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UNITING AVIATION

Guidance on Space Weather requirements Workshop

(Virtual, 28-29 July 2021)

Space Weather Information service to support international air navigation as part of ICAO's Global Air Navigation Plan (Doc 9750)

(Presented by Goama Ilboudo, Regional Officer, MET, WACAF Office)



WELCOME TO THE GLOBAL AIR NAVIGATION PLAN PORTAL

The GANP Portal is a web portal where all aviation stakeholders will be able to find the most relevant information related to the GANP



THE GLOBAL AIR NAVIGATION PLAN

The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). It also supports planning for local and regional implementation.

In order to better communicate with technical and high-level managers and to not leave any State or stakeholder behind, a multilayer structure, tailored for the various audiences, is proposed for the sixth edition of the GANP. This multilayer structure of four layers; two global levels, a regional level and a national one, would also provide a framework for alignment of regional, sub-regional and national plans.



MULTILAYER STRUCTURE OF THE GANP

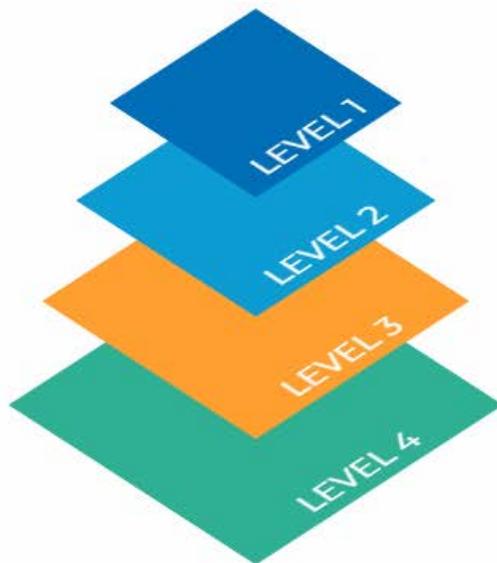
Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



The GANP drives the evolution of the global air navigation system to meet the ever growing expectations of the aviation community. The purpose of the GANP is to equitably accommodate all airspace users operations in a safe, secure and cost-effective manner while reducing



MULTILAYER STRUCTURE OF THE GANP

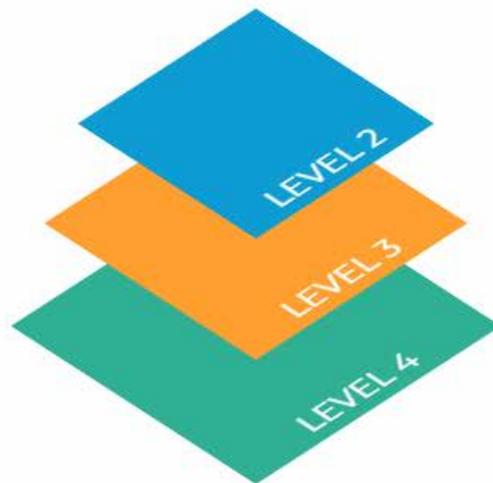
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GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



GLOBAL STRATEGIC ×

Provides high-level strategic directions for decision makers to drive the evolution of the global air navigation system towards a common agreed vision.



GANP STRATEGY

The global strategic level provides high-level strategic direction for decision makers to drive the evolution of the global air navigation system. To this end, the global strategic level includes a common vision, global performance ambitions and a conceptual roadman.

MULTILAYER STRUCTURE OF THE GANP

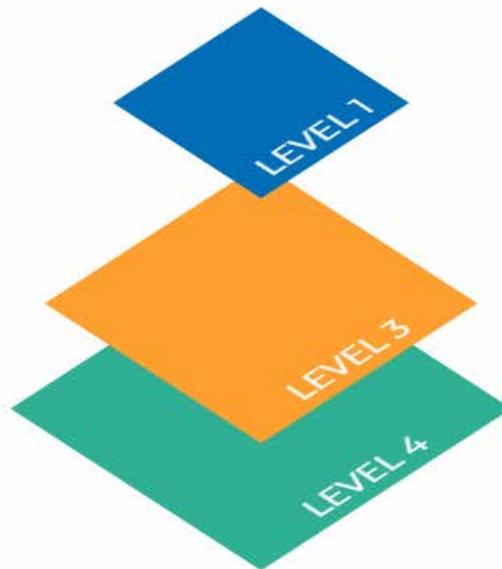
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GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



GLOBAL TECHNICAL ×

Supports technical managers in planning the implementation of basic air navigation services and new operational improvements in a cost-effective manner.



