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INTERNATIONAL CIVIL AVIATION ORGANISATION
AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
THIRTEENTH MEETING (APIRG/13)
(Sal, Cape Verde, 25-29 June 2001)

Agenda Item 4: Review of Reports of APIRG Sub-Groups and other subsidiary bodies

4.7: Review of the report of the fourth meeting of the Aerodrome Operational Planning Sub-Group (AOP/SG/4)

(Presented by the Secretariat)

SUMMARY

This paper presents the report of the fourth meeting of the Aerodrome Operational Planning Sub-group. The Sub-group received and reviewed additional information received from States on the list of regular and alternate aerodromes as a follow up to the AFI/7 RAN Conclusion 2/1. The Table AOP was also reviewed to include submissions received from States and information gathered by the Secretariat and consequently the Table AOP1 to be included in the AFI FASID was developed. The Sub-Group reviewed the lists of shortcomings and deficiencies in the AOP field submitted by the Secretariat and from other sources that was found accurate. The Sub-Group noted some effort on the removal of the shortcomings and deficiencies mainly as a result of the restructuring of the civil aviation administrations in a number of States. The Sub-Group also reviewed the status of the aerodromes installations and services provided at international aerodromes and made recommendations for improvements where appropriate. The impact of new larger aeroplanes at aerodromes in the AFI Region was discussed by the Sub-Group and a further study recommended.

Action by APIRG/13 is at paragraph 8.

Reference:

AFI/7 RAN Meeting Report Doc. 9702
APIRG/12 Report
AOP/SG/4 Report

1. Introduction

1.1 The fourth meeting of the Aerodrome Operational Planning Sub-group (AOP/SG) was held at Nairobi from 28 November - 01 December 2000 in the conference premises of the ESAF Regional Office. The meeting was attended by 27 participants from 8 of its 26 member States, 4 non-member States, 2 member international organizations. It was noted that the participation has reduced and there are members who have never participated in any of the Sub-Group meetings. The meeting was honoured by the presence of the APIRG Chairman.

2. Follow-up action on AFI/7 RAN Conclusion 2/1 - Planning of En-route Alternate Aerodromes

2.1 As a follow-up to the AFI/7 RAN Conclusion 2/1, the Secretariat obtained information from South Africa which unfortunately was not complete and could not be effectively discussed. The meeting directed the Secretariat to continue with the dialogue with the Authorities in South Africa. Algeria also submitted information requiring the modification of the list of regular and alternate aerodromes. This information together with that received previously shall be consolidated and shall form an amendment to the AFI Air Navigation Plan (ANP).

3. Follow-up actions on AFI/7 RAN Meeting Conclusions 3/2 - Table AOP 1 Amendment

3.1 The AFI/7 RAN Meeting Conclusion 3/2 requires that the Table AOP be reviewed and updated at regular intervals by APIRG. Consequently APIRG tasked the AOP/SG and directed that this activity remain on the work programme of the Sub-Group.

3.2 Subsequently, APIRG/12 reviewed the minor amendments to the AOP Table with respect to Algeria and Tunisia. The AOP/SG/4 Meeting received additional amendments with respect to Algeria and new amendments with respect to South Africa. It was however noted that the amendments on South Africa were received without the respective information on the facilities and hence the Sub-Group was unable to complete the entries in the Table AOP. The Secretariat was directed to continue following up this issue with South Africa Authorities.

3.3 Following the new format agreed on during CAR/SAM/3 Meeting, the Secretariat advised the AOP Sub-Group that a new column has been introduced in the AOP Table on the GNSS aspects which currently remains empty. The entries will be included after the completion of the GNSS Study Group and appropriate coordination with the work of the CNS/ATM Sub-Group.

3.4 In accordance with the APIRG/12 Conclusion 12/51, a draft AFI BASIC ANP and FASID Documents were to be prepared with due consideration to the APIRG/11 and APIRG/12 reports. The Secretariat has now completed these drafts documents for APIRG approval. After approval, the documents will be circulated to non APIRG member States concerned for comments. Any new amendments shall be consolidated and processed by an amendment proposal according to the established procedures.

