

# SKYBRARY RESOURCES SUPPORTING THE EUROPEAN ACTION PLAN FOR AIRSPACE INFRINGEMENT RISK REDUCTION



SKYbrary is an on-line wiki-style safety knowledge base developed by EUROCONTROL in partnership with recognised global aviation safety organizations, such as ICAO and the

Flight Safety Foundation. SKYbrary has the ambitious objective of becoming the single point of reference for aviation safety knowledge. It is envisaged that this will take a few years to achieve, and will require the support and active participation of all those interested in promoting safety, best practice and knowledge. Eighteen months of work has already

gone into the development of articles in SKYbrary including a growing category dedicated to airspace infringement ([http://www.skybrary.aero/index.php/Category:Airspace\\_Infringement](http://www.skybrary.aero/index.php/Category:Airspace_Infringement)) providing resources to support safety awareness and implementation of the Action Plan.

## SKYBRARY AIRSPACE INFRINGEMENT ARTICLES

SKYbrary includes the following articles related to airspace infringement:

- Airspace infringement ([http://www.skybrary.aero/index.php/Airspace\\_Infringement](http://www.skybrary.aero/index.php/Airspace_Infringement))
- Airspace infringement and briefing ([http://www.skybrary.aero/index.php/Airspace\\_Infringement\\_and\\_Briefing](http://www.skybrary.aero/index.php/Airspace_Infringement_and_Briefing))

## SKYBRARY BOOKSHELF RESOURCES

Attached to SKYbrary is a reference repository containing hundreds of documents - magazine articles, publications by institutions such as the FAA, the Flight Safety Foundation, and EUROCONTROL of course, which we call the SKYbrary Bookshelf. The Bookshelf includes the following airspace infringement references:

- Airspace infringement FIS survey (<http://www.skybrary.aero/bookshelf/books/124.pdf>)

- Airspace infringement and communication ([http://www.skybrary.aero/index.php/Airspace\\_Infringement\\_and\\_Communication](http://www.skybrary.aero/index.php/Airspace_Infringement_and_Communication))
- Airspace infringement and navigation ([http://www.skybrary.aero/index.php/Airspace\\_Infringement\\_and\\_Navigation](http://www.skybrary.aero/index.php/Airspace_Infringement_and_Navigation))
- Entering controlled airspace ([http://www.skybrary.aero/index.php/Entering\\_Controlled\\_Airspace](http://www.skybrary.aero/index.php/Entering_Controlled_Airspace))
- Flexible use of airspace ([http://www.skybrary.aero/index.php/Flexible\\_Use\\_of\\_Airspace](http://www.skybrary.aero/index.php/Flexible_Use_of_Airspace))

- Airspace infringement poster - Did you infringe today (<http://www.skybrary.aero/bookshelf/books/132.pdf>)
- Airspace infringement poster - Top 10 tips for GA pilots (<http://www.skybrary.aero/bookshelf/books/133.pdf>)
- Airspace infringement risk analysis 1 - Safety analysis of airspace infringements in Europe (<http://www.skybrary.aero/bookshelf/books/125.pdf>)
- Airspace infringement risk analysis 2 - general aviation airspace infringement

- GPS problem areas ([http://www.skybrary.aero/index.php/GPS\\_Problem\\_Areas](http://www.skybrary.aero/index.php/GPS_Problem_Areas))
- Navigation by radio aids ([http://www.skybrary.aero/index.php/Navigation\\_by\\_Radio\\_Aids](http://www.skybrary.aero/index.php/Navigation_by_Radio_Aids))
- Visual navigation ([http://www.skybrary.aero/index.php/Visual\\_Navigation](http://www.skybrary.aero/index.php/Visual_Navigation))
- Guidance notes for GA pilots ([http://www.skybrary.aero/index.php/Airspace\\_Infringement\\_Guidance\\_Notes\\_for\\_GA\\_Pilots](http://www.skybrary.aero/index.php/Airspace_Infringement_Guidance_Notes_for_GA_Pilots))

- survey (<http://www.skybrary.aero/bookshelf/books/126.pdf>)
- Airspace infringement risk analysis 3 - case study Switzerland (<http://www.skybrary.aero/bookshelf/books/127.pdf>)
- Airspace infringement safety letter 2 (<http://www.skybrary.aero/bookshelf/books/129.pdf>)
- Airspace infringement safety letter 3 (<http://www.skybrary.aero/bookshelf/books/130.pdf>)
- Airspace infringement safety letter 4 (<http://www.skybrary.aero/bookshelf/books/131.pdf>)

