



International Civil Aviation Organization

MID Air Navigation Plan Ad-hoc Working Group

Second Meeting (ANP WG/2)
(Cairo, Egypt, 16 - 18 December 2014)

Agenda Item 3: Development of the new MID Air Navigation Plan

REVIEW OF VOLUMES I and II – PART 0 – INTRODUCTION AND
PART I - GENERALITIES

(Presented by the Secretariat)

SUMMARY
This paper presents Part 0 and Part I of Volumes I and II of the MID eANP.
Action by the meeting is at paragraph 3.
REFERENCES
- MIDANPIRG/14 Report
- MSG/4 Report

1. INTRODUCTION

1.1 The Council approved the new eANP Template (Volumes I, II and III) and corresponding procedure for amendment on 18 June 2014 (202nd session, Fourth meeting).

2. DISCUSSION

2.1 A consolidated version of the MID eANP Part 0 – Introduction and Part I – General Planning of Volumes I and II prepared by the Secretariat based on the Council approved Template are at **Appendices A** and **B**.

3. ACTION BY THE MEETING

3.1 The meeting is invited to review and update, as appropriate, the MID eANP Volumes I and II - Parts 0 and I at **Appendices A** and **B**, in particular Tables GEN-I-1 and GEN II-1.

APPENDIX A

MID AIR NAVIGATION PLAN

VOLUME I

DRAFT

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MID ANP, VOLUME I PART 0 – INTRODUCTION

1. GENERAL

1.1 On **18 June 2014**, the ICAO Council decided that the regional air navigation plans (ANPs) should be published in three volumes.

1.2 ANP Volume I contains stable plan elements whose amendment necessitates approval by the Council such as the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300); and the current to medium term mandatory regional requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements and requirements specific to the region which are not covered in the ICAO Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS). The material to be included in Volume I should minimise the requirement for frequent amendment. The following is a non-exhaustive list of such elements:

- Flight Information Regions (FIR) boundaries (Table and Charts);
- Search and Rescue Regions (SRR) boundaries (Table and Charts);
- Volcanic Ash Advisory Centres (VAAC);
- Tropical Cyclone Advisory Centres (TCAC); and
- Volcano Observatories (VO).

1.3 ANP Volume II contains dynamic plan elements material related to the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services and the current to medium term mandatory regional requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements involving the relevant PIRG. The amendment of these elements does not require approval by the Council. The following is a non-exhaustive list of such elements:

- Major traffic flows;
- ATS route network;
- Meteorological Watch Offices (MWO);
- Secondary Surveillance Radar (SSR) codes;
- Five-letter name-codes; and
- VOLMET Broadcasts.

1.4 ANP Volume III contains dynamic/flexible plan elements providing implementation planning guidance for air navigation systems and their modernization taking into consideration emerging programmes such as the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the *Global Air Navigation Plan* (GANP) (Doc 9750). The ANP Volume III would also include appropriate additional guidance, particularly with regard to implementation, to complement the material contained in the ANP Volumes I and II. The amendment of Volume III would not require approval by the Council (approval of Part II is under the responsibility of the relevant PIRG).

Note 1: The ANP does not list all facilities in the region(s) but only those required for international civil aviation operations. Documents from the Integrated Aeronautical Information Package and other States publications should be consulted for information on additional facilities and for operational information in general.

Note 2: The general structure of the regional plans for the parts which concern an air navigation field in Volumes I and II consists of an “Introduction”, “General Regional Requirements” and “Specific Regional Requirements”. Only Tables shown under “General Regional Requirements” are harmonized for all Regions. Should a Region require a Table for a specific field, this should be reflected under “Specific Regional Requirements” of the subject concerned. The naming convention for such tables consists of the technical field concerned (AOP, CNS, ATM, MET, SAR and AIM), the ANP Volume number

(I or II), the Region (APAC, AFI, CAR/SAM, EUR, MID, NAM and NAT) and the consecutive number of the table. Examples are as follows: Table ATM I-EUR-1, Table CNS II-MID-1 or Table MET I-AFI-2.

1.5 Guidance material on the detail of programmes or concepts should be contained in supplementary material referenced appropriately or adopted as MID Documents.

2. RELATIONSHIP BETWEEN THE GLOBAL AND REGIONAL AIR NAVIGATION PLANS

2.1 The ANPs represent the bridge between, on one side, the global provisions in the ICAO SARPs and the GANP, and on the other side, the States' air navigation plans and implementation status.

