

**ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES****1. PROVISION OF ATS SURVEILLANCE SERVICES****1.1 ATS surveillance systems used in the provision of air traffic services**

1.1.1 Secondary Surveillance Radar (SSR) systems shall be used in the provision of air traffic services, including in the provision of separation between aircraft, provided:

- a. the carriage of SSR transponders is mandatory to all aircraft operating within the area notified at GEN 1.5.3, paragraph 3.4.1; and
- b. identification is established and maintained.

1.1.2 The provision of ATS surveillance services shall be limited to specified areas of coverage and shall be subject to such other limitations as have been specified by the competent authority.

1.1.3 The ATS surveillance services are based on the data received from the following SSR systems:

SSR Name	Latitude	Longitude	Range
Porto Romano MSSR	41 21 54N	019 25 22E	227 NM
Rinas MSSR	41 25 06N	019 42 45E	200 NM
Kerkira MSSR	39 32 59N	019 52 51E	200 NM
Skopje MSSR	41 57 30N	021 38 31E	200 NM
Podgorica MSSR	42 22 46N	019 13 26E	256 NM

**1.2 Types of ATS surveillance service**

1.2.1 Tirana ACC shall normally provide air traffic control services with the use of ATS surveillance system to all aircraft operating in controlled airspace within the Tirana FIR at and above FL 115, except Tirana TMA and portions of ATS routes feeding Tirana TMA.

1.2.2 Tirana ACC shall provide flight information and alerting service with the use of ATS surveillance system to all aircraft operating within the Tirana FIR at and above FL 115, except Tirana TMA and portions of ATS routes feeding Tirana TMA.

1.2.3 Tirana APP shall normally provide air traffic control services with the use of ATS surveillance system to all aircraft operating in the Tirana TMA and portions of ATS routes feeding Tirana TMA.

1.2.4 Tirana APP shall provide flight information and alerting service with the use of ATS surveillance system to all aircraft operating in the Tirana TMA and portions of ATS routes feeding Tirana TMA and, as far as practicable, outside controlled airspace within the Tirana FIR below FL 115, if requested (see GEN 3.3).

**1.3 Identification of aircraft**

1.3.1 Before providing an ATS surveillance service to an aircraft, identification shall be established and the pilot informed. Thereafter, identification shall be maintained until termination of the ATS surveillance service.

1.3.2 If identification is subsequently lost, the pilot shall be informed accordingly and, when applicable, appropriate instructions issued.

1.3.2.1 Aircraft may be identified by one or more of the following procedures:

- a. recognition of the aircraft identification in an SSR label;

*Note: The use of this procedure requires that the code/call sign correlation is achieved successfully, taking into account the Note following b) below.*

- b. recognition of an assigned discrete code, the setting of which has been verified, in an SSR label; and

*Note: The use of this procedure requires a system of code assignment which ensures that each aircraft in a given portion of airspace is assigned a discrete code.*

- c. by transfer of identification;
- d. observation of compliance with an instruction to set a specific code;
- e. observation of compliance with an instruction to squawk IDENT.

1.3.2.2 When a discrete code has been assigned to an aircraft, a check shall be made at the earliest opportunity to ensure that the code set by the pilot is identical to that assigned for the flight. Only after this check has been made shall the discrete code be used as a basis for identification.

#### **1.4 Minimum levels**

1.4.1 The controller shall at all times be in possession of full and up-to-date information regarding:

- a. established minimum flight altitudes within the area of responsibility;
- b. the lowest usable flight level or levels in accordance with ENR. 1.7, 2.3.2 and GEN 3.3, 3.2.4; and
- c. established minimum altitudes applicable to procedures based on tactical vectoring and direct routing, including the necessary temperature correction or method to correct the effect of low temperatures on minimum altitudes.

1.4.2 Unless otherwise specified by the competent authority, minimum altitudes for procedures based on tactical vectoring with any ATS surveillance system shall be determined using the criteria applicable to tactical radar vectoring.