The global technical level supports technical managers in planning implementation of basic services and new operational improvements in a cost-effective manner and according to specific needs, while ensuring interoperability of systems and harmonization of procedures. It

MULTILAYER STRUCTURE OF THE GANP

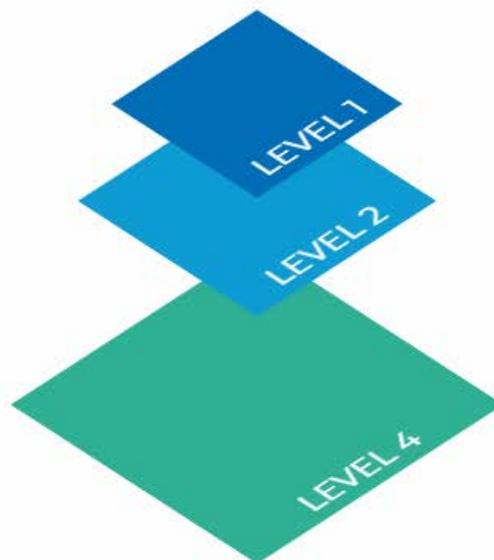
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GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



REGIONAL ✕

Addresses regional and sub-regional needs aligned with the global objectives.



AFI ANP



APAC ANP



EUR ANP



MID ANP



NAM ANP



NAT ANP



CARSAM ANP

The regional level addresses regional and sub-regional needs aligned with the global objectives. As such, it contains the ICAO Regional Air Navigation Plans (ANPs) and considers other regional initiatives.

MULTILAYER STRUCTURE OF THE GANP

Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



NATIONAL ×

Development by States, in coordination with relevant stakeholders, of air navigation plans aligned with regional and global plans.



NANP
TEMPLATE



CBA
CHECKLIST

The fourth level, under responsibility of the States, focuses on national planning. The development by States, in coordination with relevant stakeholders, of air navigation plans as a strategic part of their national development plans and aligned with regional and global plans is

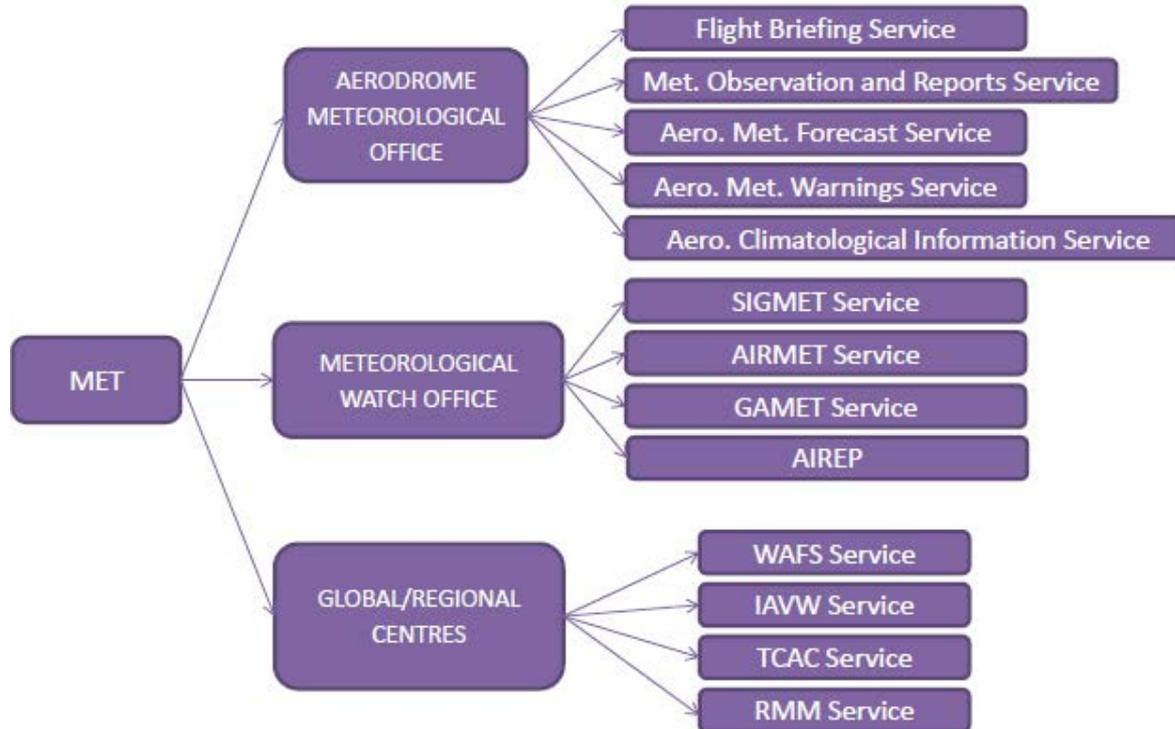


Global technical frameworks:

Two global technical frameworks:

- The **Basic Building Blocks (BBB) framework**, which outlines the foundation for a robust air navigation system by defining the essential air navigation services that shall be provided for international civil aviation; and
- An **updated version of the ASBU framework** for scalable implementation, which provides the aviation community with the performance benefits expected from the implementation of specific air navigation operational improvements.