4. Review of the list of shortcomings and deficiencies in the AOP field

4.1 The AFI/7 RAN Meeting when discussing the implementation of the AFI Air Navigation Plan reaffirmed the methodology for assessing and reporting shortcomings and deficiencies in the air navigation fields which would be common to all Regional Groups. On the source of information required to compile the list, the AFI/7 RAN Meeting recognized that in addition to the Secretariat own means of gathering the information, IATA, IFALPA and IFATCA were valuable sources especially those that were safety related. The Sub-Group however noted that information from such other sources must be validated with the States concerned before they are included in the list of shortcomings and deficiencies.

4.2 APIRG/11 when considering the agenda on shortcomings and deficiencies in the air navigation field in the AFI Region, reviewed and updated the lists provided by the Secretariat and IATA resulting into an updated list to be used by the Secretariat for follow-up action, further updating and regular submission to APIRG at future meetings.

4.3 The AOP/SG/4 Meeting when once again reviewing the list acknowledged the efforts of the Secretariat to update the list through correspondence with States and missions to States and agreed that these efforts should be enhanced. The Sub-Group emphasized the need to ensure the inputs from other organisations are validated before they are entered in the list. The Meeting agreed that the updated list form the Sub-Group's input to APIRG/13.

4.3 The AOP/SG/4 Meeting noted with concern that the progress of removal of the shortcomings and deficiencies which were considered to be impairing the safety of aircraft operations was not adequate. As a result some shortcomings and/or deficiencies had remained uncleared for a long time in many cases due to the lack of adequate resources. To this end the AOP/SG/4 Meeting reaffirmed the relevance of the AFI/7 Recommendation 14/3 relating to the institutional strategies for addressing shortcomings in the airports and air navigation systems in the AFI Region as it has been clearly shown that where such strategies have been implemented, substantial progress is being registered.

4.4 The AOP/SG/4 noted there were cases where arrangements between States and IATA had resulted to appropriate solutions for dealing with some urgent needs. In addition some States had through bilateral arrangements with donors made commendable progress. The Sub-Group also noted and encouraged the efforts being pursued within the Sub-Regional Groupings including ASECNA, SADC, East African Co-operation (EAC) and the Roberts Flight Information Region. The Sub-Group however acknowledged that there were cases where such efforts required better coordination in order to avoid duplication of effort. The AOP/SG/4 therefore reaffirmed the relevance of APIRG/12 Conclusions 12/57 and 12/58.

5. Follow-up of AFI/7 RAN Meeting Conclusion and Recommendation

5.1 General

The Sub-group acknowledged that some progress had been made in the implementation of the various AFI/7 RAN and APIRG/12 Conclusions and Decisions as is evident from the updates to the list of shortcomings and deficiencies approved during discussion of Agenda Item 3: Review of the list of shortcomings and deficiencies in the AOP field. Nevertheless it was also noted that a lot remains to be done and as a result the Sub-group discussed each of the items in this agenda item and either reiterated previous conclusions or made recommendation for modification of these recommendations as described herebelow:

5.2 Implementation of Visual Aids

5.2.1 The AFI/7 RAN meeting Conclusion 4/1 and APIRG/12 Conclusion 12/5 were developed after it was noted that the lack of implementation of visual aids was as a result of inadequate allocation of resources for the provision and maintenance of the visual aids. In addition to calling for continued technical assistance by ICAO through its Technical Cooperation Bureau, the conclusion stressed the need for institutional restructuring towards the establishment of autonomous authorities which if well structured and are economically independent would contribute towards the provision of the much needed funds.

5.2.2 The Sub-group noted that tremendous strides had been made in this regard. More autonomous authorities had been established in a number of States in the Region during this reporting period since AOP/SG/3 meeting (Cameroon, Tanzania and Zimbabwe) and on others, studies were ongoing to determine what form the authority would take. Other States were still procuring funds (Rwanda, Swaziland) to allow for the studies to be conducted. Many such studies are being conducted under the auspices of ICAO through its Technical Cooperation Bureau.

5.2.3 In view of the above, the Sub-group agreed that the APIRG/12 Conclusion 12/5 was still relevant.

5.3 **Aerodrome equipment, installation and services**

5.3.1 The Sub-group agreed that in spite of the Conclusions adopted at the AFI/7 RAN and APIRG meetings, the States have not implemented fully and uniformly the requirements of Annex 14 provisions and that where the provisions had been implemented, their maintenance was inadequate resulting into prolonged unavailability of the services.

