

## **Flying over Conflict Zones – Follow-up Recommendations MH17 Crash investigation**

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On 17 July 2014, 298 people lost their lives when the Malaysia Airlines aeroplane they were in crashed near Hrabove, Ukraine. The disintegration of the aeroplane during the flight was the result of the detonation of a warhead above the left hand side of the cockpit. The aeroplane crashed over the eastern part of Ukraine, an area in which an armed conflict arose in April 2014. Initially, the conflict mostly took place on the ground, but as from the end of April 2014 it expanded into the airspace. The crash of flight MH17 immediately raised the question why the aeroplane was flying over an area where there was an ongoing armed conflict.

The MH17 Crash report published by the Dutch Safety Board in October 2015 responded to this question and explained the decision-making process with regard to flying over conflict zones at the time. The report contained eleven recommendations for better management of the risks associated with flying over conflict zones. Due to the global importance of the recommendations, they were addressed to the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), all States and all airlines.

This paper presents the main results of the follow-up investigation. The Dutch Safety Board published the report on the follow-up investigation in February 2019.

#### Follow-up investigation

In all of its investigations, the Dutch Safety Board evaluates how organizations have implemented its recommendations. Given the size of the disaster and the great value the Safety Board attaches to the formulated recommendations, the Board started an investigation into the follow-up to the recommendations regarding flying over conflict zones in the beginning of 2018. The investigation focused on whether the eleven recommendations from 2015 were followed up on and whether the parties concerned were successful in eliminating the safety shortcomings underlying the recommendations. The Dutch Safety Board stresses that this follow-up investigation only serves as a follow-up to the recommendations and therefore does not address the cause and circumstances of the crash of flight MH17.

The subject of flying over conflict zones is not an obvious subject for an aviation accident investigation. From 2014 to 2015, the Dutch Safety Board carried out its investigation into the crash of flight MH17 in accordance with Annex 13 of the Convention on International Civil Aviation, which sets out the international regulations on independent accident investigation. Although this annex is intended for investigations aimed at increasing civil aviation safety, it was also possible to carry out an investigation within that framework in which the essence of the risk was more about security. This follow-up investigation confirms that entities that conduct independent investigations on aviation accidents can also contribute to improving safety in the context of security risks.

#### Developments after the crash of flight MH17

On a global level, ICAO launched various initiatives aimed at better management of the risks associated with flying over conflict zones. These initiatives have included amending standards, recommended working methods and manuals (henceforth referred to as 'ICAO documents') in order to embed and promote the sharing of threat information and the performance of risk assessments. Some of the proposed amendments have now been implemented, while others are yet to be carried out. This is a long-term process due to the involvement of 192 ICAO Member States with differing views and interests. The first steps towards amending the ICAO documents were taken in 2014, but it will take until at least 2020 for all of the foreseen amendments to be implemented.

Another important ICAO initiative is the publication of a manual offering support to States, airlines and other parties concerned in the performance of risk assessments with regard to flying over and near conflict areas. Since it is not possible to provide a thorough explanation in international standards of how the risk assessments should be performed, the publication of a manual containing guidelines for performing risk assessments is a valuable initiative. There is no obligation attached to the manual. ICAO has indicated that they are to provide workshops and presentations in order to bring the manual to the attention of those concerned. Through the publication and dissemination of the manual, ICAO is helping to increase the quality and harmonization of the implementation of risk assessments for flying over conflict areas by States and airlines.

Although none of the Dutch Safety Board's recommendations are addressed to European Union (EU) institutions, in response to the crash of flight MH17, the European Aviation Safety Agency (EASA) and the European Commission have launched initiatives aimed at better management of the risks associated with flying over conflict zones. EU Member States now exchange relevant intelligence information in order to arrive at a joint assessment of the risks associated with flying over conflict zones. The advantage of this cooperation is that intelligence information and risk analysis capabilities of both larger and smaller States are combined. If the outcome of the assessment is that the risk for a certain area is considered 'high', EASA publishes a Conflict Zone Information Bulletin. These bulletins are not only used within the European Union, but also as an information source by States and airlines based outside of Europe. This European initiative thus contributes to a better global understanding of the risks. Various States (such as the USA, the UK, France and Germany) also publish information about conflict zones across the world, for example in the form of a Notice to Airmen (NOTAM). NOTAMs also serve as important information sources for States and airlines around the world.

On a national level, several States have taken initiatives that contribute to better management of the risks related to flying over conflict zones. In the Netherlands, an agreement has been drawn up regarding the sharing of threat information for civil aviation. The Netherlands has translated the text of the agreement into English and made this translation available to serve as an example to other countries inside and outside Europe, as well as to ICAO. In addition, the Netherlands has taken the lead in initiating amendments to the ICAO documents. To support the ICAO Secretariat in effecting the work programme, the Netherlands has seconded a senior safety expert at ICAO for a two-year period (2017 and 2018). This way, the Netherlands, in collaboration with various other countries, contributes to ensuring that the subject of flying over conflict zones remains on the international agenda.

Airlines now play a more active role in gathering information about the risks that conflict areas pose to civil aviation than they did at the time of the crash of flight MH17. They also have access to more and generally better threat information. Risk assessments are performed in a more structured manner and some airlines explicitly state that they take uncertainties and risk increasing factors into consideration as part of the risk assessment process. Furthermore, there is evidence to suggest that, if there are doubts about the safety of a flight route, airlines are more inclined not to fly. IATA has made risk assessment relating to flying over conflict areas part of their prescribed management systems in order to manage the risks for aviation. Airlines that are members of IATA are periodically

tested on their implementation of these systems. However, the results of these audits are not published, meaning that the extent to and manner in which airlines have given the risks of flying over conflict areas a place in their management systems is unclear.

#### Areas of attention for the years to come

This follow-up investigation has also shown that not all of the amendments proposed by the Dutch Safety Board have been implemented. The full assurance provided by ICAO standards has not yet been achieved (status DSB report published in February 2019). Moreover, these amendments will need to be incorporated into the States' national legislation.

In the past years, no or minimal changes have been made to the airspace management by States involved in armed conflicts in their territory. The Board realizes that States involved in an armed conflict will have difficulty when it comes to guarding the safety of their airspace. This indeed turns out to be the case in practice. With the exception of Ukraine, States have not implemented airspace restrictions related to the overflying of conflict zones. Although ICAO is in a position, as an intergovernmental organization, to urge and support States to safeguard the safety of their airspace, ICAO is not doing so.

Another area of attention is that airlines are indicating that the level of detail of the information available is not always sufficient in order to perform an adequate risk assessment. There are also obstacles in relation to sharing non-public information. Conditions for exchanging threat information include a proper information network and mutual trust. For access to relevant information, a good relationship and mutual communication between airlines and the intelligence services of the State in which the airline is based are essential. However, these are not a given everywhere in the world.

The mechanisms that have been created for the purposes of sharing threat information and risk classifications are better suited to tackling long-term conflicts than to tackling new conflicts or sudden escalations of existing conflicts. Information sharing about abrupt changes in the threat level occurs on an ad hoc basis and through informal networks. As a result, it is not guaranteed that airlines can access accurate information about new threats timely and adjust their flight paths accordingly.

The Dutch Safety Board considers public accountability for flight routes chosen to be the final link in keeping airlines focused with respect to their responsibility for performing thorough risk assessments for flying over conflict areas. However, airlines do not or hardly account publicly for their chosen flight routes, and this is not being encouraged by IATA either.

Throughout history, safety and security have been separate worlds; worlds with their own laws and regulations, for which the responsibilities were assigned to various parties and departments within organizations. However, as the crash of flight MH17 shows, safety and security are intertwined. To manage the risks related to flying over conflict zones and other risks at the interface of safety and security as good as possible, closer cooperation between both worlds is necessary.

This follow-up investigation has shown that over the past few years, important steps have been taken with the aim of better management of the risks associated with flying over conflict areas. It is important that the amendments already implemented are perpetuated and that parties take the announced follow-up steps. Vital to this is the willingness of parties to actively inform each other about threats and potential threats, in order to protect civilians and passengers across the world.

*The full report is available on [www.safetyboard.nl](http://www.safetyboard.nl)*