MET BASIC MODULES AND ELEMENTS





Updated version of the ASBU MET Modules

AMET B0

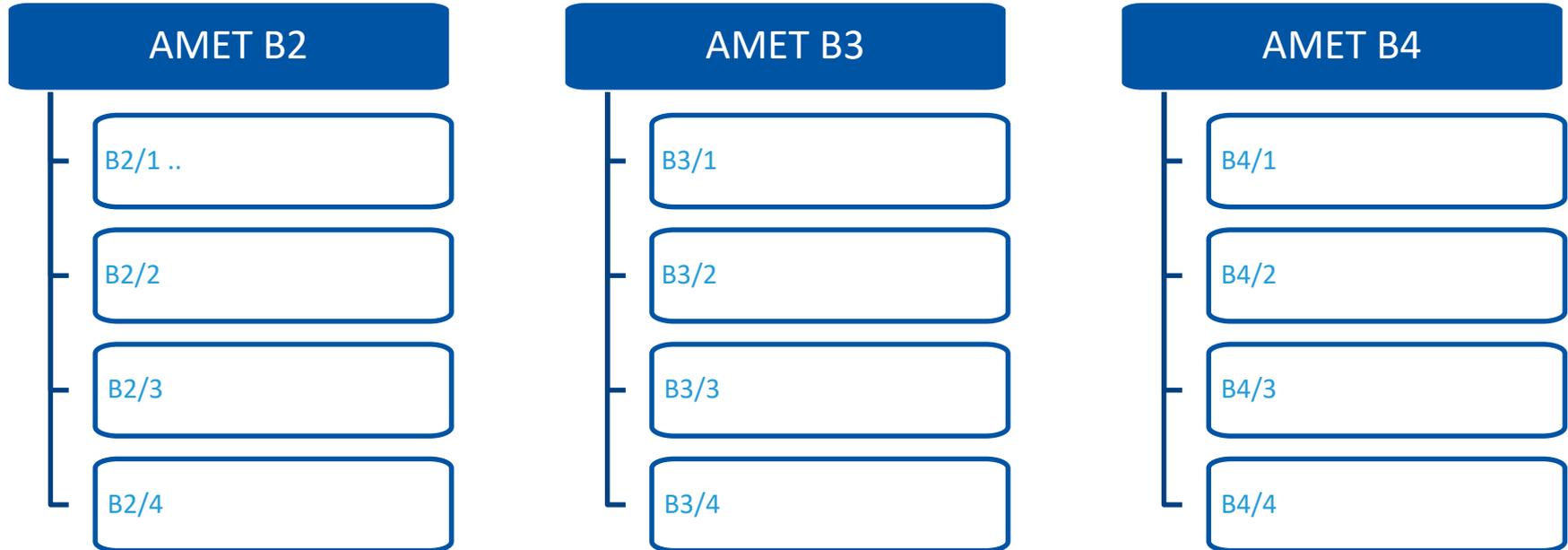
- B0/1** Meteorological Observations Products
- B0/2** Meteorological forecast and warning products
- B0/3** Climatological and Historical Information
- B0/4** Dissemination of Meteorological Products

AMET B1

- B1/1** Meteorological observations information
- B1/2** Meteorological forecast and warning information
- B1/3** Climatological and historical meteorological information
- B1/4** Dissemination of meteorological information



Updated version of the ASBU MET Modules





AMET B1/1 Elements

Table 1 - Implementation of the AMET-B1/1 Elements

#	AMET-B1/1 elements	Related SARPs & Requirements	Applicable (Yes /No)	Priority	Target date	Status
1	Wind speed and direction (aerodrome) including gusts					
...
25	Space weather events	Annex 3, hap.3:3.8, App.2:6 APIRG/23 Conc. 23/20; Conc. 23/30	Yes	1	Nov. 2022	Ongoing
26	Tsunami, Flood					



AMET B1/2 Elements

Table 1 - Implementation of the AMET-B1/2 Elements

#	AMET-B1/2 elements	Related SARPs & Requirements	Applicable (Yes /No)	Priority	Target date	Status
1	Wind speed and direction (aerodrome) including gusts and operationally significant wind shifts					
...
25	Space weather events	Annex 3, Chap.3:3.8, App.2:6 APIRG/23 Conc. 23/20; Conc. 23/30	Yes	1	Nov. 2022	Ongoing
26	Tsunami, Flood					



Conclusion

The implementation of Space Weather information with regard to Annex provisions and APIRG Conclusions contribute to the implementation of AMET B1/1 and B1/2 elements



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North Atlantic
(EUR/NAT) Office
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(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU