

ICAO RBIS TOD PROJECT TERRAIN AND OBSTACLES DATA

TOD POLICY TEMPLATE[State name]

No.: AFI_AIM_RBIS_TOD_PLN_TMP



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed:	01 03/2023	Rev: 00 03/2023	2 of 24
------------------------------------	------------	-----------------	-----------------------

0. DOCUMENT ADMINISTRATION

0.1. APPROVAL PAGE

	Position	Name and Signature	Date
Prepared by			
Reviewed by			
Reviewed by			
Approved by			



No.: AFI_AIM_RBIS_TOD_POLI_TMP	Ed: 01 03/2023	Rev: 00 03/2023	3 of 24

0.2. LIST OF EFFECTIVE PAGES

List of Effective Pages		
Page Number Revision Date		



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 4 of 24

0.3. RECORD OF AMENDMENTS AND CORRIGENDA

Record of amendments			
Ed. Rev. Date of the amendments			Reason for the amendments

	Record of corrigenda			
I Ed I Rev I		Date of the corrigenda	Reason for the corrigenda	



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 5 of 24



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 6 of 24

0.4. DOCUMENTS REFERENCES

- Annex 15: Aeronautical information Services
- Procedures for Air Navigation Services Aeronautical and information Management (PANS-AIM, Doc 10066)
- Aeronautical and information Services (AIS) Manual (Doc 8126)
- Eurocontrol TOD manual
- AFI e-TOD WG/1-Report



No. : *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 7 of 24

0.5. LIST OF TERMS AND DEFINITION

Accuracy. A degree of conformance between the estimated or measured value and the true value.

Confidence level. The probability that the true value of a parameter is within a certain interval around the estimate of its value. The interval is usually referred to as the accuracy of the estimate.

Data originator. The part of an organisation which performs measurements by a particular means and which then groups those measurements to represent an area of terrain or a set of obstacles.

Digital Elevation Model (DEM). The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

Note.— Digital Terrain Model (DTM) is sometimes referred to as DEM.

Integrity (aeronautical data). A degree of assurance that an aeronautical data and its value has not been lost or altered since the data origination or authorized amendment.

Note.— For measured positional data the accuracy is normally expressed in terms of a distance from a stated position within which there is a defined confidence of the true position falling

Obstacle. All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.

Post spacing. Angular or linear distance between two adjacent elevation points.

Precision. The smallest difference that can be reliably distinguished by a measurement process.

Specification. Document which establishes the requirements the product or service should be compliant with.

State. An internationally recognized geographic entity that provides aeronautical information service.

Terrain. The surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, excluding obstacles.

Traceability. Ability to trace the history, application or location of that which is under consideration.

Validation. Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled.

Verification. Confirmation, through the provision of objective evidence that, specified requirements have been fulfilled.



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 8 of 24

Instructions

[This document is an example template of a State TOD policy and provides step-by-step guidance to States on how to establish their own national TOD policy in a standard consistent way in relation to ICAO SARPs, GANP, Regional plans and other related documents.

This template includes, boilerplate text, and fields that should be replaced with the values specific to the State TOD policy.

Blue italicized text enclosed in square brackets ([text]) provides instructions to the document author, including explanation on the intent, assumptions and context for content that should be included in this document.

Text and tables in **Black** are provided as boilerplate examples of wording and formats that may be used or modified as appropriate to a specific policy. These are offered only as suggestions to assist in developing planning documents; they are not mandatory formats.

When using this template for your TOD Policy, it is recommended that you follow these steps:

Modify boilerplate text as appropriate to address the State's own requirements.

Add extra sections which are not included in the template to provide more detail information or to address specific State issues.

Complete the sections that the template contains as these are mandatory fields to be filled.]