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# European Action Plan for Airspace Infringement Risk Reduction Safety Letter



## EUROCONTROL PROVISIONAL COUNCIL APPROVES THE EUROPEAN ACTION PLAN FOR AIRSPACE INFRINGEMENT RISK REDUCTION

### FOREWORD

By Alexander Krastev - Coordinator Airspace Infringement Initiative



Although airspace infringements are not new, they are a source of growing concern to aviation professionals. The analysis

of 2008 incident data by EUROCONTROL acknowledges the continuing upward trend of reported infringements, and the proportion of airspace infringements which have a significant or higher safety impact is more than 40%. In 2008, a total of more than 2 000 incidents were reported, and it should be noted that a number of States still do not report this category of safety occurrence, so the true number is much higher.

The current EUROCONTROL Airspace Infringement Safety Improvement Initiative was launched at the beginning of 2006 with the main goal of identifying and implementing risk reduction measures on a Europe-wide scale. Coordinated and harmonised implementation of safety

measures is the most efficient risk-mitigation approach.

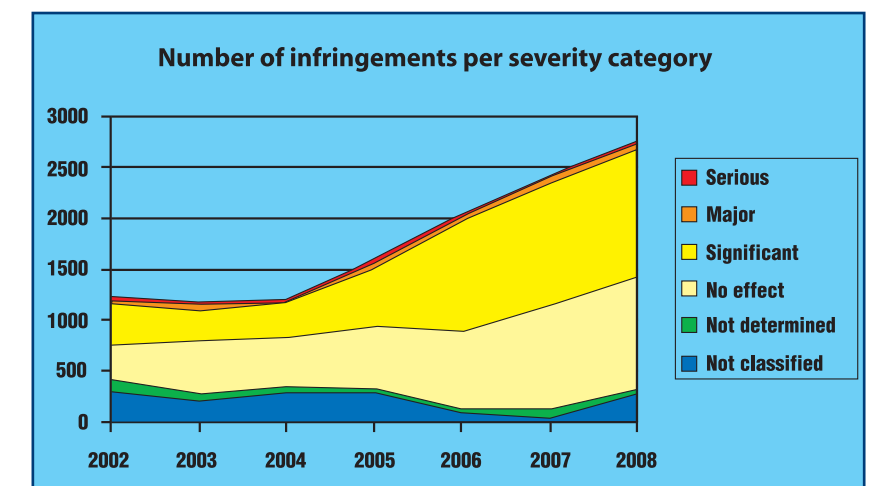
#### How were the measures established?

The findings from the risk analysis projects carried out within the scope of this safety initiative enabled us to identify and group the causal and contributory factors into several broad categories related to:

- aeronautical information;
- airspace and navigation;
- air traffic services;
- environment (weather);
- human factors;
- pilot's skills (airmanship).

The next step was to develop, in consultation with all risk stakeholders, a series of recommendations aimed at reducing the number of infringements and the risk to aircraft operations posed by those infringements. The recommendations became the backbone of the Action Plan.

In December 2009, following an extensive stakeholder consultation process, the European Action Plan for Airspace Infringement Risk Reduction was approved by the EUROCONTROL Provisional Council. The recommended



Source: EUROCONTROL Safety Regulation Unit

# EUROPEAN ACTION PLAN FOR AIRSPACE INFRINGEMENT RISK REDUCTION

and proposed risk reduction measures are assigned to 7 action owners - AIS and MET service providers, airspace users, air navigation service providers, training organisations, the military, regulators and EUROCONTROL.

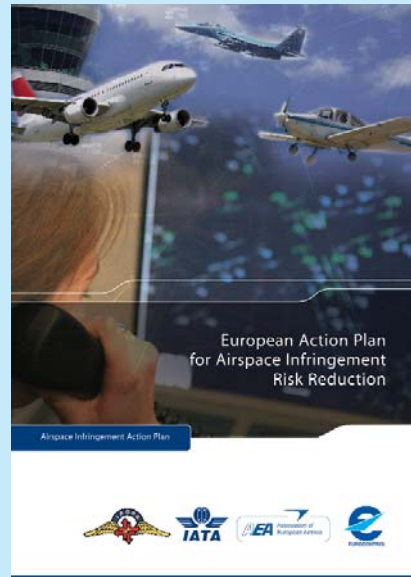
The Action Plan aims to achieve the right balance between positive encouragement and regulatory enforcement, which is of particular importance for the development of general aviation in Europe. It is a further acknowledgement of the recognised need for harmonisation and standardisation of the services provided to all flights in European airspace, and calls for a consistent and integrated approach to the needs of general aviation, military and commercial operations.

The Action Plan recognises the need to ensure flexibility for action owners to decide how far they need to go, in accordance with their specific operational environment and safety improvement needs. It calls for a consensus between the airspace users, service providers and national authorities on the action to be taken at local level.

As in previous safety improvement initiatives, EUROCONTROL will continue to assist States and industry organisations in the implementation of the safety measures. A set of 11 guidance notes was produced in 2009 to help general aviation pilots avoid infringement of notified airspace. A set of briefing notes on the harmonisation of flight information services in Europe is under development.

The central pages of this Safety Letter depict the 5 focus areas of the Action Plan:

- pilot navigation and communication skills;
- airspace design and management;
- aeronautical information provision;
- flight information services;
- safety awareness.



## PILOT NAVIGATION AND COMMUNICATION SKILLS

- Basic navigation skills training for PPL should be harmonised in all States to reduce the number of cross-border infringements. It should also include knowledge of GPS systems, their use and their limitations.
- Refresher training should be provided to PPL holders to maintain a minimum level of navigation skills.
- Competence checks should be enhanced beyond simple aircraft handling to include navigation and communication aspects as well.
- Correct pilot-controller communication is essential for safety. All pilots should receive practical training.
- Pilot's pre-flight preparation should be improved through the provision of better briefing facilities.

## AIRSPACE DESIGN AND MANAGEMENT

- Lower airspace classification should be harmonised, and where possible airspace structures should be simplified. This should include harmonisation of procedures and services provided in the same class of airspace across national borders.
- The review of lower airspace organisation should also aim to make the boundaries of the various control areas and zones less complex.
- Management of restricted airspaces should be improved. This is already being addressed by further improvement of the FUA concept. However, the specific needs of GA need to be better taken into account. The number and volume of reserved areas and zones need to be reviewed on the basis of their actual usage.
- Implementation of standard CAS crossing procedures and VFR arrival and departure routes to/from airports serving both VFR and IFR flights is suggested in order to ensure the required level of safety and fair access to busy airspace.

## SAFETY AWARENESS

- Action should be taken by the GA organisations and clubs, with the support of national authorities and ATS providers, to raise pilots' safety awareness through dedicated safety events, seminars, and publications. There are many examples of best practice - safety evenings, road-shows, flight safety seminars.
- Service provider organisations should foster cooperation between local ATS units and GA establishments. "Open-door" days at ATC units, and visits to flying clubs for ATC staff will improve the understanding of one another's needs, capabilities and concerns.
- National and international authorities and organisations should support the safety improvement efforts of GA establishments.
- The EUROCONTROL Agency will continue to support safety improvement initiatives in the Member States.

## FLIGHT INFORMATION SERVICES

- ATS providers should harmonise and enhance services in line with ICAO recommendations and existing best practices.
- Radar data available at ATC centres should be used to enhance information passed to pilots, not only in the event of in-flight emergencies.
- FIC staff should receive dedicated training improving their awareness and understanding of the needs of VFR flights and light aircraft performance.
- Controllers should be provided with enhanced system support based on better use of transponders fitted on board aircraft and SSR codes, and automated safety net functions that will warn them in the event of imminent or actual infringement of controlled or restricted airspace.
- Coordination between local ATS units and flying clubs should be improved.

## AERONAUTICAL INFORMATION PROVISION

- Lower airspace charts should be standardised. This includes common layout conventions, consistent use of colour schemes and symbols, etc.
- Availability and accessibility of the aeronautical information should be improved. Service providers should ensure on-line provision of aeronautical data on their websites.
- Provision of AIS should be harmonised across national borders. This includes provision of VFR AIPs and up-to-date VFR maps, and better briefing facilities.
- NOTAM readability should be improved by using plain text where possible and by graphical visualisation of airspace changes and activation/deactivation of restricted airspaces.
- The options for implementing an integrated briefing facility for the provision of aeronautical and MET information (often called the "one-stop shop") should be explored.