2.2 The GANP represents a rolling, 15-year strategic methodology which leverages existing technologies and anticipates future developments based on State/industry-agreed operational objectives. The GANP is an overarching framework that includes key aviation policy principles to assist ICAO Regions, sub-regions and States with the preparation of their regional and State air navigation plans and to support the establishment of air navigation priorities.

3. OBJECTIVE AND PURPOSE OF REGIONAL AIR NAVIGATION PLANS

3.1 The ANPs provide for the planning and implementation of air navigation systems within a specified area, in accordance with the agreed global and regional planning framework. They are developed to meet those needs of specific areas not covered in the worldwide provisions. The development and maintenance of the ANPs is undertaken by ICAO PIRGs with the assistance of the ICAO Secretariat.

3.2 The ANPs are used as a repository Document for the assignment of responsibilities to States for the provision of air navigation facilities and services within a specified area in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300).

3.3 The ANPs contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements. The procedural parts of ANPs are published in the *ICAO Regional Supplementary Procedures* (SUPPs) (Doc 7030).

3.4 The ANPs contain provisions that States can follow in the planning of aerodrome and air navigation facilities and services activities, with the assurance that facilities and services furnished in accordance with the plan will form with those of other States an integrated system adequate for the foreseeable future.

3.5 The ANPs may serve as a legal basis for air navigation services charges which are levied for services provided or made available to users, in accordance with ICAO's *Policies on Charges for Airports and Air Navigation Services* (Doc 9082) and *ICAO Manual on Air Navigation Services Economics* (Doc 9161).

3.6 The ANPs support the performance-based approach to planning adopted by ICAO to measure the efforts made by States in implementing the agreed requirements.

4. MANAGEMENT AND AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

4.1 The elements of the existing planning system and the planning principles, operational requirements and planning criteria as developed for the MID Region are kept under constant review by the MIDANPIRG in accordance with its schedule of meetings, in consultation with provider and user States and with the assistance of the ICAO MID Regional Office.

4.2 The detailed amendment procedure of the three ANP Volumes is described in paragraph 5 below.

5. PROCEDURE FOR THE AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

5.1 The procedure for the amendment of regional air navigation plans in three Volumes as approved by the Council is shown in **Appendix A**.

6. ABBREVIATIONS

6.1 The abbreviations used in this document are contained in the *Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC)* (Doc 8400), with the exception of those used in the explanations of any tables appearing herein, which also give their meaning.

7. ESTABLISHMENT AND PROVISION OF A MULTINATIONAL ICAO AIR NAVIGATION FACILITY/SERVICE

7.1 The operation of multinational air navigation services is well established within the MID Region(s). The *ICAO Manual on Air Navigation Services Economics* (Doc 9161) details the ICAO policies on charges for air navigation services and provides additional information on the various models adopted globally. The introduction of multinational air navigation services does not dilute the principle that a State has the responsibility of overseeing the provision of air navigation services and that it shall maintain that responsibility within its sovereign airspace as well as within the airspace over the high seas for which it has accepted the responsibility for the provision of services. Where there is no intention to change or modify the FIR boundaries nor the facilities and services currently listed in the ANP there is not a requirement to amend the ANP. However, should changes to the FIR boundaries or to the facilities and services provided be required, such changes are likely to be subject to the ANP amendment procedure and should therefore be examined on a case-by-case basis. Advice on this issue can be obtained from the ICAO Regional Office(s). Any multinational arrangements for the provision of air navigation services should be registered with ICAO (Article 83 of the Convention (Doc 7300) and *Rules for Registration with ICAO of Aeronautical Agreements and Arrangements* (Doc 6685)).

APPENDIX A - PROCEDURE FOR THE AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

(Approved by Council on 18 June 2014)

1. Introduction

1.1. The procedure outlined below has been evolved to provide a means of maintaining the regional air navigation plans using an ANP web based platform.

2. General criteria

2.1. The Assembly has resolved that regional plans should be revised when it becomes apparent that they are no longer consistent with current and foreseen requirements of international civil aviation and that, when the nature of a required change permits, the associated amendment of the regional plan should be undertaken by correspondence between the Organization and the States and international organizations concerned.

2.2. When a State cannot immediately implement a particular part or a specific detail of a regional plan although it intends to do so, when practicable, this in itself should not lead to the State proposing an amendment to the plan.