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 9 of 24

0.6. CONTENTS

0. DO	CUMENT ADMINISTRATION	2
0.1.	APPROVAL PAGE	2
0.2.	LIST OF EFFECTIVE PAGES	3
0.3.	RECORD OF AMENDMENTS AND CORRIGENDA	4
0.4.	DOCUMENTS REFERENCES	<i>6</i>
0.5.	LIST OF TERMS AND DEFINITION	7
0.6.	CONTENTS	9
1. EX	ECUTIVE SUMMARY	11
2. INT	RODUCTION	12
2.1.	PURPOSE AND SCOPE OF THIS DOCUMENT	12
3. TEI	RRAIN DATA	12
3.1.	DEFINITION OF SCOPE	12
3	.1.1. GENERAL	12
3	.1.2. QUALITY/NUMERICAL REQUIREMENTS FOR TERRAIN DATA	13
3	.1.3 AERODROMES REQUIRED TO PROVIDE TERRAIN DATA	14
3	.1.4 FUNCTIONS REQUIRED FOR TERRAIN DATA	14
3.2.	DEFINITION OF RESPONSIBILITIES	15
3	.2.1 RESPONSIBILITY FOR REGULATION	15
3	.2.2 RESPONSIBILITY FOR DATA ORIGINATION	15
3	.2.3 RESPONSIBILITY FOR DATA VERIFICATION AND VALIDATION	16
3	.2.4 RESPONSIBILITY FOR THE TERRAIN DATA REPOSITORY	16
3	.2.5 RESPONSIBILITY FOR TERRAIN DATA MAINTENANCE	16
3	.2.6 RESPONSIBILITY FOR TERRAIN DATA PROVISION	17
3	.2.7 RESPONSIBILITY FOR CROSS-BORDER EXCHANGE OF TERRAIN DATA	17
3	.2.8 RESPONSIBILITY FOR THE OVERSIGHT MECHANISM	17
3.3.	COST RECOVERY AND CHARGING	17
4. OB	STACLE DATA	18
4.1.	DEFINITION OF SCOPE	18
4	.1.1. GENERAL	18
4	.1.2 QUALITY/NUMERICAL REQUIREMENTS FOR OBSTACLE DATA	18
4	.1.3 AERODROMES REQUIRED TO PROVIDE OBSTACLE DATA	19
4	.1.4 FUNCTIONS REQUIRED FOR OBSTACLE DATA	20
12	STATE DOLICY ON A EDODDOME SAFEGUADDING	21



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 10 of 24

4.2.1 PURPOSE OF THIS SECTION	21
4.2.2 STATE POLICY	21
4.3 OBSTACLE PERMISSION PROCESS	21
4.3.1 PURPOSE OF THIS SECTION	21
4.3.2 PROCESS	21
4.3 DEFINITION OF RESPONSIBILITIES	21
4.3.1 RESPONSIBILITY FOR REGULATION	21
4.3.2 RESPONSIBILITY FOR THE DATA SOURCE	22
4.3.3 RESPONSIBILITY FOR OBSTACLE ASSESSMENT	22
4.3.4 RESPONSIBILITY FOR VERIFICATION AND VALIDATION	23
4.3.5 RESPONSIBILITY FOR THE OBSTACLE DATA REPOSITORY	23
4.3.6 RESPONSIBILITY FOR OBSTACLE DATA MAINTENANCE	23
4.3.7 RESPONSIBILITY FOR OBSTACLE DATA PROVISION	23
4.3.8 RESPONSIBILITY FOR CROSS-BORDER EXCHANGE OF OBSTACLE DATA	23
4.3.9 RESPONSIBILITY FOR THE OVERSIGHT MECHANISM	24
A A COST RECOVERY AND CHARGING	24



No. : *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 11 of 24

1. EXECUTIVE SUMMARY

[This section provides a summary of the key points of the plan including the actions to be taken by all stakeholders.]

It should briefly describe:

- the purpose of the Policy
- the key stakeholders that were involved;
- the strategic objectives,



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 12 of 24

2. INTRODUCTION

2.1. PURPOSE AND SCOPE OF THIS DOCUMENT

This document sets out the policy for [Name of State] relating to the collection, processing and provision of terrain and obstacle data (TOD). This document is not a regulation, but an approach, plan and set of actions adopted and agreed by the parties concerned by and included in this policy.

The main purpose of this document is to exhaustively define the policy of [Name of State] for TOD implementation, in order to enable [Name of the regulatory authority of the State] to update or develop the [Name of State] TOD regulatory framework and for the parties involved to develop the implementation programs and put in place the necessary steps to enable the provision of terrain and obstacle data.

3. TERRAIN DATA

3.1. DEFINITION OF SCOPE

3.1.1. GENERAL

This section documents the [Name of State] national policy relating to the collection, processing and provision of terrain data for the following coverage areas.

3.1.1.1. STATE POLICY FOR AREA 1

[Provide the State Policy for Area 1 here.]

Area 1 coverage including more information if it covers only part of the territory.

3. 1.1.2. STATE POLICY FOR AREA 2

[Provide the State Policy for Area 2 here.]