*Note: Criteria for the determination of minimum altitudes applicable to procedures based on tactical radar vectoring are contained in Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volume II.*

1.4.3 ATC shall not at any time clear or vector aircraft below the published minimum en-route levels for aircraft outside the Tirana TMA, or below the levels specified on the ATC Surveillance Minimum Altitude Chart for aircraft within the Tirana TMA.

#### **1.5 Use of ATS surveillance systems in the air traffic control**

##### **1.5.1 Functions**

1.5.1.1 The information provided by ATS surveillance systems and presented on a situation display may be used to perform the following functions in the provision of air traffic control service:

- a. provide ATS surveillance services as necessary in order to improve airspace utilization, reduce delays, provide for direct routings and more optimum flight profiles, as well as to enhance safety;
- b. provide vectoring to departing aircraft for the purpose of facilitating an expeditious and efficient departure flow and expediting climb to cruising level;
- c. provide vectoring to aircraft for the purpose of resolving potential conflicts;
- d. provide vectoring to arriving aircraft for the purpose of establishing an expeditious and efficient approach sequence;
- e. provide vectoring to assist pilots in their navigation, e.g. to or from a radio navigation aid, away from or around areas of adverse weather;
- f. provide separation and maintain normal traffic flow when an aircraft experiences communication failure within the area of coverage;
- g. maintain flight path monitoring of air traffic.

*Note: Where tolerances regarding such matters as adherence to track, speed or time have been prescribed by the competent authority, deviations are not considered significant until such tolerances are exceeded.*

**1.5.2 Separation application**

- 1.5.2.1 Except as provided for in 1.5.2.5 and 1.5.2.6, the separation minima specified in 1.5.3.1 shall only be applied between identified aircraft when there is reasonable assurance that identification will be maintained.
- 1.5.2.2 When control of an identified aircraft is to be transferred to a control sector that will provide the aircraft with procedural separation, such separation shall be established by the transferring controller before the aircraft reaches the limits of the transferring controller's area of responsibility, or before the aircraft leaves the relevant area of surveillance coverage.
- 1.5.2.3 Separation based on the use of SSR responses shall be applied so that the distance between the closest edges of the SSR responses is never less than a prescribed minimum.
- 1.5.2.4 In no circumstances shall the edges of the position indications touch or overlap unless vertical separation is applied between the aircraft concerned, irrespective of the type of position indication displayed and separation minimum applied.
- 1.5.2.5 In the event that the controller has been notified of a controlled flight entering or about to enter the airspace within which the separation minima specified in 1.5.3.1 is applied, but has not identified the aircraft, the controller may, if so prescribed by the competent authority, continue to provide an ATS surveillance service to identified aircraft provided that:
- a. reasonable assurance exists that the unidentified controlled flight will be identified using SSR or the flight is being operated by an aircraft of a type which may be expected to give an adequate return on primary radar in the airspace within which the separation is applied; and
  - b. the separation is maintained between identified flights and any other observed ATS surveillance system position indications until either the unidentified controlled flight has been identified or procedural separation has been established.
- 1.5.2.6 The separation minima specified in 1.5.3.1 may be applied between an aircraft taking off and a preceding departing aircraft or other identified traffic provided there is reasonable assurance that the departing aircraft will be identified within 1 NM from the end of the runway, and that, at the time, the required separation will exist.
- 1.5.2.7 The separation minima specified in 1.5.3.1 shall not be applied between aircraft holding over the same holding fix. Application of ATS surveillance system separation minima based on ATS surveillance systems between holding aircraft and other flights shall be subject to requirements and procedures prescribed by the competent authority.

**1.5.3 Separation minima based on ATS surveillance systems**

- 1.5.3.1 The horizontal separation minima based on ATS surveillance systems within the Tirana CTA shall be 7.0 NM. This may be reduced to 5.0 NM within the Tirana TMA.

**1.5.4 Speed control**

- 1.5.4.1 Subject to conditions specified by the competent authority, including consideration of aircraft performance limitations, a controller may, in order to facilitate sequencing or to reduce the need for vectoring, request aircraft to adjust their speed in a specified manner.