2.3. The general structure of the regional plans for the parts which concern an air navigation field in Volumes I and II consists of an "Introduction", "General Regional Requirements" and "Specific Regional Requirements". As the section "General Regional Requirements" is harmonized for all regions, an amendment of the provisions (text) in "General Regional Requirements" will lead to amendment of Volumes I and II of the regional plans of all regions.

2.4. The amendment process of Volume III is under the responsibility of the relevant Planning and Implementation Regional Group (PIRG). The Parts 0 (Introduction) and I (General Planning Aspects) of Volume III are harmonized for all regions and the amendment of these parts should be made following inter-regional coordination.

3. User rights

3.1. Access to the ANP web based platform to develop and submit amendment proposals to the regional plan and to comment on an officially issued amendment proposal should be provided through controlled access by the State's or international organization's designated Focal Points. The State or international organization should officially inform their respective Regional Office of the registration of their designated Focal Points.

4. States and international organizations to be consulted

4.1. The Secretary General, through the relevant Regional Office, will determine the States and international organizations to be consulted on the amendment proposal. These will generally only include the provider and user States and international organizations that have a direct and obvious interest in the amendment in question.

PART A — AIR NAVIGATION PLANS, VOLUME I

5. Procedure for amendment of Volume I

5.1. If, in the light of the above general criteria, any State (or group of States) wishes to effect a change in the approved air navigation plan for that region, it should propose to the Secretary General, through the Regional Office accredited to that State, an appropriate amendment to the plan, adequately documented; the proposal should include the facts that lead the State (or group of States) to the conclusion that the amendment is necessary. Such amendments may include additions, modifications or deletions. (This procedure does not preclude a State having previous consultation with other States before submitting an amendment proposal to the Regional Office.) This proposed amendment should be submitted via the web based tool and/or by correspondence to the Regional Office.

5.2. Upon studying the proposal, if the Secretary General considers that the proposed amendment requires further coordination through the relevant Planning and Implementation Regional Group (PIRG), the proposal will be presented, adequately documented, to the PIRG. The views of the PIRG will be coordinated with the originating State and the proposed amendment will be uploaded via the ANP web based platform for processing proposals for amendment for approval by the Council.

5.3. If the proposal concerns an amendment of the provisions (text) in “General Regional Requirements”, the Secretary General will coordinate and circulate, through all Regional Offices, an amendment of all the regional plans.

5.4. If the Secretary General considers that the proposed amendment conflicts with established ICAO policy, or that it raises questions which the Secretary General considers should be brought to the attention of the Air Navigation Commission, the proposal will be presented, adequately documented, to the Commission. In such cases, the Commission will decide the action to be taken on the proposal.

5.5. The Secretary General, through the Regional Office, will circulate the proposal, adequately documented, with a request for comments to all provider and user States of the region considered affected as well as to user States outside the region and international organizations which may be invited to attend suitable ICAO meetings and which may be concerned with the proposal. The States and international organizations concerned should either send their comments/agreement/objection via the ANP web based platform and/or by correspondence to the Regional Office. Any comment or objection should be adequately supported by reasons for the comment or objection.

5.6. If, in reply to the Secretary General's inquiry, no objection is raised to the proposal by a specified date, the proposal should be submitted to the President of the Council, who is authorized to approve the amendment on behalf of the Council. The approved amendment should be incorporated into Volume I of the regional plan.

5.7. If, in reply to the Secretary General's inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by the respective planning and implementation regional group (PIRG) and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

5.8. Proposals for the amendment of Volume I of the regional plan submitted by international organizations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings and which attended the meeting(s) where the relevant regional plan is managed, will be dealt with in the same manner as those received from States, except that, before circulating a proposal to States and selected international organizations, the Secretary General will ascertain whether it has adequate support from the State or States whose facilities will be affected. If such support is not forthcoming, the proposal will be presented to the Commission, and the Commission will decide on the action to be taken on the proposal.

5.9. Proposals for the amendment of Volume I of the regional plan may also be initiated by the Secretary General, through the Regional Office accredited to that State, provided that the State or States whose facilities will be affected have expressed their concurrence with the proposal.

5.10. Amendments to Volume I of the regional plan which have been approved in accordance with the above procedure will be published in the ANP web based platform at convenient intervals.