Area 2 designates the digital terrain model covering the vicinity of an aerodrome [subdivision of Area 2, if applicable].

[The subdivision of terrain data sets for Area 2 (if applicable) should be described here, e.g. provision of Area 2a, 2b, 2c and 2d or only Area 2a, the take-off flight path area, an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces]

3.1.1.3. STATE POLICY FOR AREA 3

[Provide the State Policy for Area 3 here.]

Area 3 designates the digital terrain model covering the vicinity of an aerodrome movement area as defined in ICAO Annex 15 and PANS-AIM.



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 13 of 24

3.1.1.4. STATE POLICY FOR AREA 4

[Provide the State Policy for Area 4 here.]

Area 4 designates the digital terrain model covering the radio altimeter operating area for the precision approach runway, Category II or III, as defined in ICAO Annex 15 and PANS-AIM.

3.1.2. QUALITY/NUMERICAL REQUIREMENTS FOR TERRAIN DATA

Terrain data for [list each specific coverage areas] in [Name of State] must conform to the following numerical requirements:

[This section should define the quality and numerical requirements for terrain data based on the applicable national and international regulations]

	Area 1	Area 2	Area 3	Area 4
Post spacing	X arc seconds (approx. X m)	X arc second (approx. X m)	X arc seconds (approx. X m)	X arc seconds (approx. X m)
Vertical accuracy	X m	X m	X m	X m
Vertical resolution	X m	X m	X m	X m
Horizontal accuracy	X m	X m	X m	X m
Confidence level	X %	X %	X %	X %
Integrity classification	routine	essential	essential	essential
Maintenance period	as required	as required	as required	as required

Table 1: Terrain quality data

3.1.2.1 APPLICABLE REGULATIONS

The following national and international regulations govern the collection, processing and provision of terrain data for [list each specific coverage areas] in [Name of State].

[Insert applicable national regulations and policies]



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 14 of 24

3.1.2.2 CURRENT COMPLIANCE

3.1.2.2.1 DATA

[Provide here a statement about the (non) compliance of the provided/available sets of terrain data for each specific coverage area, as applicable, with the quality and numerical requirements described above]

3.1.2.2.2 REGULATION

[Provide here a list of the documents forming part of the national regulatory framework which need to be updated or developed, as applicable, in order to ensure compliance with the quality and numerical requirements described above]

3.1.3 AERODROMES REQUIRED TO PROVIDE TERRAIN DATA

[Name of State] will provide sets of terrain data for Area 2 at the following aerodromes [list of aerodromes required to provide sets of terrain data for Area 2]

[As a minimum, the list of aerodromes will contain all international aerodromes publishing Aerodrome Obstacle Charts Types A/B in national AIPs. The list could be supplemented with information if the aerodrome is to provide Area 2a, 2b, 2c and 2d or Area 2a, the take-off flight path area, an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces]

[In the light of the ICAO plans for the move towards the introduction of APV and Performance Based Navigation (PBN) and an increased need for the provision of terrain data for those aerodromes where these are being implemented, it is recommended that priority for implementation of TOD be given to those aerodromes where the establishment of APV and PBN is planned. Such an approach would allow a gradual implementation of Area 2, with effort being focused on those aerodromes where the greatest benefits could be gained.]

[Name of State] will provide sets of terrain data for Area 3 at the following aerodromes [list of aerodromes required to provide sets of terrain data for Area 3]

[Name of State] will provide sets of terrain data for Area 4 at the following aerodromes and runways [list of aerodromes and runways required to provide sets of terrain data for Area 4]

3.1.4 FUNCTIONS REQUIRED FOR TERRAIN DATA

[Provide here the list of all functions and their roles within [Name of State] required for the collection, processing and provision of terrain data for each specific coverage area, preferably with a diagram of the intended data flow processes]

[A non-exhaustive list of possible functions is provided below:

- Regulation: entity responsible for the development of the national civil aviation regulatory framework for terrain data
- Data origination: entity with the capacity to survey the terrain and provide the surveyed data with the required numerical and quality characteristics



- Verification and validation: entity responsible for the validation and verification of the quality of the data
- Terrain data repository: entity responsible for terrain data storage
- Terrain data provision: entity responsible for the provision of terrain data to users
- Maintenance (and update): entity responsible for terrain data consistency with the evolution of the terrain in the universe of discourse
- Oversight: national supervisory authority responsible for oversight].