**1.6 Use of ATS surveillance systems in the flight information service**

*Note: The use of an ATS surveillance system in the provision of flight information service does not relieve the pilot-in-command of an aircraft of any responsibilities, including the final decision regarding any suggested alteration of the flight plan.*

**1.6.1 Functions**

- 1.6.1.1 The information presented on a situation display may be used to provide identified aircraft with:
- a. information regarding any aircraft observed to be on a conflicting path with the identified aircraft and suggestions or advice regarding avoiding action;

- b. information on the position of significant weather and, as practicable, advice to the aircraft on how best to circumnavigate any such areas of adverse weather;
- c. information to assist the aircraft in its navigation.

## 2. SSR TRANSPONDERS

### 2.1 General procedures

- 2.1.1 To ensure the safe and efficient use of ATS surveillance services, pilots and controllers shall strictly adhere to published operating procedures and standard radiotelephony phraseology. The correct setting of transponder codes and/or aircraft identification shall be ensured at all times.
- 2.1.2 Codes shall be assigned to aircraft in accordance with the plan and procedures laid down by the competent authority.
- 2.1.3 Where there is a need for individual aircraft identification, each aircraft shall be assigned a discrete code which should, whenever possible, be retained throughout the flight.
- 2.1.4 Except for aircraft in a state of emergency, or during communication failure or unlawful interference situations, and unless otherwise agreed by regional air navigation agreement or between a transferring and an accepting ATC unit, the transferring unit shall assign Code A2000 to a controlled flight prior to transfer of communications.

### 2.2 Transit and local codes allocated to Albania

- 2.2.1 According to SSR Code Allocation List for the EUR Region, local codes in the series 00 are allocated to Tirana FIR for use by designated ATC units for local purposes. Transit codes are allocated to Tirana ACC for assignment to an aircraft engaged in transit flights within the Participating Area (PA) EUR-D. Aircraft will retain the assigned code within the geographical limits of the PA or, in the case of the agreement between States concerned, across PA boundaries.
- 2.2.2 SSR codes shall be used for ATS purposes only.

Tirana FIR	Series	Codes	Remarks
Transit	13	1360 – 1377	Allocated to aircraft departing from any aerodrome within the Tirana FIR with destination to other countries
	43	4340 - 4347	Allocated by Tirana ACC to aircraft departing from LGKR and LGPZ
Local	00	0060 - 0077	Allocated for use by aircraft remaining within the boundary of the Tirana FIR
Local	67	6770 - 6777	Temporary allocated to NATO for use by helicopters operating not above 3000 FT AGL

### 2.3 Operation of SSR transponders

*Note: SSR transponder operating procedures are contained in Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volume III, Chapter 1, Section 4.*

- 2.3.1 When an aircraft carries a serviceable transponder, the pilot shall operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes.
- 2.3.2 Pilots shall not operate the IDENT feature unless requested by ATS.
- 2.3.3 Except for flight in airspace designated by the competent authority for mandatory operation of transponder, aircraft without sufficient electrical power supply are exempted from the requirement to operate the transponder at all times.

### 2.4 SSR transport Mode A code setting

- 2.4.1 To indicate that it is in a specific contingency situation, the pilot of an aircraft equipped with SSR shall:

