full range of AeroMet QMS implementation and AeroMet oversight activities to international standards, thus enabling the beneficiary States to meet their international obligations in the field of aeronautical meteorology.

3.2.5 The continuing Programme or its Successor 'Organization may serve as a regional AeroMet oversight and training resource whose services could be made available at the discretion of Programme Steering Committee to States outside the community on a fee-for-service basis.

4 CONCLUSION

4.1 The information provided in this paper is intended to generate interest from other states who may wish to join the initiative.

4.2 In this regard, Conclusion 17/XX in the main paper has been formulated for AFI States interested in the CODEVMET Project to submit a formal application to ICAO WACAF Office, for enrollment to the project.

APPENDIX B

THE AFI PBN PROJECT PROPOSAL

THE PERFORMANCE BASED NAVIGATION (PBN) IMPLEMENTATION PROJECT

1. CONTEXT

1.1 The meeting will recall that the 36th Session of the Assembly adopted Resolution A36-23: *Performance-based navigation global goals*, inter alia, urging all States to implement RNAV and RNP air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept laid down in the *Performance Based Navigation Manual* (Doc 9613).

1.2 Resolution A36-23 calls for achievement by States, of specific goals in this regard and for ICAO to develop a coordinated action plan to assist States in the implementation of PBN and to ensure development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands.

1.3 The Special AFI/8 RAN Meeting in November 2008 formulated Recommendation 6/13: *Publication of GNSS-based RNP approach procedures* calling on States that had taken part in the IATA area navigation (RNAV) global navigation satellite systems (GNSS) procedures to develop and implement a programme to publish GNSS-based required navigation performance (RNP) approaches, and to remove any restrictions that may be impeding operations. Moreover, Recommendation 6/14: called on ICAO to provide assistance to States in overcoming legal and regulatory difficulties associated with implementation of global navigation satellite systems (GNSS) based approach procedures.

1.4 The Special AFI/8 RAN Meeting in November 2008 also formulated Recommendation 6/28 - **Implementation of a Global ATM System ICAO Technical Cooperation Project**

> *That the AFI Region consider the establishment of a Technical Cooperation Project, funded by AFI States and donors, to support planning and implementation of performance objectives, aligned with the Global ATM Operational Concept and the Global Air Navigation Plan.*

1.5 Further to the above, the meeting may wish to note that the ATS/AIS/SAR SG/11 meeting was of the view that the implementation of PBN within the AFI Region continues to be a major challenge. In this regard, the APIRG 17 meeting may wish to agree that in order to achieve the requirements in the Regional PBN Implementation, which is developed within the framework of APIRG pursuant to Assembly Resolution A36-23, many States will require assistance. The meeting will recall that the implementation of WGS-84 is a prerequisite for the implementation of PBN. In this regard it is to be noted that many states are yet to implement WGS-84, or not done so to the extent covering all parts of the relevant airspace.

1.6 Missions carried out to States in 2010 identified that in the States visited, there was a significant requirement for development of expertise in the areas covered by the Global Air

Navigation Plan other than ATS. Aspects relating PBN were particularly affected due to lack of training and expertise.

1.7 The AFI PBN Implementation Project is proposed to give effect or support to recommendations of APIRG and relevant Task Forces (PBN Task Force and GNSS Implementation Task Force) by providing necessary assistance to States to support the implementation of PBN in the AFI Region.

2. OBJECTIVES

2.1 The PBN Implementation Project would have the following objectives:

- Development of model regulations to enable the GNSS aspects of air navigation and the implementation of PBN
- Direct interaction with States needing assistance to ensure that the model regulations are appropriately integrated into the specific States' legislation
- Assistance to States in developing specific actions in order to meet the requirements of the Regional PBN Implementation Plan, and to support efforts relating to the States national performance objectives.

3 IMPLEMENTATION

3.1 Regulatory issues

3.1.1 Legal expertise would be required to review the implementation aspects relating to GNSS and PBN and study the concerns of States, and in this regard to develop regulatory elements that would be included in national regulations to enable implementation and to address the States' specific impediments to implementation.

3.2 GNSS and PBN Technical Aspects

3.2.1 Appropriate technical expertise would be required to assist States needing assistance, with regard to:

- identifying specific challenges and impediments to implementation of the GNSS-based instrument approach procedures that have already been developed, and proposing solutions;
- assisting in the development of actions to support national performance objectives relating to ATM in particular those that are PBN related;
- identifying further actions where applicable and making recommendations to the project Steering Committee on their implementation.

3.3 Implementation Strategy

3.3.1 It is proposed that the project be implemented as a cooperative type project in the manner of the other regional cooperative programmes being implemented by ICAO TCB. Pooling of resources offers a practical and cost-effective method of addressing common goals. Cooperative framework enhances harmonized implementation and fosters participation of interested third

party stakeholders and donor agencies. The project will be directed by a Steering Committee comprising representatives of the States participating in the project. Monitoring of the performance of the project will be carried out by the Steering Committee as well as the relevant APIRG Task Force(s) through the Regional Officers/secretaries of the Task Force(s).

3.3.2 Following the compilation of data (from a gap and impediments analysis) on individual beneficiary States, it is proposed to prioritize actions according to the degree of their importance in the hierarchy of the regional/national PBN implementation plan.

3.3.3 TCB will thereafter develop a detailed project with estimated costs, drawing on the experience States within and outside the region which have implemented PBN, using existing tools and guidance material and aimed at providing expertise and training to States to assist in the implementation of PBN including the GNSS applications. The detailed project will be circulated to the interested States for their review and approval.

3.3.4 TCB will subsequently assist in the sourcing and mobilization of the requisite funds.

4 Conclusion

4.1 The information provided in this paper is intended to generate interest from States who may be needing the assistance being proposed under this project.

4.2 In this regard, Conclusion 17/XX in the main paper has been formulated for AFI States interested in the PBN Project to submit a formal indication of interest to participate in the project to ICAO ESAF Office.