3.2. DEFINITION OF RESPONSIBILITIES

This section sets out the responsibilities for the collection, processing and provision of terrain data for [list each specific coverage areas] in [Name of State].

[For the area of coverage in question, this section shall state who is responsible for which function. Each "Function required for terrain data" from the above should be listed and related to the full identification of the entities responsible for this function. If such responsibilities are shared, it shall detail how.

The following entities may also be involved (non-exhaustive list):

Ministry responsible for transport, Civil Aviation Authority, AISP, ANSP, Aerodrome Operators, Military, National Geodetic, Cadastral or State Survey organization, commercial survey companies or associations, military survey organizations, Ministry responsible for local government, land planning and the environment, local authorities or other bodies responsible for aerodrome safeguarding/construction approval in the vicinity of the aerodrome, etc.]

3.2.1 RESPONSIBILITY FOR REGULATION

The [Name of entity] will be responsible in [Name of State] for developing/updating the national civil aviation regulatory framework to ensure the collection, processing and provision of terrain data for [each specific coverage areas]

[This section could include the list of specific regulations to be developed or updated]

3.2.2 RESPONSIBILITY FOR DATA ORIGINATION

The [Name of entity] will be responsible in [Name of State] for providing the original or updated¹ terrain data for [each specific coverage areas]

[This section could include the State's approach to terrain data origination in each particular coverage area]

¹ Updates could be covered under the responsibility for data maintenance



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 16 of 24

3.2.2.1 DATA SOURCES

[Provide a list of data sources of terrain data for [each specific coverage areas]]

[For each data source identified, provide information about its status, i.e., State-owned, commercial organization and list any particular areas of issue that arise from this.]

3.2.2.2 FORMAL ARRANGEMENTS

[List here the elements of the formal arrangements, which need to be put in place for the provision of terrain data for [each specific coverage areas]]

[Where arrangements are made for data source providers to make data available for aviation use, formal arrangements should be established between the data source providers and the receiving body. This section should list the formal arrangements in place which are related to the provision of terrain data for each specific coverage area.]

3.2.3 RESPONSIBILITY FOR DATA VERIFICATION AND VALIDATION

The [Name of entity] will be responsible in [Name of State] for validating and verifying the terrain data for [each specific coverage areas]

[This section could include the State's approach to the validation and verification of terrain data in each particular coverage area]

3.2.4 RESPONSIBILITY FOR THE TERRAIN DATA REPOSITORY

The [Name of entity] will be responsible in [Name of State] for storing the terrain data for [each specific coverage area]

[This section include the State's approach to the terrain data repository in each particular coverage area]

3.2.5 RESPONSIBILITY FOR TERRAIN DATA MAINTENANCE

The [Name of entity] will be responsible in [Name of State] for providing updates (regular maintenance) to the terrain data for [each specific coverage area]

[Unless this is covered in the responsibilities for data origination, this section could include the State's approach to the maintenance of the terrain data in each particular coverage area, including the frequency of its review].

[This section could include also the monitoring policy for each aerodrome/heliport which lays down the approach to be taken to ensure that the terrain data is maintained in such a way as to give a sufficiently high degree of confidence that it correctly reflects the current situation. It is recommended that this monitoring policy be applied on an individual aerodrome/heliport basis and agreed with the national regulator]



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 17 of 24

3.2.6 RESPONSIBILITY FOR TERRAIN DATA PROVISION

The [Name of entity] will be responsible in [Name of State] for providing the terrain data for [each specific coverage area] to the next-intended users.

[This section could include the State's approach to terrain data provision to the next-intended users for each particular coverage area, including the formats to be used and the means and media whereby the terrain data could be made available]

3.2.7 RESPONSIBILITY FOR CROSS-BORDER EXCHANGE OF TERRAIN DATA

[List the arrangements (to be put) in place with neighboring States for the exchange, provision and receipt of terrain data]

[This section should document the arrangements (to be put) in place with adjacent States for the exchange, provision and receipt of terrain data for a particular coverage area, e.g. aerodromes located close to the border with obstacle limitation surfaces extending into the adjacent State. Arrangements could include sharing the survey costs or use of the same survey company, all with the intention of reducing the cost of data acquisition.]

3.2.8 RESPONSIBILITY FOR THE OVERSIGHT MECHANISM

The [Name of entity] will be responsible in [Name of State] for the oversight of terrain data provision for [each specific coverage area].