- a. select Code 7700 to indicate a state of emergency unless ATC has previously directed the pilot to operate the transponder on a specified code. In the latter case, a pilot may nevertheless select Code 7700 whenever there is a specific reason to believe that this would be the best course of action;
  - b. select Code 7600 to indicate a state of radio-communication failure;
  - c. attempt to select Code 7500 to indicate a state of unlawful interference. If circumstances so warrant, Code 7700 should be used instead.
- 2.4.2 If a pilot has selected Mode A Code 7500 and has been requested to confirm this code by ATC, the pilot should, according to circumstances, either confirm this or not reply at all. If the pilot does not reply, ATC should take this as confirmation that the use of Code 7500 is not an inadvertent false code selection.
- 2.4.3 Except in the cases described in 2.4.1 above, the pilot shall:
- a. select codes as instructed by the ATS unit; or
  - b. in the absence of ATS instructions related to code setting, select Code 2000; or
  - c. when not receiving air traffic services, select Code 7000 in order to improve the detection of suitably equipped aircraft.
- 2.4.4 When it is observed that the code shown on the situation display is different from what has been assigned to the aircraft:
- a. the pilot shall be requested to confirm the code selected and, if the situation warrants, to reselect the correct code; and
  - b. if the discrepancy between assigned and displayed codes still persists, the pilot may be requested to stop the operation of the aircraft's transponder. The next control position and any other affected unit using SSR and/or multilateration (MLAT) in the provision of ATS shall be informed accordingly.
- 2.5 Pressure-altitude-derived information**
- 2.5.1 When the aircraft carries serviceable Mode C equipment, the pilot shall continuously operate this mode, unless otherwise directed by ATC.
- 2.5.2 Unless otherwise prescribed by the competent authority, verification of the pressure-altitude-derived level information displayed shall be effected at least once by each suitably equipped ATS unit on initial contact with the aircraft concerned or, if this is not feasible, as soon as possible thereafter.
- 2.5.3 When the aircraft is transferred from one sector to another within Tirana FIR, verification of the pressure-altitude-derived level information shall be effected only by the first controlling ATC sector of Tirana ACC/APP.
- 2.5.4 If the displayed level information is not within the approved tolerance value or when a discrepancy in excess of the approved tolerance value is detected subsequent to verification, the pilot should be advised accordingly and requested to check the pressure setting and confirm the aircraft's level.
- 2.5.5 If, following confirmation of the correct pressure setting, the discrepancy continues to exist, the following action should be taken by ATC according to circumstances:
- a. request the pilot to select and operate an alternative transponder, if available, and re-verify that the displayed level information is within the approved tolerance; or
  - b. request the pilot to stop Mode C altitude data transmission, provided this does not cause the loss of position and identity information; or
  - c. inform the pilot of the discrepancy and request that the relevant operation continue in order to prevent loss of position and identity information of the aircraft.
- 2.6 SSR transponder Mode S aircraft identification setting**
- 2.6.1 Aircraft equipped with Mode S having an aircraft identification feature shall transmit the aircraft identification as specified in Item 7 of the ICAO flight plan or, when no flight plan has been filed, the aircraft registration.

2.6.2 Whenever it is observed on the situation display that the aircraft identification transmitted by a Mode S-equipped aircraft is different from that expected from the aircraft, the pilot shall be requested to confirm and, if necessary, re-enter the correct aircraft identification.

2.6.3 If, following confirmation by the pilot that the correct aircraft identification has been set on the Mode S identification feature, the discrepancy continues to exist, the controller shall take the following actions:

1. inform the pilot of the persistent discrepancy;
2. where possible, correct the label showing the aircraft identification on the situation display; and
3. notify the next control position and any other unit concerned using Mode S for identification purposes that the aircraft identification transmitted by the aircraft is erroneous.

### 3. EMERGENCY, EQUIPMENT FAILURE AND UNLAWFUL INTERFERENCE PROCEDURES

#### 3.1 General

3.1.1 In case of an aircraft known or believed to be in a state of emergency, including being subjected to unlawful interference, ATS units shall give the aircraft maximum consideration, assistance and priority over other aircraft, as may be necessitated by the circumstances.

3.1.2 Subsequent ATC actions shall be based on the intentions of the pilot, the overall air traffic situation and the real-time dynamics of the contingency.

#### 3.2 Emergency procedures

3.2.1 In the event of an aircraft in, or appearing to be in, any form of emergency, every assistance shall be provided by the controller, and the procedures prescribed herein may be varied according to the situation.

3.2.2 The progress of an aircraft in emergency shall be monitored and (whenever possible) plotted on the situation display until the aircraft passes out of coverage of the ATS surveillance system, and position information shall be provided to all air traffic services units which may be able to give assistance to the aircraft. Transfer to adjacent sectors shall also be effected when appropriate.

