



NAMIBIAN CIVIL AVIATION AUTHORITY

Advisory Pamphlet (AP)

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GUIDANCE ON ESTABLISHMENT OF AN ATS ORGANIZATION

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GUIDANCE ON ESTABLISHMENT OF AN ATS ORGANISATION

1. PURPOSE

This Advisory Pamphlet (AP) provides guidance to ATS providers on the establishment of an air traffic services organisation. It provides information on the ATS management and operational functions to meet the requirements of the NAMCARs, Part 172 and the associated technical standards.

2. BACKGROUND

- (a) The NAM-CARS Parts 172 requires an ATS provider to maintain an appropriate organisation with sound and effective management structure to enable it to provide the services covered by its approval.
- (b) Document NAM-CATS-ATS also requires that the ATS organisation include roles and functions of ATS management positions, operational lines of responsibilities and functional organisation of ATS units.
- (c) Document NAM-CATS-ATS further requires that in establishing an ATS organisation, the ATS provide must take into account accommodation, facilities and equipment requirements of ATS.
- (d) Below are the extracts from the Civil Aviation Regulations Part 172 – Air traffic services, to which this Advisory Pamphlet apply.

3. EXTRACTS FROM NAM-CARS, PART 172 – AIR TRAFFIC SERVICES

172.03.2 ATS provider organisation

- (1) An ATS provider must, at all times, maintain an appropriate organisation with sound and effective management structure to enable it to provide, in

accordance with the standards set out in Document NAM-CATS-ATS, the services covered by its certificate.

- (2) An ATS provider must establish in its organisational structures, ATS systems, functions and activities and management and operational positions necessary for the safe and efficient provision of the air traffic services.

4. EXTRACTS FROM DOCUMENT NAM-CATS-ATS

172.03.2 ATS PROVIDER ORGANIZATION

- 1.1 The organisation of an ATS provider must include a description of:
 - (a) Roles and Functions and activities;
 - (b) Management positions and responsibilities;
 - (c) Operational lines of responsibilities; and
 - (d) Functional organization of ATS units

- 1.4 The objectives of air traffic services (ATS) and the functions of the service have been specified in this Part 172; however, neither the objectives nor the functions of ATS can be satisfactorily accomplished unless there is an organization through which the objectives can be achieved.

- 1.5 An ATS provider must develop the procedures necessary for a safe and efficient system of ATS and specify the facilities, accommodation and equipment required to accomplish ATS objectives including all types of communications, navigation and surveillance equipment, and other visual and electronic aids to navigation.

- 1.6 Typical description of ATS Personnel duties and responsibilities are described in 172.03.3.

GUIDANCE ON ESTABLISHMENT OF AN ATS ORGANISATION

1. Introduction

- 1.1 Air traffic services is significant in the day-to-day conduct of aircraft operations. NAM-CARs Part 65 prescribes the rules, regulations and minimum standards for the licensing and rating of ATS personnel including the supervision and enforcement of medical standards.
- 1.2 NAM-CARs Part 71 prescribes the rules, regulations and minimum standards for the management of the airspace in Namibia while NAM-CARs Part 172 prescribes the minimum standards for the provision and operation of air traffic services. However, the objectives and the functions of ATS cannot be satisfactorily accomplished unless there is an organization through which the objectives and functions can be achieved and executed.

2. Establishment of an ATS Headquarters and outside ATS stations

- 2.1 In the organization of the ATS there must be a central or Headquarters administration responsible for the overall policy, planning, personnel and budgetary management of ATS. The ATS headquarter must ensure that adequate resources (i.e. money and people) are assigned to ATS and that the important role of ATS in the determination of the overall priorities and policies of the administration is recognized.
- 2.2 Headquarters staff of ATS must include air traffic controllers with advanced experience in the performance of ATC and knowledge of actual field requirements. In addition, the ATS Headquarter must determine the number of qualified personnel required to operate the ATS system and negotiate the terms and conditions of employment of ATS staff and further be concerned with the ATS working environment.
- 2.3 As part of the ATS structure, outside ATS stations may be established with the necessary authority and resources to operate semi-independently in the

provision of ATS services within a specified geographical region within the State. Functional responsibility must in this case be delegated to the outside stations by the ATS Headquarters.

- 2.4 Individual ATS units may be grouped together under a common outside station management. These units may comprise area control centres (ACCs), approach control offices (APPs) and aerodrome control towers, to provide ATS at the operational level and within a geographical region.
- 2.5 The ATS provider must determine the number of qualified personnel required to operate a unit and ensure that the ATS working environment at the units can comfortably accommodate the required number of staff.

3. ATS systems, functions and activities

- 3.1 An ATS provider must in setting up its organisation, specify ATS system needs, including roles, functions, activities and personnel requirements of air traffic services.
- 3.2 The safe and efficient utilization of the airspace is the primary objective of ATS. To this extent, an ATS provider must specify the needs of particular airspaces based on the air traffic services provided and establish arrangements for accommodation of facilities, equipment and personnel to ensure a safe and efficient system for the management of the concerned airspaces.
- 3.3 The ATS provider is required to maintain training and physical standards for ATS personnel, arrange training programmes to ensure ATS personnel have the necessary qualifications and competencies to provide air traffic services. To this end, the ATS provider must make arrangements for training facilities including training rooms, ATC simulators and training devices unique to ATS.
- 3.4 In establishing the ATS organisation, an ATS provider must take cognisance of other essential civil aviation activities relating to the provision of ATS. Activities such as the design and layout of the movement area and the alignment of runways, though the responsibility of the aerodrome operator, have an impact

on the establishment of air navigation aids used for channelling the flow of traffic into and out of aerodromes by ATS.