5.3.2 Reasons for this state of affairs were outlined to be the inadequacy of financial resources, lack of adequate skilled personnel, inadequacies in the resources allocated for maintenance and the lack of an equipment replacement program.

5.3.3 The Sub-group noted the progress made by ICAO towards the implementation of the recommendation to expand the ICAO universal safety oversight audit program to include among others Annex 14. An amendment to Annex 14 has been proposed to introduce the requirement for certification of aerodromes. The amendment will become applicable as from 1 November 2001. To this effect, a Draft "Manual on Certification of Aerodromes" has also been developed. It is envisaged that safety oversight audits including aerodromes shall be launched at the beginning of 2002.

5.3.4 The Sub-group, after discussion, reiterated the relevance of the AFI/7RAN Conclusion 4/2, and urged States to implement it as soon as possible bearing in mind its effect on the safety of operations in the Region.

5.4 **Condition of movement areas - runway surface unevenness and runway characteristics**

5.4.1 The Sub-group acknowledged that runway surface unevenness can be due to a combination of reasons including poor construction workmanship, increased traffic loading and/or deterioration of pavement strength due to soil characteristics of the pavement underlying layers. Inadequate runway surface friction characteristics could also be due to a number of reasons including excessive rubber deposits, bitumen bleeding in asphalt concrete surfaces and stagnant surface water due to irregular or insufficient cross-slopes.

5.4.2 The Sub-group observed that other than the above conditions, the Region except on few occasions did not have situations of permanent or even semipermanent poor braking action. The Sub-group noted however, that when accidents occur, runway friction characteristics can sometimes be a source of argument as to the contributing factors. The Sub-group therefore agreed to the relevance of an AFI/6 RAN Recommendation 4/4.

5.5 **Removal of disabled aircraft**

5.5.1 The Sub-group, once again, observed the high cost involved in the provision of disabled aircraft recovery kits and with this in mind advocated for regional cooperation and the encouragement of regional airlines to pool resources to acquire such kits to be located at strategic locations. Existing arrangements through IATA should be explored in this regard.

5.5.2 In addition to South Africa, the Sub-group noted that recovery kits were available also in Lybia and Nigeria even though the serviceability of the latter could not be immediately confirmed. The Sub-group emphasized the need to publish such information in the AIP.

5.5.3 The Sub-group emphasized the need for all States in the Region to establish an inventory of associated equipments available locally that could be used for the recovery activities. To this effect, it was noted that Uganda had established such an inventory and this had indeed proved useful in a recent incident.

5.5.4 The Sub-group also acknowledged that some militaries in the Region had such kits available and recommended that within the civil/military coordination framework an arrangement be made whereby such facilities could be made available for the removal of a disabled aircraft.

5.5.5 The Sub-group however emphasized that as agreed by ICAO, the responsibility for the removal of a disabled aircraft rests with the registered owner or operator concerned. However, if the registered owner or operator cannot remove the disabled aircraft or exceedingly delays its removal and this seriously affecting the other normal airport operations, the airport authority should have the authority to undertake the removal of the aircraft.

5.5.6 The Sub-group, after discussion, agreed to the relevance of the AFI/7 Recommendation 4/5.

5.6 **Rescue and fire fighting services (RFFS)**

5.6.1 The Sub-group acknowledged that there still exists many deficiencies in the provision of the adequate RFFS coverages at the airports in the Region. This is basically due to the high costs of the service both in terms of the equipment procurement, maintenance and replacement costs and the large personnel often perceived to be doing nothing most of the time. The cost of the rescue facilities is also exorbitant.

5.6.2 Emphasis was made on the need to have appropriate equipment and skills where the aerodrome final approaches and take-off paths were over large bodies of water. Fire fighting and rescue in such an environment require specific types of resources.

5.6.3 The Sub-group, once again, agreed to the relevance of the AFI/7 RAN Conclusion 4/6.

5.7 **Bird hazard reduction**

5.7.1 The list of shortcomings and deficiencies discussed in Agenda Item 3 confirm the prevalence of the bird hazard problem at many airports in the Region. Statistics available at ICAO also confirm the seriousness of the problem and it is with this view in mind that the Sub-group has formulated the Conclusion 4/7 that was adopted at the AFI/7 RAN meeting.