*Note: If the pilot of an aircraft encountering a state of emergency has previously been directed by ATC to select a specific transponder code, that code will normally be maintained unless, in special circumstances, the pilot has decided or has been advised otherwise. Where ATC has not requested a code or emergency mode to be set, the pilot will set the transponder to Mode A Code 7700.*

3.2.3 When an emergency is declared by an aircraft, the ATS unit should take appropriate and relevant action as follows:

- a. unless clearly stated by the flight crew or otherwise known, take all necessary steps to ascertain aircraft identification and type, the type of emergency, the intentions of the flight crew as well as the position and level of the aircraft;
- b. decide upon the most appropriate type of assistance which can be rendered;
- c. enlist the aid of any other ATS unit or other services which may be able to provide assistance to the aircraft;
- d. provide the flight crew with any information requested as well as any additional relevant information, such as details on suitable aerodromes, minimum safe altitudes, weather information;
- e. obtain from the operator or the flight crew such of the following information as may be relevant: number of persons on board, amount of fuel remaining, possible presence of hazardous materials and the nature thereof; and
- f. notify the appropriate ATS units and authorities as specified in local instructions.

3.2.4 Changes of radio frequency and SSR code should be avoided if possible and should normally be made only when or if an improved service can be provided to the aircraft concerned. Manoeuvring instructions to an aircraft experiencing engine failure should be limited to a minimum. When appropriate, other aircraft operating

in the vicinity of the aircraft in emergency should be advised of the circumstances.

*Note: Requests to the flight crew for the information contained in 3.2.3 e) will be made only if the information is not available from the operator or from other sources and will be limited to essential information.*

### **3.3 Failure of equipment**

#### **3.3.1 Aircraft radio transmitter failure**

3.3.1.1 If two-way communication is lost with an aircraft, the controller should determine whether or not the aircraft's receiver is functioning by instructing the aircraft on the channel so far used to acknowledge by making a specified manoeuvre and by observing the aircraft's track, or by instructing the aircraft to operate IDENT or to make SSR code transmission changes.

*Note: Transponder-equipped aircraft experiencing radiocommunication failure will operate the transponder on Mode A Code 7600.*

3.3.1.2 If the action prescribed in 3.3.1.1 is unsuccessful, it shall be repeated on any other available channel on which it is believed that the aircraft might be listening.

3.3.1.3 In both the cases covered by 3.3.1.1 and 3.3.1.2, any manoeuvring instructions shall be such that the aircraft would regain its current cleared track after having complied with the instructions received.

3.3.1.4 Where it has been established by the action in 3.3.1.1 that the aircraft's radio receiver is functioning, continued control can be effected using SSR code transmission changes or IDENT transmissions to obtain acknowledgement of clearances issued to the aircraft.

#### **3.3.2 Complete aircraft communication failure**

3.3.2.1 When a controlled aircraft experiencing complete communication failure is operating or expected to operate in an area and at flight levels where an ATS surveillance service is applied, separation minima may continue to be used.

3.3.2.2 However, if the aircraft experiencing the communication failure is not identified, separation shall be applied between identified aircraft and all unidentified aircraft observed along the expected route of the aircraft with the communication failure, until such time as it is known, or can safely be assumed, that the aircraft with radiocommunication failure has passed through the airspace concerned, has landed, or has proceeded elsewhere.

#### **3.3.3 SSR transponder failure when the carriage of a functioning transponder is mandatory**

3.3.3.1 In case of a transponder failure after departure, ATC units shall attempt to provide for continuation of the flight to the destination aerodrome in accordance with the flight plan. Pilots may, however, be expected to comply with specific restrictions.

3.3.3.2 In the case of a transponder which has failed and cannot be restored before departure, pilots shall:

- a. inform ATS as soon as possible, preferably before submission of a flight plan;
- b. insert in item 10 of the ICAO flight plan form under SSR the character 'N' for complete unserviceability of the transponder or, in case of partial transponder failure, insert the character corresponding to the remaining transponder capability; and
- c. comply with any published procedures for requesting an exemption from the requirements to carry a functioning SSR transponder.

### **3.4 ATS surveillance system failure**

3.4.1 In the event of complete failure of the ATS surveillance system where air-ground communications remain, the controller shall plot the positions of all aircraft already identified, take the necessary action to establish separation between the aircraft and, if necessary, limit the number of aircraft permitted to enter the area.