[This section should detail how the State will monitor the implementation of the terrain data (e.g. mechanism whereby the State intends to monitor the implementation, and plan for the audit of the organizations involved in the implementation and the subsequent management and maintenance of the terrain data). It should also deal with the verification of compliance with the regulatory requirements through oversight and the acceptance of national implementation for data origination, collection, verification and validation, management and provision based on international requirements and the national regulatory framework]

3.3. COST RECOVERY AND CHARGING

[Provide here the cost recovery and charging mechanisms for each specific coverage area of the terrain data]

[This section identifies how the functions in 2.2. will finance their defined responsibilities and the charging mechanisms (to be put) in place].



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 18 of 24

4. OBSTACLE DATA

4.1. DEFINITION OF SCOPE

4.1.1. GENERAL

This section documents the [Name of State]'s national policy relating to the collection, processing and provision of obstacle data for the following coverage areas.

4.1.1.1. STATE POLICY FOR AREA 1

[Provide the State Policy for Area 1 here.]

Area 1 covers the entire territory of [Name of State].

4. 1.1.2 STATE POLICY FOR AREA 2

[Provide the State Policy for Area 2 here.]

Area 2 covers the vicinity of an aerodrome as defined in ICAO Annex 15 and PANS-AIM [subdivision of Area 2, if applicable] [The subdivision of obstacles data sets for Area 2 (if applicable) should be described here, e.g. provision of Area 2a, 2b, 2c and 2d or only Area 2a, the take-off flight path area, an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces]

4.1.1.3 STATE POLICY FOR AREA 3

[Provide the State Policy for Area 3 here.]

Area 3 covers the vicinity of an aerodrome movement area as defined in ICAO Annex 15 and PANS-AIM.

4.1.1.4 STATE POLICY FOR AREA 4

[Provide the State Policy for Area 4 here.]

Area 4 covers the radio altimeter operating area for the precision approach runway, Category II or III, as defined in ICAO Annex 15 and PANS-AIM.

4.1.2 QUALITY/NUMERICAL REQUIREMENTS FOR OBSTACLE DATA

Obstacle data for coverage areas below in [Name of State] shall conform to the following numerical requirements:

[This section should define the quality of and numerical requirements for obstacle data based on the applicable national and international regulations]

Area 1 Area 2 Area 3 Area	4
---------------------------	---



		ì	
No.: AFI_AIM_RBIS_TOD_POLI_TMP	Ed: 01 03/2023	Rev: 00 03/2023	19 of 24

Vertical accuracy	X m	X m	X m	X m
Vertical resolution	X m	X m	X m	X m
Horizontal accuracy	X m	X m	X m	X m
Confidence level	X %	X %	X %	X %
Integrity classification	routine	essential	essential	essential
Maintenance period	as required	as required	as required	as required

Table 2: Obstacles quality data

[Additional requirements could be included here based on applicable regulations, examples of which are described below]

4.1.2.1 APPLICABLE REGULATIONS

The following national and international regulations govern the collection, processing and provision of obstacle data for [list each specific coverage area] in [Name of State].

[Insert applicable national regulations and policies]

4.1.2.2 CURRENT COMPLIANCE

4.1.2.2.1 DATA

[Provide here a statement about the (non) compliance of the provided/available sets of obstacle data for each specific coverage area, as applicable, with the quality and numerical requirements described above]

4.1.2.2.2 REGULATION

[Provide here a list of the documents forming part of the national regulatory framework which need to be updated or developed, as applicable, in order to ensure compliance with the quality and numerical requirements described above]

4.1.3 AERODROMES REQUIRED TO PROVIDE OBSTACLE DATA

[Name of State] will provide sets of obstacle data for Area 2 at the following aerodromes [list of aerodromes required to provide sets of obstacle data for Area 2]

[As a minimum, the list of aerodromes will contain all international aerodromes publishing Aerodrome Obstacle Charts Type A/B in national AIPs. The list could be supplemented with information if the aerodrome is to provide Area 2a, 2b, 2c and 2d or Area 2a, the take-off flight path area and the aerodrome obstacle limitation surfaces]



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 20 of 24

[In the light of the ICAO plans for the move towards the introduction of APV and Performance Based Navigation (PBN) and an increased need for the provision of obstacle data for those aerodromes where these are being implemented, it is recommended that priority for implementation of TOD be given to those aerodromes where the establishment of APV and PBN is planned. Such an approach would allow a gradual implementation of Area 2, with effort being focused on those aerodromes where the greatest benefits could be gained.]