PART B — AIR NAVIGATION PLANS, VOLUME II

6. Procedure for amendment of Volume II

6.1. Amendments of Volume II of the regional plan should be effected on the basis of an adequately documented proposal submitted by a State (or a group of States) or the relevant PIRG to the Secretary General, through the Regional Office accredited to that State. The proposal should include the facts that lead to the conclusion that the amendment is necessary. Such amendments may include additions, modifications or deletions to Volume II of the regional plan. (This procedure does not preclude a State having previous consultation with other States before submitting an amendment proposal to the Regional Office.) This proposed amendment should be submitted via the ANP web based platform and/or by correspondence to the Regional Office.

6.2. If the proposal concerns an amendment of the provisions (text) in “General Regional Requirements”, the Secretary General will coordinate and circulate, through all Regional Offices, an amendment of all the regional plans.

6.3. The ICAO Regional Office will circulate the proposal, adequately documented, with a request for comments to all provider and user States of the region considered affected as well as to user States outside the region and international organizations which may be invited to attend suitable ICAO meetings and which may be concerned with the proposal. The States and international organizations concerned should either send their comments/agreement/objection via the ANP web based platform and/or by correspondence to the Regional Office. Any comment or objection should be adequately supported by reasons for the comment or objection.

6.4. If, in reply to the ICAO Regional Office’s inquiry, no objection is raised to the proposal by a specified date, it will be deemed that a regional agreement (involving the relevant PIRG) on the subject has been reached and the proposed amendment should be incorporated into Volume II of the regional plan.

6.5. If, in reply to the ICAO Regional Office’s inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by the respective planning and implementation regional group (PIRG) and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

6.6. Proposals for the amendment of Volume II of the regional plan submitted by international organizations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings, where the relevant regional plan is managed, will be dealt with in the same manner as those received from States, except that, before circulating a proposal to States and selected international organizations, the Secretary General will ascertain whether the proposal has adequate support from the State or States whose facilities or services will be affected. If such support is not forthcoming, the proposal will not be pursued.

6.7. Proposals for the amendment of Volume II of the regional plan may also be initiated by the Secretary General, through the Regional Office accredited to that State, provided that the State or States whose facilities or services will be affected have expressed their concurrence with the proposal.

6.8. Amendments to Volume II of the regional plan which have been approved in accordance with the above procedure will be published in the ANP web based platform at convenient intervals.

PART C — AIR NAVIGATION PLANS, VOLUME III

7. Procedure for amendment of Volume III

7.1. Amendments of Volume III of the regional plan are under the responsibility of the relevant Planning and Implementation Regional Group (PIRG) and not subject to a formal application of the procedure for amendment of the ANP described in Parts A and B above. However, the amendment of the provisions of Part 0 - "Introduction" and Part I - "General Planning Aspects" needs special coordination, as specified in 7.4 below. Since these two Parts are harmonized for all regions, an amendment of the provisions contained there-in will lead to amendment of Parts 0 and I of Volume III of the regional plans of all regions.

7.2. Amendments of Volume III of the regional plan should be effected on the basis of an adequately documented proposal submitted to the ICAO Regional Office concerned by:

- a State (or a group of States); or
- the relevant Planning and Implementation Regional Group (PIRG) of the region(s); or
- the ICAO Secretariat; or
- international organisations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings and/or which attended the meeting(s) where the relevant Volume III amendments were agreed.

7.3. This procedure does not preclude a State (or group of States) having previous consultation with other States before submitting an amendment proposal to the Regional Office. Such amendments may include additions, modifications or deletions to Volume III of the regional plan. In addition, the facts that led to the conclusion that the amendment should be included.

7.4. If the proposal concerns an amendment of the provisions in Part 0 - "Introduction" or Part I - "General Planning Aspects", the ICAO Regional Office concerned will submit the proposal to ICAO Headquarters (Air Navigation Bureau) for coordination with all ICAO Regional Offices. The views of the ICAO Regional Offices will be taken into consideration in the consolidation/approval of the amendment by the ANB. The approved amendment will be published in Volume III of all regional plans at convenient intervals.

7.5. The mechanism for the amendment of Part II of Volume III of the regional plan should be developed, agreed by the relevant PIRG and reflected in the corresponding PIRG Handbook.

MID ANP, VOLUME I

PART I – GENERAL PLANNING ASPECTS (GEN)

1. GEOGRAPHICAL SCOPE

1.1 The MID ANP is related to the ICAO MID air navigation region. The ANP may call for the provision of basic facilities and services beyond the charted boundaries of a region where such facilities and services are necessary to meet the requirements of international air navigation within the region.