4. Management positions

- 4.1 In setting up an ATS organization, an ATS provider must include in its structure:
- (a) Key management positions including a description of their roles and responsibilities;
 - (b) Line management positions including a description of their roles and responsibilities;
 - (c) Operational positions including a description of their roles and responsibilities.
- 4.2 While acting under the delegated authority from the ATS Headquarters (appropriate ATS authority), managers of outside stations or ATS units must have relative freedom of action regarding the management of their staff, and also in the disposition and control of funds allotted to their activity, provided such funds are expended in compliance with applicable rules.

5. Operational line of responsibility

- 5.1 To ensure the sound administration and management of facilities, clear lines of operational authority from headquarters to the outside stations, and from outside station managers to the units and controllers must be established.
- 5.2 The functions of personnel at ATS headquarters must not be confused with the functions of personnel at the ATS unit level. Policy directives, operating instructions, unit reports and other information must flow freely and quickly from management to personnel at ATS unit level.
- 5.3 In ATS matters, outside station managers must be directly responsible to the ATS headquarters (appropriate ATS authority). Managers of area control centres (ACCs), approach control (APP) offices and aerodrome control towers must be responsible to the station manager while watch supervisors and evaluation

and proficiency supervisors must be responsible to the unit manager. Individual controllers must report to watch supervisors, or, where none are envisaged, to the manager of the ATS unit concerned.

- 5.4 Delegation of work is important if personnel in supervisory positions are not to become overloaded. However, when a significant responsibility is delegated it must be done in writing clearly stating the level of management to which the delegation extends.
- 5.5 Specialist ATS staff at headquarters (managers of operations, planning, etc) must be authorized to communicate directly with unit managers in matters within their competence and unit manager must likewise be authorized to approach specialist staff officers at Headquarters directly for technical advice and information. Should it be found that, in the course of such contacts, matters of significance arise, these matters must be made subject to formal processing.
- 5.6 Direct access to senior management must be available to all ATS staff in matters of a strictly personal or private nature. In all other matters ATS personnel must be required to forward correspondence, addressed to a higher level, through proper channels. Supervisors must comment on such correspondence as appropriate and dispatch it with the minimum of delay.
- 5.7 Personnel at all levels must profit from rapid and accurate transmittal of administrative and management information. Lines of communication must be kept open at all times and involve the least possible number of personnel, thus facilitating dialogue between senior management and field units.

6. Functional organization of ATS units

6.1 Area control centre

- 6.1.1 The area control centre, responsible for en-route service to aircraft, must be organized in relation to the density and flow of movements within the

established ATS route network for which they are responsible. As the flow and density of traffic increase, controller activities must be arranged so that they manage sectors of airspace which may be divided geographically, e.g. North and South sectors, or vertically, i.e. high, medium and low level sectors. Sectorization relieves congestion. Sectorization shall be generally arranged so that like functions are grouped together so as to facilitate co-ordination between operating positions and enable supervisors to monitor the total situation.

- 6.1.2 In ACCs where radar is used, a radar monitor shall be provided at the watch supervisor's desk for random monitoring.
- 6.1.3 Other matters to be taken into account in the organization of the functions of ACCs concern the ready availability of flight data which requires the collocation of assistant and controller positions in the most convenient manner.
- 6.1.4 The provision of a flight information service to visual flight rules (VFR) or non-controlled flights within the flight information region (FIR) may be an integral function of the ACC.
- 6.1.5 Area control functions may also be exercised by an APP unit when there is no requirement for the establishment of a separate ACC either by reason of limitations of airspace or low density traffic.

6.2 Approach control office

- 6.2.1 An APP office shall be responsible for the separation of aircraft operating in accordance with the instrument flight rules (IFR) within a defined airspace around an aerodrome. This service may be provided by procedural and/or radar methods.
- 6.2.2 The functional organisation of an APP shall be as that of an ACC except that, when traffic density requires sectorization, this shall be based on entry/exit routes.

6.2.3 APP functions may be combined either with an aerodrome control tower or with an ACC where the traffic density does not warrant the establishment of a separate unit.

6.3 Aerodrome control tower

6.3.1 An aerodrome control tower shall provide control service to all aircraft manoeuvring on the aerodrome, to arriving and departing aircraft, and to aircraft flying in the vicinity of the aerodrome.

6.3.2 The responsibility for the control of landing and departing aircraft shall be considered as the key position in the aerodrome control tower, and must be provided with sufficient support from other tower personnel.

6.3.3 Except at low and medium traffic density aerodromes, the manager of an aerodrome control tower may not be directly involved in active controlling duties so that he/she may concentrate on all facets of flight operation. In this case, responsibility for the operation of the aerodrome control tower may be delegated to the most senior controller on duty who also co-ordinates the overall workload.

6.3.4 In circumstances where a control tower is also providing approach control service, a separate supervisor may where possible be provided to ensure adequate and timely co-ordination between the two functions.

6.3.5 The maximum use of a standard equipment layout at units providing similar service will help improve functional efficiency and unit managers or their designated representatives must be given the opportunity to participate in meetings where changes and improvements to the layout and equipment of facilities are being discussed.

7. Typical ATS description of the duties

- 7.1 Typical description of the duties and responsibilities of ATS is found in Document NAM-CATS-ATS, paragraph 172.03.3.