[Name of State] will provide sets of obstacle data for Area 3 at the following aerodromes [list of aerodromes required to provide sets of obstacle data for Area 3]

[Name of State] will provide sets of obstacle data for Area 4 at the following aerodromes and runways [list of aerodromes and runways required to provide sets of obstacle data for Area 4]

4.1.4 FUNCTIONS REQUIRED FOR OBSTACLE DATA

[Provide here the list of all functions and their roles within [Name of State] required for the collection, processing and provision of obstacle data for each specific coverage area, preferably with a diagram of the intended data flow processes]

[A non-exhaustive list of possible functions is provided below:

- Regulation: entity responsible for the development of the national civil aviation regulatory framework for obstacle data Data source:
 - Obstacle owner: entity owning/commissioning the erection of any objects penetrating the obstacle collection surfaces for specific coverage areas in accordance with the national obstacle authorisation process
 - Data origination: entity with the capacity to survey obstacles and provide the surveyed data with the required numerical and quality characteristics
- Obstacle assessment: entity constituted from various aviation domains (e.g. military, CNS infrastructure authority, aerodrome safeguarding authority, PANS-OPS) responsible for the assessment of the effects of the obstacle on aviation infrastructure. The opinion of this entity should be considered in the obstacle authorisation process.
- Verification and validation: entity responsible for the validation and verification of the quality of data
- Obstacle data repository: entity responsible for obstacle data storage and maintenance as described in the national obstacle authorisation process.
- Obstacle data provision: entity responsible for the provision of obstacle data to the next-intended users
- Oversight: national supervisory authority responsible for oversight]



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 21 of 24

4.2 STATE POLICY ON AERODROME SAFEGUARDING

4.2.1 PURPOSE OF THIS SECTION

This section documents the [Name of State] policy for the safeguarding of aerodromes.

4.2.2 STATE POLICY

[Provide the State policy for aerodrome safeguarding here.]

4.3 OBSTACLE PERMISSION PROCESS

4.3.1 PURPOSE OF THIS SECTION

This section documents the obstacle permission process of [Name of State] and any legislation that applies.

4.3.2 PROCESS

[Provide the State obstacle permission process here and list any legislation that applies.]

4.3 DEFINITION OF RESPONSIBILITIES

This section sets out the responsibilities for the collection, processing and provision of obstacle data for [list each specific coverage area] in [Name of State].

[For the area of coverage in question, this section shall state who is responsible for which function. Each "Function required for obstacle data" from the above should be listed and related to the full identification of the entities responsible for this function. If such responsibilities are shared, it shall detail how.

The following entities may also be involved (non-exhaustive list):

Ministry responsible for transport, Civil Aviation Authority, AISP, ANSP, Military, National Geodetic, Cadastral or State Survey organization, commercial survey companies or associations, military survey organization, local authorities or other bodies responsible for aerodrome safeguarding/construction approval in the vicinity of the aerodrome, Ministry responsible for local government, land planning and the environment, power transmission companies, regulatory authority for radio and television broadcasts, mobile antenna operators, local port authorities if ports exist in close proximity to an airport, etc.]

4.3.1 RESPONSIBILITY FOR REGULATION

The [Name of entity] will be responsible in [Name of State] for developing/updating the national civil aviation regulatory framework to ensure the collection, processing and provision of obstacle data for [each specific coverage area]



No.: *AFI_AIM_RBIS_TOD_POLI_TMP* Ed: 01 03/2023 Rev: 00 03/2023 22 of 24

[This section could include the list of specific regulations to be developed or updated]

4.3.2 RESPONSIBILITY FOR THE DATA SOURCE

The [Name of entity] will be responsible in [Name of State] for originate the initial or provide updates² to existing obstacle data for [each specific coverage area] [This section could include the State's approach to obstacle data origination in each particular coverage area, based on the national obstacle authorization process and aerodrome safeguarding policy. The data sources could be the individual obstacle owners or data originators able to collect such obstacles with the required numerical and quality characteristics

Possible examples of obstacle owners:

- Power transmission companies
- Regulatory authority for radio and television broadcasts
- Mobile antenna operators
- **-** *Wind farm operators*
- *Etc.*]

4.3.2.1 DATA SOURCES

[Provide a list of data sources of obstacle data for [each specific coverage area]]

[For each data source identified, provide information about its status, i.e., State-owned, commercial organization and list any particular areas of issue that arise from this.]