1.2 A number of States within the ICAO MID Region are members of one or more sub-regional groupings which have development plans to improve air navigation services; such plans contribute to the regional implementation of the ICAO *Global Air Navigation Plan* (GANP) (Doc 9750). Regional subgroups include the:

- Arab Civil Aviation Commission (ACAC)
- Gulf Cooperation Council (GCC)

2. FLIGHT INFORMATION REGIONS

2.1 **Table GEN I-1** shows the current Flight Information Regions (FIR)/Upper Information Regions (UIR) which are part of the ICAO MID Region. More details of the FIRs and UIRs within the MID air navigation region are contained in **Table ATM I-1** and **Charts ATM I-1** and **ATM I-2**.

3. STATES' RESPONSIBILITIES

3.1 Each Contracting State is responsible for the provision of facilities and services in its territory under Article 28 of the Convention as well as within the airspace over the high seas for which it has accepted the responsibility for the provision of services. The Council has recommended that these facilities and services include those specified in the ANPs.

4. MID REGIONAL PLANNING

4.1 The regional planning and implementation process is the principal engine of ICAO's planning framework. It is here that the top-down approach comprising global guidance and regional harmonization measures converges with the bottom-up approach constituted by national planning by States.

4.2 PERFORMANCE BASED APPROACH

4.2.1 Global Approach

4.2.1.1 In an effort to assist planners in weighing outcomes and making appropriate decisions, the *Manual on Global Performance of the Air Navigation System* (Doc 9883) has been developed. In this respect ICAO has defined 11 Key Performance Areas (KPA), one for each of the *Global ATM Operational Concept* (Doc 9854) expectations outlined below.

4.2.1.2 These general expectations are relative to the effective operation of the ATM system. The ICAO planning objective is to achieve a performance based global air traffic management (ATM) system through the implementation of air navigation systems and procedures in a safe, progressive, cost-effective and cooperative manner.

5. RELATIONSHIP BETWEEN GLOBAL, REGIONAL AND NATIONAL PLANNING

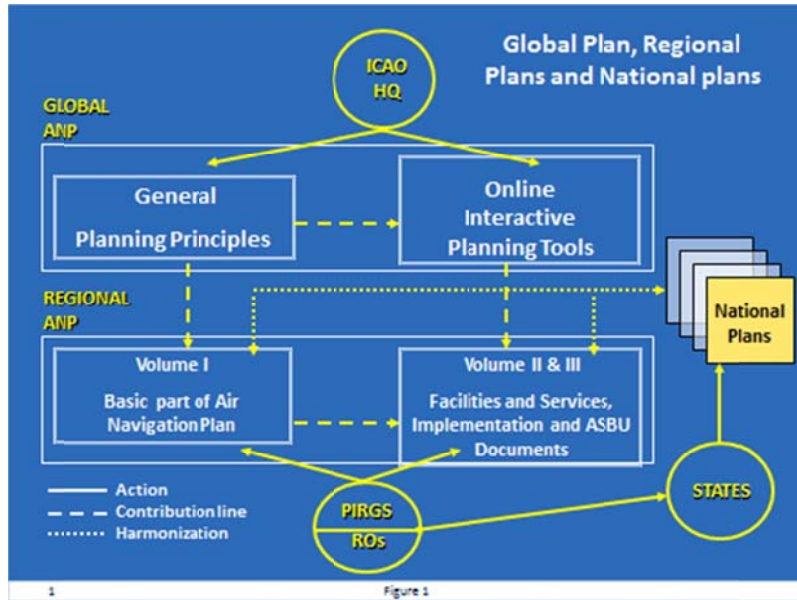


Figure 1. Relationship between global, regional and national plans.

5.1 Planning takes place at global, regional and national levels. Planning is accomplished with the help of planning tools and methodologies that are used primarily at the regional and national levels, conditioned by guidance from the global level. The basis for effective planning is the GANP (Doc 9750), which should guide the development of regional and national implementation plans that will support system architectures.

6. HUMAN RESOURCE PLANNING

6.1 Human resource planning can be considered “the systematic and continuing process of analysing an organisation’s human resource needs under changing conditions and developing personnel policies appropriate to the longer-term effectiveness of the organisation. It is an integral part of corporate planning and budgeting procedures since human resource costs and forecasts both affect and are affected by longer-term corporate plans.”¹

6.2 Estimating current and future requirements for civil aviation personnel and training capacity is essential for human resource planning, institutional capacity building, and related funding and policy measures. Such planning will need to take into account the interdependencies for supply and demand of qualified personnel at national, regional and global levels.