3.4.2 If, during an emergency situation, it is not possible to ensure that the applicable horizontal separation can be maintained, emergency separation of half the applicable vertical separation minimum may be used, i.e. a

nominal 150 m (500 ft) between aircraft in airspace where a vertical separation minimum of 300 m (1 000 ft) is applied, and a nominal 300 m (1 000 ft) between aircraft in airspace where a 600 m (2 000 ft) vertical separation minimum is applied.

- 3.4.3 When emergency separation is applied, the flight crews concerned should be advised that emergency separation is being applied, and informed of the actual minimum used. Additionally, all flight crews concerned should be provided with essential traffic information.

### 3.5 Ground radio failure

- 3.5.1 In the event of complete failure of the ground radio equipment used for control, the controller shall, unless able to continue to provide the ATS surveillance service by means of other available communication channels, proceed as follows:

- a. without delay inform all adjacent control positions or ATC units, as applicable, of the failure;
- b. apprise such positions or units of the current traffic situation;
- c. request their assistance, in respect of aircraft which may establish communications with those positions or units, in establishing and maintaining separation between such aircraft; and
- d. instruct adjacent control positions or ATC units to hold or re-route all controlled flights outside the area of responsibility of the position or ATC unit that has experienced the failure until such time that the provision of normal services can be resumed.

- 3.5.2 In order to reduce the impact of complete ground radio equipment failure on the safety of air traffic, the appropriate ATS authority should establish contingency procedures to be followed by control positions and ATC units in the event of such failures. Where feasible and practicable, such contingency procedures should provide for the delegation of control to an adjacent control position or ATC unit in order to permit a minimum level of services to be provided as soon as possible, following the ground radio failure and until normal operations can be resumed.

### 3.6 Unlawful interferences with aircraft in flight

- 3.6.1 If there is unlawful interference with an aircraft in flight, the pilot-in-command shall attempt to set the transponder to Mode A Code 7500 in order to indicate the situation. If circumstances so warrant, Code 7700 should be used instead.

- 3.6.2 If a pilot has selected Mode A Code 7500 and has been requested to confirm this code by ATC (in accordance with 2.4.2), the pilot shall, according to circumstances, either confirm this or not reply at all.

*Note: If the pilot does not reply, ATC will take this as confirmation that the use of Code 7500 is not an inadvertent false code selection.*

### 3.7 Collision hazard information

- 3.7.1 When an identified controlled flight is observed to be on a conflicting path with an unknown aircraft deemed to constitute a collision hazard, the pilot of the controlled flight shall, whenever practicable:

- a. be informed of the unknown aircraft, and if so requested by the controlled flight or if, in the opinion of the controller, the situation warrants, a course of avoiding action shall be suggested; and
- b. be notified when the conflict no longer exists.

- 3.7.2 Information regarding traffic on a conflicting path should be given, whenever practicable, in the following form:

- a. relative bearing of the conflicting traffic in terms of the 12-hour clock;
- b. distance from the conflicting traffic in nautical miles;
- c. direction in which the conflicting traffic appears to be proceeding;
- d. level and type of aircraft or, if unknown, relative speed of the conflicting traffic, e.g. slow or fast.



- 3.7.3 In cases where using the terms of the 12-hour clock is not practicable, like when the aircraft is turning, the direction of the unknown aircraft may be given by compass points, e.g. northwest, south, etc.
- 3.7.4 The level may be described either as a flight level, altitude or height, or as a relative vertical distance from the aircraft provided with traffic information (e.g. 1 000 FT above or 1 000 FT below).
- 3.7.5 Pressure-altitude-derived level information, even when unverified, should be used in the provision of collision hazard information because such information, particularly if available from an otherwise unknown aircraft (e.g. a VFR flight) and given to the pilot of a known aircraft, could facilitate the location of a collision hazard.
- 3.7.6 When the pressure-altitude-derived level information has been verified, the information shall be passed to pilots in a clear and unambiguous manner. If the level information has not been verified, the accuracy of the information should be considered uncertain and the pilot shall be informed accordingly.
- 3.7.7 When an identified IFR flight operating outside controlled airspace is observed to be on a conflicting path with another aircraft, the pilot should:
- be informed as to the need for collision avoidance action to be initiated, and if so requested by the pilot or if, in the opinion of the controller, the situation warrants, a course of avoiding action shall be suggested; and
  - be notified when the conflict no longer exists.
- 3.7.8 The information presented on a situation display may be used to provide identified aircraft with information regarding any aircraft observed to be on a conflicting path with the identified aircraft, and suggestions or advice regarding avoiding action.
- 3.7.9 The provision of collision hazard information does not absolve pilots of VFR flights from their responsibilities for avoiding terrain/obstacles and for maintaining visual meteorological conditions.