4.3.2.2 FORMAL ARRANGEMENTS

[List here the elements of the formal arrangements which need to be put in place for the provision of obstacle data for [each specific coverage area]]

[Where arrangements are made for data source providers to make data available for aviation use, formal arrangements should be established between the data source providers and the receiving body. This section should list the formal arrangements (to be put) in place related to the provision of obstacle data for each specific coverage area.

4.3.3 RESPONSIBILITY FOR OBSTACLE ASSESSMENT

The [Name of entity] will be responsible in [Name of State] for assessing the effects of the objects penetrating the obstacle collection surfaces on the aviation infrastructure for [each specific coverage area] and providing advice to the obstacle authorization process.

² Updates could be covered under the responsibility for data maintenance



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 23 of 24

[Obstacle assessment should cover the expertise of various aviation domains, i.e. military, CNS infrastructure, aerodrome safeguarding authority, airspace and instrument procedure designers). The opinion of this entity should be considered in the obstacle authorisation process.

4.3.4 RESPONSIBILITY FOR VERIFICATION AND VALIDATION

The [Name of entity] will be responsible in [Name of State] for validating and verifying the obstacle data for [each specific coverage area]

[This section include the State's approach to the validation and verification of obstacle data in each particular coverage area]

4.3.5 RESPONSIBILITY FOR THE OBSTACLE DATA REPOSITORY

The [Name of entity] will be responsible in [Name of State] for storing the obstacle data for [each specific coverage area]

[This section could include the State's approach to the obstacle data repository in each particular coverage area]

4.3.6 RESPONSIBILITY FOR OBSTACLE DATA MAINTENANCE

The [Name of entity] will be responsible in [Name of State] for the maintenance of the obstacle data for [each specific coverage area] in accordance with the national obstacle authorization process.

[Unless this is covered in the responsibilities for data sources, this section could include the State's approach to the maintenance of the obstacle data in each particular coverage area based on the national obstacle authorization process]

[This section could include also the monitoring policy for each aerodrome/heliport which lays down the approach to be taken to ensure that the obstacle data is maintained in such a way as to give a sufficiently high degree of confidence that it correctly reflects the current situation. It is recommended that this monitoring policy be applied on an individual aerodrome/heliport basis and agreed with the national regulator]

4.3.7 RESPONSIBILITY FOR OBSTACLE DATA PROVISION

The [Name of entity] will be responsible in [Name of State] for providing the obstacle data for [each specific coverage area] to the next-intended users.

[This section could include the State's approach to obstacle data provision to the next-intended users for each particular coverage area, including the formats to be used and the means and media whereby the obstacle data could be made available]

4.3.8 RESPONSIBILITY FOR CROSS-BORDER EXCHANGE OF OBSTACLE DATA

[List the arrangements (to be put) in place with neighboring States for the exchange, provision and receipt of obstacle data]



No.: AFI_AIM_RBIS_TOD_POLI_TMP Ed: 01 03/2023 Rev: 00 03/2023 24 of 24

[This section should document the arrangements (to be put) in place with adjacent States for the exchange, provision and receipt of obstacle data for a particular coverage area which might affect the civil aviation infrastructure, e.g. aerodromes located close to the border with obstacle limitation surfaces extending into the adjacent State, wind farms or other obstacles close to the border. Arrangements could include sharing the survey costs or use of same survey company, all with the intention of reducing the cost of data acquisition.]

4.3.9 RESPONSIBILITY FOR THE OVERSIGHT MECHANISM

The [Name of entity] will be responsible in [Name of State] for the oversight of obstacle data provision for [each specific coverage area].

[This section should detail how the State will monitor the implementation of the obstacle data (e.g. mechanism whereby the State intends to monitor the implementation, and plan for the audit of the organizations involved in the implementation and the subsequent management and maintenance of the obstacle data). It should also deal with the verification of compliance with the regulatory requirements through the oversight and acceptance of national implementation of data origination, collection, verification and validation, management and provision based on international requirements and the national regulatory framework]

4.4 COST RECOVERY AND CHARGING

[Provide here the cost recovery and charging mechanisms for each specific coverage area of the obstacle data]

[This section identifies how the functions in 3.3. will finance their defined responsibilities and the charging mechanisms (to be put) in place].