6.3 Human Performance

6.3.1 The high level of automation and interdependencies across aviation disciplines will only increase with evolving air navigation systems. To maximise potential safety and efficiency benefits that these offer, the development of human-driven, rather than engineering-driven interfaces is required, making it easier for the human operator to make sound decisions and take correct actions. Similarly, as part of a

¹ Defined by the UK Institute of Personnel and Development

safety management systems approach, procedures need to be identified for the use of current and new technologies that take into account human capabilities and manage the risk associated with human limitations.

6.3.2 States should:

- a) Identify a certification process that requires at the design stage:
 - i) recognition of the potential human performance issues that the proposed new technology attempts to address; and
 - ii) consideration of the potential human performance issues, including changes in roles and the effects on individual and team behaviours, that may be introduced by the proposed new technology.
- b) Identify processes for the implementation of new technologies, systems and procedures that describes the means by which human performance considerations can be addressed within operational contexts.
- c) Consider the management of human performance-related risks as a necessary and essential aspect of the oversight of safety management systems.
- d) Ensure that their technical personnel have exposure to training in human factors.

6.4 Training

6.4.1 A major goal of CNS/ATM systems is to create a seamless air navigation system. A seamless air navigation environment will require adequately qualified personnel prepared to perform their jobs in an evolving environment. At the same time, shortcomings in human resource planning and training are frequently mentioned as one of the reasons for the lack of implementation of regional ANPs. Human resource development challenges will be compounded during the transition period to CNS/ATM systems. As the existing and emerging air navigation technologies will co-exist in parallel for a period of time, civil aviation personnel will need to learn new skills, whilst retaining those needed to operate and maintain existing systems. To meet this challenge, a cooperative approach should be used in civil aviation training within the region. This approach should:

- a) ensure that the training needs for the region are identified, documented and kept up to date;
- b) facilitate the access to specialized types of training needed within the region or sub-regions that individual States cannot justify based on their national training needs alone;
- c) ensure that a balanced market exists to support the development and on-going implementation of high-quality training in one or more training centres within the region or sub-regions;
- d) endeavour to distribute equitably regional training activities among the training centres established within the region or sub-regions.
- e) take advantage of readily available training materials including those available through the TRAINAIR Plus sharing system.

6.4.2 Appropriate bodies should be established to facilitate regional and sub-regional training planning. A quantitative approach should be used to determine the training capabilities needed within a

region or sub-region. Decisions concerning required training capabilities should be based on an aggregate of training needs for existing air navigation technologies, as well as emerging technologies. A State consultation process should be used to formulate a plan for the establishment of specific regional training centres.

6.5 Training of technical personnel

6.5.1 States should develop and implement comprehensive training programmes and periodic training plans for all technical staff, including initial, on-the-job, recurrent and specialized training.

7. SAFETY CONSIDERATIONS

7.1 Safety fundamentally contributes to the sustainable growth of a sound and economically viable civil aviation system that continues to foster economic prosperity and social development. With air traffic projected to double in the next 15 years, safety risks must be addressed proactively to ensure that this significant capacity expansion is carefully managed and supported through strategic regulatory and infrastructure developments. It is imperative therefore that States and regions remain focused on their safety priorities as they continue to encourage expansion of their air transport sectors.

7.2 Acceptable safety levels are related to the establishment of State safety programmes (SSPs) that are able to anticipate and effectively respond to safety-related occurrences, resulting in continual improvements to an already low global accident rate. The *Global Aviation Safety Plan (GASP)* specifically establishes targeted safety objectives and initiatives that support SSP implementation while ensuring the efficient and effective coordination of complementary safety activities between all stakeholders.

7.3 PIRGs should harmonize activities undertaken to address aviation safety issues on a regional basis with the Regional Aviation Safety Groups (RASGs). In addition, PIRGs should coordinate relevant safety matters with RASGs to ensure consistency and avoid overlap.

7.4 PIRGs should ensure that air navigation services development programmes are consistent with the GASP safety objectives and initiatives. States are responsible for the prompt elimination of their air navigation deficiencies. Detailed information on the process of identifying and managing air navigation deficiencies is contained in the MIDANPIRG Procedural Handbook.

7.5 Adherence to the ICAO SARPs will significantly contribute to aviation safety. States should therefore ensure that they have the necessary regulatory framework in place to reinforce the adoption of the ICAO SARPs within their national regulations. States should also ensure that any differences to the ICAO SARPs have been assessed in respect of safety and are notified in accordance with ICAO requirements.