5.7.2 The Sub-group noted major achievements realized after the implementation of this conclusion at some of the airports in the Region notably in Uganda, Ethiopia and Tunisia. It was noted that to achieve positive results, the measures employed must be appropriate, wholistic and continuing.

Ornithological studies done prior to the implementation of the bird hazard reduction measures should be able to make recommendations on a series of measures that must be implemented together continuously.

5.7.3 The Sub-group also noted that several States, in spite of reminders during workshops held in both the ESAF and WACAF Regional Offices, still do not report bird strikes to the ICAO Bird Strike Information System (IBIS) as per the Annex 14 recommendation. The Sub-group, in recognition of the usefulness of the keeping track of the trends, emphasized the need for States which do not report to do so. The Sub-group agreed with the opinion raised at the two workshops held in Nairobi and Ouagadougou that the recommendation in Annex 14 for reporting to IBIS should be upgraded to a standard.

5.7.4 The Sub-group acknowledged that often there were conflicting interests between the airport authority and the conservationists. After awareness of the consequences of bird strikes is created however, coordinated efforts can and do cause success in bird hazard control. The involvement of leaders of communities around the airport goes a long way towards ensuring their cooperation and causes positive results.

5.7.5 On the issue of allocation of resources for bird hazard control, the Sub-group emphasized that often managers doubt the effectiveness of the measures proposed. With adequate sensitization on the effectiveness of the measures to be implemented, resource allocation improves.

5.7.6 The Sub-group noted that in compliance with its recommendation adopted by APIRG, the ICAO Regional Offices have continued to hold bird hazard reduction workshop which have proven to be quite popular as is evidenced by the large attendance at the Nairobi workshop in 1996 and the latest Workshop in Ouagadougou in October 2000.

5.7.7 The Sub-group, after discussion, re-affirmed the relevance of the AFI/7 Conclusion 4/7.

5.8 **Secondary Power Supply**

5.8.1 The Sub-group noted that in view of the difficulties of unreliability of the mains power supply in many States in the AFI Region the requirement for resources for secondary power supply are beyond what is envisaged in Annex 14. In many cases, the reasons for this are beyond the control of the airport authorities. There are cases where for a prolonged length of time the secondary power supply acted as the mains power supply thereby increasing the operational costs and putting unnecessary strain on the system. Further, these systems are not practically designed for such an operation.

5.8.2 The Sub-Group acknowledged that secondary power supply maintenance activities were ideal candidates for contracting out. The specialized skills required are often not available within most of the small airport authorities.

5.8.3 The Sub-group therefore re-affirmed the validity of the AFI/7 Conclusion 4/8.

5.9 **Fencing and security lighting**

5.9.1 The Sub-group noted the efforts being made in the provision of airport fencing. It however, also noted that in some cases such efforts are not fruitful because the fences are again damaged and rendered ineffective after a short time due to a number of reasons. Consequently, some airports have had to resort to very expensive alternatives. However it is certain that practical and effective solutions are necessary in order to ensure adequate safety.

5.9.2 On the issue of security lighting, the Sub-group agreed that such provision are expensive and careful consideration has to be made on identifying areas where such lighting will be cost effective.

5.9.3 The Sub-group reiterated the need to intensify fencing patrol by the appropriate authority as a more practical solution to ensure its integrity at all times.

5.9.4 The Sub-group re-affirmed the relevance of the AFI/7 Conclusion 4/9.

5.10 Maintenance

5.10.1 The Sub-group noted with encouragement that with the continued establishment of airport autonomous authorities, there were improvement in the allocation of resources for the establishment of preventive maintenance programmes which has resulted in improved level of service, reduced down time on equipment and services, reduction on maintenance and operational costs and overall increase in staff job satisfaction and morale. It however still noted that resources allocated were not adequate in many cases and therefore re-affirmed the relevance of AFI/7 Conclusion 4/10.

5.11 Aerodromes emergency plans

5.11.1 Following the APIRG/12 Conclusion 6/7, the ICAO Regional Offices of Nairobi and Dakar have continued to monitor the status of the implementation of the requirement to establish aerodrome emergency plans as outlined in Annex 14, Volume 1. The Sub-group note with concern the results of the survey which indicates a varying status over the region as indicated below none of which is acceptable.