#### 4. GRAPHIC PORTRAYAL OF AREA OF SSR COVERAGE

##### 4.1 MSSR coverage at FL 300

- 4.1.1 At FL 300 the MSSR coverage is triplicated everywhere as shown on Figure 1 below.

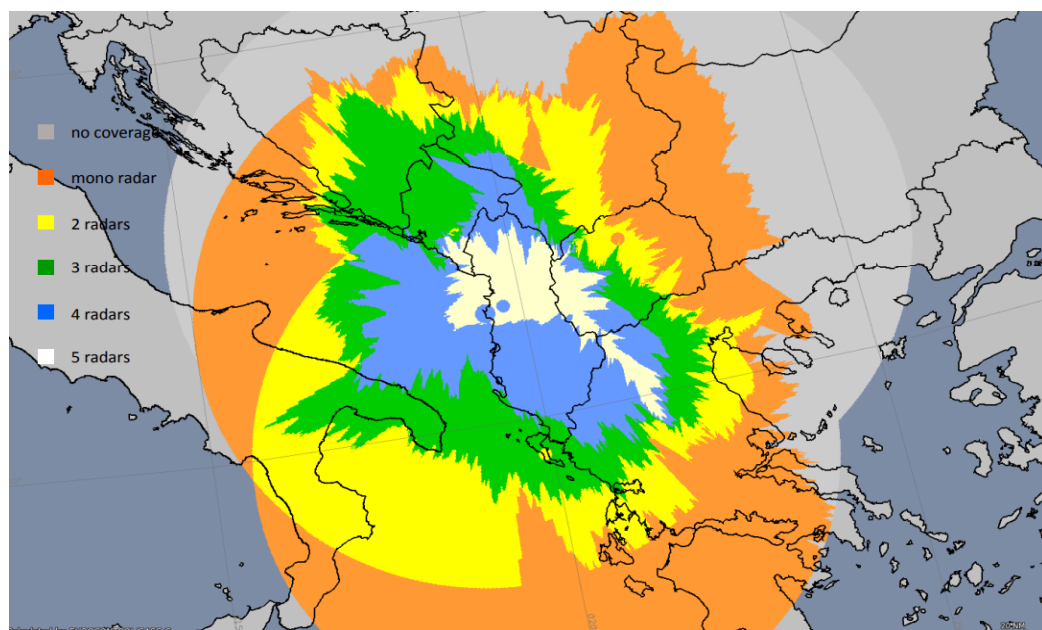


Figure 1 - MSSR coverage at FL 300

## 4.2 MSSR coverage at FL 200

- 4.2.1 At FL 200 duplicated surveillance coverage is assured with almost a third layer available everywhere as shown on Figure 2 below.