7.6 Unsatisfactory Conditions Reporting

7.6.1 States should act on any serious problems encountered due to the lack of implementation or prolonged unavailability of air navigation facilities or services required by the ANPs as reported by users of air navigation facilities and services.

8. ENVIRONMENT CONSIDERATIONS

8.1 It is an ICAO Strategic Objective to minimize the adverse effects of global civil aviation on the environment. PIRGs should ensure that environmental factors are taken into consideration when performance based systems implementation plans are developed and may wish to coordinate their plans with the State Action Plans on CO₂ Emissions Reduction. The results of environmental analysis can be useful in providing national decision-makers within the various sub-regions with information upon which to base airspace architecture decisions and in providing information on what the aviation industry is doing now to protect the environment in the future. Tools such as the ICAO Fuel Savings Estimation Tool (IFSET) are available from the ICAO public website to help quantify the environmental benefits from operational

improvements. Environmental considerations should, however, not compromise acceptable levels of safety and be balanced against operational and economic considerations.

9. AIR TRAFFIC FORECASTS

9.1 Regional traffic forecasting supports the regional air navigation system planning. All States generally prepare individual forecasts, taking account of the regional information, for national planning purposes. A uniform strategy has been adopted by ICAO for the purpose of preparing traffic forecasts and other planning parameters in support of the regional planning process. This information should be shared through at least the sub-regional groupings to enable effective regional planning development.

10. CONTINGENCY PLANNING

10.1 Contingency plans may constitute a temporary deviation from the approved ANPs; such deviations are approved, as necessary, by the President of the ICAO Council on behalf of the Council.

10.2 The effects of disruption of services in particular portions of airspace are likely to affect significantly the services in adjacent airspace. States should co-ordinate with neighbouring States in the development and implementation of contingency plans, which in some cases may be developed on a sub-regional basis.

10.3 ICAO will initiate and coordinate appropriate contingency action in the event of disruption of air traffic services and related supporting services affecting international civil aviation operations provided by a State in the event that the authorities cannot adequately discharge their responsibility for the provision of such services to ensure the safety of international civil aviation operations. In such circumstances, ICAO will work in coordination with States responsible for airspace adjacent to that affected by the disruption and in close consultation with international organizations concerned.

10.4 Regional contingency plans will be developed, approved and maintained by MIDANPIRG with the support of ICAO and other organizations.

10.5 States should prepare their contingency plans in advance and ensure their availability or accessibility to the ICAO Regional Office. The plans should be reviewed at regular intervals and updated as required.



TABLE GEN I-1 - FLIGHT INFORMATION REGIONS (FIR)/UPPER INFORMATION REGIONS (UIR) OF THE ICAO MID REGION

EXPLANATION OF TABLE

Column		
1	State	Name of State
2	FIR/UIR	Name of FIR/UIR

STATE	FIR/UIR
BAHRAIN	Bahrain FIR
EGYPT	Cairo FIR
IRAN, ISLAMIC REPUBLIC OF	Tehran FIR
IRAQ	Baghdad FIR
JORDAN	Amman FIR
KUWAIT	Kuwait FIR
LEBANON	Beirut FIR
LIBYA	Tripoli FIR
OMAN	Muscat FIR
SAUDI ARABIA	Jeddah FIR
SUDAN	Khartoum FIR
SYRIAN ARAB REPUBLIC	Damascus FIR
UNITED ARAB EMIRATES	Emirates FIR
YEMEN	Sana'a FIR

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APPENDIX B

MID AIR NAVIGATION PLAN

VOLUME II

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**MID ANP, VOLUME II
PART 0 – INTRODUCTION**

1. GENERAL

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction in Volume I. The procedure for amendment of Volume II is also described in Volume I.

1.2 Volume II contains dynamic plan elements related to:

- a) the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services; and
- b) the mandatory requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.3 Volume II does not list all facilities in the region but only those required for international civil aviation operations in accordance with regional air navigation agreements. A regional air navigation agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. Documents from the Integrated Aeronautical Information Package and other publications should be consulted for information on additional facilities and for operational information in general. Detailed guidance material or concepts, complementary to the material in Volumes I, II and III are contained in documents that are referenced as MID Documents.

2. MANAGEMENT OF REGIONAL AIR NAVIGATION PLANS

2.1 The elements in Volume II are reviewed by the MIDANPIRG in accordance with its schedule of meetings, in consultation with provider and user States, and with the assistance of the ICAO MID Regional Office.