- a. States where there are no plans at all
- b. States where plans exist but have not been updated accordingly
- c. States where the plans that exist were not well coordinated with other relevant agencies during its preparation
- d. States where the plans that exist have not been supported by adequate resources
- e. States where exercises are not carried out at regular intervals.

5.11.2 The Sub-group noted also that even though the ICAO Regional Offices continues to hold workshops on the subject at regular intervals, the latest of which was in September 2000, there is much more sensitization required especially among non-core aviation agencies. It was agreed that the workshops must therefore continue and be more publicized and be widened in scope and attendance.

5.11.3 ICAO on its part continues to offer assistance to States as and when requested either through its regular programme or the Technical Assistance Programme. The Secretariat however emphasized that for such assistance to be of any use, the recipient authority must be fully committed to the objectives of such assistance by ensuring its full participation.

5.11.5 The Sub-group also noted that the development and possible use of new larger aeroplanes will put even more demands to the resources allocated for RFFS and the emergency plans.

5.11.6 In conclusion, the Sub-group therefore re-affirmed the relevance of the APIRG/12 Conclusion 12/6.

6. Impact of new larger aeroplanes at aerodromes in the AFI Region

6.1 The Sub-group noted the work so far accomplished by ICAO which culminated in the coming into force in November 1999 of an Amendment No. 3 to Annex 14 Vol.I which in effect introduced a new aerodrome reference code F to cover aeroplanes with wing spans from 65m to 80m and an outer main gear wheel span from 14m to 16m. The subsequent specifications on the physical characteristics for the new code "F" was noted. The Sub-Group emphasized the need for the States to be aware of these new requirements in addition to the concurrent requirement for RFF Category 10.

6.2 The Sub-group also noted the fact that with respect to pavement strength, full-scale tests were still being carried out.

6.3 Following up on its previous recommendation to APIRG for the establishment of a NLA Task Force to study the impact of NLA at the aerodromes in the Region, the Sub-group noted that APIRG found the formation of the task force premature at that time. After lengthy deliberations, the Sub-group agreed that it was now more evident that the NLA would have significant impact on aerodromes in the region without the economic benefits associated with the impact. Question raised and that would form the scope of works of the task force include but are not limited to:-

- f. what type of modifications if any should be made to the movement areas, to the terminal buildings and to the infrastructure?
- g. what will be the impact on the environment?
- h. what will be the cost/benefit ratio?
- i. how will the costs be recovered?

6.4 The Subgroup therefore reaffirmed the relevance of its earlier draft conclusion and adopted it as follows:-

Draft Conclusion 4/2: New Larger Aeroplanes Task Force (NLA/TF)

That APIRG set up a NLA Task Force composed of experts to evaluate the likely impact of NLA on aerodromes in the AFI Region and advise States on the appropriate action in order to facilitate forward planning.

7. Human factors in the AOP field

7.1 The Sub-group acknowledged the fact that even with the increasing use of technologies, the human element was very important and that there will always be an indispensable interaction between people and technology.

7.2 The Sub-group agreed that a good organization should have amongst others the following major traits all of which are human related:-

- a) management must place strong emphasis on safety
- b) decision makers and operational personnel should have a realistic view of the organizations activities
- c) management should not use their influence to force their views or to avoid positive criticism
- d) management must foster a climate in which there is positive attitude towards criticisms, comments and feedback
- e) management must inculcate the spirit of team work and transparency
- f) personnel must be well trained and well educated.

7.3 The Sub-group considered that there was the need for authorities to develop and implement an elaborate training and retraining programme. For such programmes to be cost effective, however, they must

be supplemented by staff motivation schemes to ensure the retention of the trained staff. The issue of market driven remuneration and schemes of service which are harmonized throughout the organization was emphasized.

7.4 In view of the above, the Sub-group formulated the following draft conclusion:

Draft Conclusion 4/3: Human factors in the AOP field

That:

- a) **States should ensure that necessary resources are made available to develop and implement an appropriate training and retraining programme for all the staff;**
- b) **States should ensure that there is a uniform policy on the management of personnel (recruitment, training, work environment and career development) to ensure the retention of staff;**

8. Action by APIRG

8.1 APIRG is required to take note of the work accomplished by the AOP/SG and to approve the conclusions for follow-up action as necessary.

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