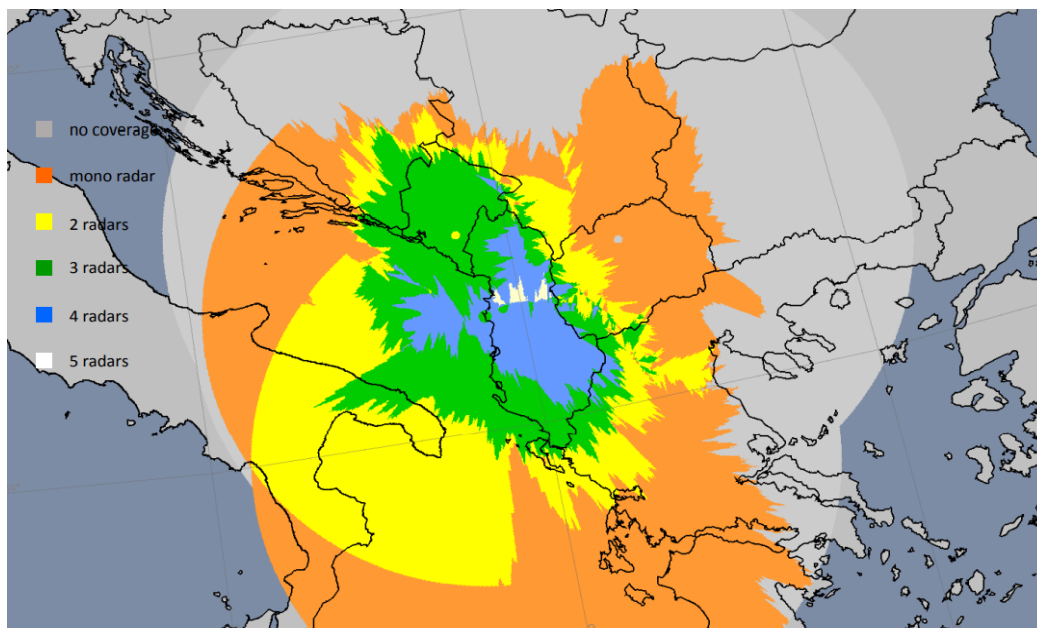


Figure 2 - MSSR coverage at FL 200

## 4.3 MSSR coverage at FL 100

- 4.3.1 At FL 100 the MSSR coverage is not available everywhere, as shown on Figure 3 below. There are gaps in achieved surveillance coverage in the eastern part of the Tirana FIR due to terrain obstruction.

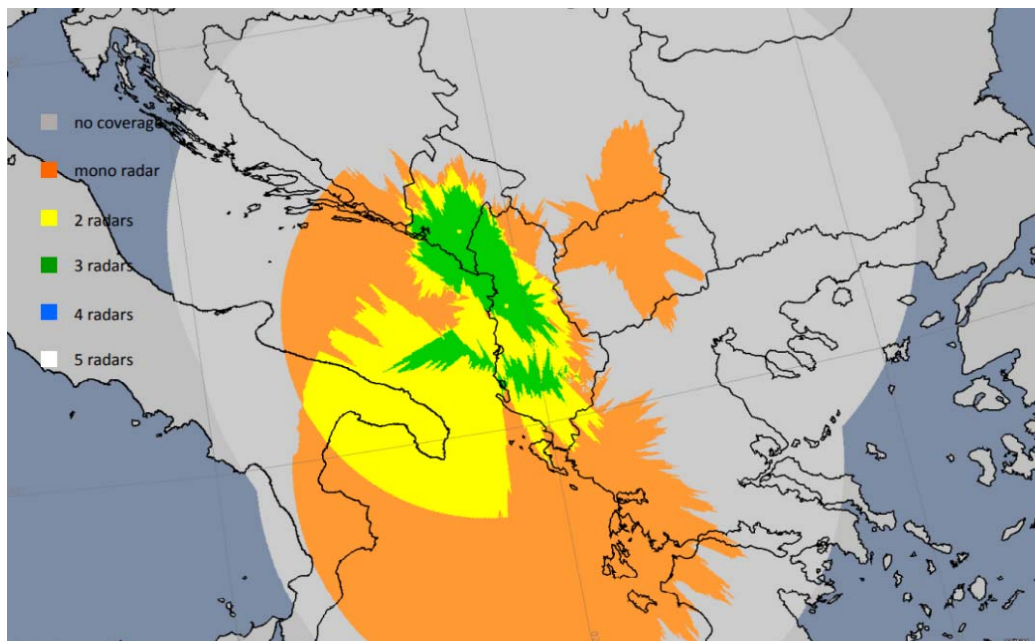


Figure 3 - MSSR coverage at FL 100