2.2 The information on States' facilities and services included in Volume II, should be updated following the process of regional air navigation agreements.

2.3 The development and maintenance of region-specific documents that provide detailed guidance material or concepts that are complementary to the material in Volumes I, II and III is the responsibility of the MIDANPIRG.

MID ANP, VOLUME II

PART I – GENERAL PLANNING ASPECTS (GEN)

1. INTRODUCTION

1.1. The material in this part of Volume II of ANP is applicable to one or more parts of the ANP. It should be taken into consideration in the overall planning process for the MID Region.

2. GENERAL REGIONAL REQUIREMENTS

2.1. To facilitate air navigation systems planning and implementation, homogenous ATM areas and/or major traffic flows/routing areas have been defined for the Region. While these areas of routing do not encompass all movements in the Region, they include the major routes. This includes the domestic flights in that particular area of routing.

Homogeneous ATM area

2.2. A homogeneous ATM area is an airspace with a common ATM interest, based on similar characteristics of traffic density, complexity, air navigation system infrastructure requirements or other specified considerations. In such an ATM area a common detailed plan will foster the implementation of interoperable ATM systems. Homogeneous ATM areas may extend over States, specific portions of States, or groupings of States. They may also extend over large oceanic and continental areas. They are considered areas of shared interest and requirements.

2.3. The method of identifying homogeneous ATM areas involves consideration of the varying degrees of complexity and diversity of the worldwide air navigation infrastructure. Based on these considerations, planning could best be achieved at the global level if it was organized based on ATM areas of common requirements and interest, taking into account traffic density and the level of sophistication required.

Major traffic flows/routing areas

2.4. A major traffic flow refers to a concentration of significant volumes of air traffic on the same or proximate flight trajectories. Major traffic flows may cross several homogeneous ATM areas with different characteristics.

2.5. A routing area encompasses one or more major traffic flows, defined for the purpose of developing a detailed plan for the implementation of ATM systems and procedures. A routing area may cross several homogeneous ATM areas with different characteristics. A routing area specifies common interests and requirements of underlying homogeneous areas, for which a detailed plan for the implementation of ATM systems and procedures either for airspace or aircraft will be specified.

2.6. The homogeneous ATM areas and major traffic flows/routing areas identified are given in **Table GEN II-1**.

TABLE GEN II-1 - HOMOGENEOUS ATM AREAS AND/OR MAJOR TRAFFIC FLOWS IDENTIFIED IN THE MID REGION

EXPLANATION OF TABLE

Column		
1	Area of routing (AR)	Sequential number of area of routing
2	Homogeneous Areas and/or Traffic flows/routing areas	Brief description and/or name
3	FIRs involved	List of FIRs concerned
4	Type of area covered	Brief description of type of area, examples: Oceanic or Continental High or low density Oceanic en-route or Continental en-route
5	Remarks	Homogeneous ATM Area and/or Major Traffic Flow and Region(s) concerned

Area of routing (AR)	Homogeneous Areas and/or Traffic flows/routing areas	FIRs involved	Type of area covered	Remarks
1	2	3	4	5
AR1	Asia and Europe, Asia and the Middle East, Europe and the Middle East, via the northern Arabian Peninsula and Eastern Mediterranean	Amman, Bahrain, Beirut, Damascus, Emirates, Jeddah, Kuwait, Muscat,	Continental high density	Mainly intraregional and MID to/from ASIA and EUR. Some overflying EUR/ASIA traffic
AR2	Egypt and the southern Arabian Peninsula to/from Europe, Africa, Asia and North Africa	Cairo, Bahrain, Emirates, Jeddah, Muscat, Sana'a	Remote continental and oceanic low density (but seasonally high density)	Major traffic flow mainly landing and departing the MID region. Some EUR/AFI traffic and North Africa
AR3	Asia and Europe, Asia and the Middle East, Europe and the Middle East, north of the Gulf	Teheran, Emirates	Continental high density	Major traffic flow ASIA/EUR
AR4	Gulf, Asia (Indian subcontinent) to/from North of Europe	Bahrain, Baghdad, Kuwait, Muscat, Emirates	Continental high density	MID to/from Asia and EUR
AR5	Gulf Area to/from Eastern, Central and West Africa	Bahrain, Muscat, Jeddah, Emirates	Continental low density (Seasonal high density)	Traffic flow Intraregional. Seasonal pilgrim flights to/from, East, Central, and West AFI

- END -