

**EUROPEAN AVIATION SAFETY AGENCY** 

I ISSUE # 01 | 02.2009

### **Editorial**



# Welcome to this First Edition of the EASA News.

As the Agency and its tasks are growing we have steadily increased our range of publications and information services.

The EASA website already functions as the Agency's Official Publication and is therefore a complex medium, providing comprehensive information on regulations, consultations and recruitment. We also host various mini-sites for specific events and topics (log on to www.easa.europa.eu/flight-standards for the latest on EASA's new responsibilities).

The Annual Safety Review is unique with its focus on European accident data and has already become a source of reference for aviation safety experts worldwide. It is available in all Community languages.

In addition, our weekly email bulletins, News Summary and Industry Aviation News, enjoy a growing readership among our stakeholders.

We now also offer you a traditional-style newsletter to complement our existing technical publications. The quarterly EASA News gives an overview of some of the "hot topics" at the Agency. The focus of the first edition is therefore on EASA's new regulatory tasks. Future editions will cover news from all areas of our work, including Certification, Standardisation and Safety Analysis. We hope you find the reports informative and interesting and look forward to your comments!

### Patrick Goudou

# 2008 Safety Review shows mixed results

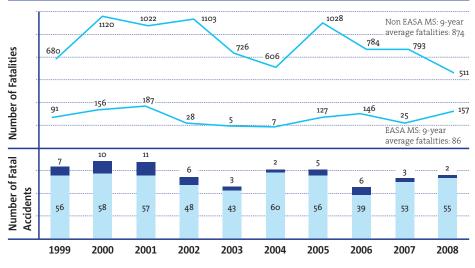
Every year, the European Aviation Safety Agency produces its Annual Safety Review to inform the public of the general safety level in Europe<sup>1</sup>. The year 2008 shows mixed results with the relative low number of accidents being overshadowed by the tragic accident of a McDonnell Douglas MD-82 aircraft on 20 August in Madrid.

2008 was a mixed year for civil aviation safety in Europe. The number of fatal accidents for commercial air transport aeroplanes in EASA Member States (EASA MS) remained low at a total of two. This means that only six per cent of fatal accidents in commercial air transport worldwide that year occurred with aeroplanes registered in an EASA MS. But on the other hand, the number of fatally injured people on board for 2008 (157 fatalities) was above the average of the previous nine years (86 fatalities)². This is mainly due to the tragic accident of a McDonnell Douglas MD-82 aircraft on 20 August in Madrid. The plane crashed during take-off killing 154 people on board. The second accident

concerned an Airbus A320 in Honduras that overran the runway during landing. Although this aircraft was operated by an airline from outside Europe, it was registered in one of the EASA MS. Regarding accidents worldwide in the same category (excluding EASA MS), 55 crashes had to be counted leading to 511 losses of life. Although the total number of accidents slightly increased from 2007, the number of fatalities is well below the nine year average (874).

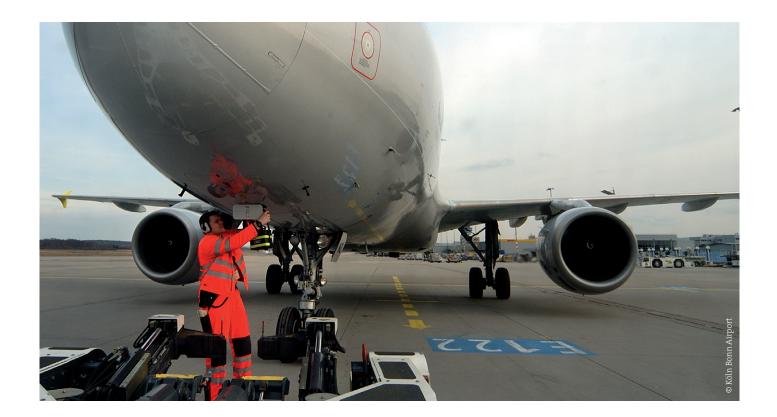
The number of fatal accidents for helicopter commercial air transport operations in Europe increased from one in 2007 to two in 2008. Despite this increase, the number of fatalities is below the average of the last nine years (10 fatalities) at three. The statistics in this preview concern aircraft fatal accidents<sup>3</sup> above a maximum certificated take-off mass (MTOM) over 2,250 kg operating as commercial air transport. These operations involve the transportation of passengers, cargo or mail for remuneration or hire. The full EASA Annual Safety Review 2008 will be published later this year.

### Fatal Accidents in Commercial Air Tranport (Aeroplanes, 1999 – 2008)



EASA MS-Accidents
Non EASA MS-Accidents

<sup>&</sup>lt;sup>1</sup> Europe or the EASA Member States are considered as the 27 EU Member States plus Iceland, Liechtenstein, Norway and Switzerland. The region is assigned based on the State of Registry of the accident aircraft. Worldwide accidents are the sum of "EASA MS" and "Non EASA MS". <sup>2</sup> For the decade 1999–2008, nine-year averages were used to compare the year 2008. In this way averages used for comparison purposes were not biased by the numbers of year 2008. <sup>3</sup> Fatal accidents are accidents that involved at least one fatality.



# More inspections, better compliance

Results from the 2007 SAFA report

Since 1 January 2007, the European Aviation Safety Agency has been coordinating the European Community Safety Assessment of Foreign Aircraft (SAFA) Programme. In September 2008, the European Commission published the 2007 report with results from more than 8,500 inspections<sup>1</sup>. They took place in 41 participating countries, 27 EU Member States and 14 ECAC countries. The aim of the SAFA report is to provide the public and stakeholders with an analysis of safety data collected through ramp inspections.

The SAFA programme\_The programme was initiated in 1996 as a voluntary action under the auspices of the European Civil Aviation Conference (ECAC). It became mandatory for all EU member states in 2007 including the legal obligation to inspect third country aircraft. Despite its name, inspections can also be performed on EU registered aircraft. The ramp inspections concentrate mainly on aircraft documents and manuals, flight crew licenses, the apparent condition of the aircraft and the presence and condition of mandatory cabin safety equipment. Inspectors carry them out using a checklist comprising 54 inspection items. Findings are classified in three categories according to their severity in relation to the level of deviation from the ICAO standard.

1.405

### CONTINUED ARTICLE

Increase in inspections, decrease in findings\_ In 2007, the 41 states participating in the SAFA programme carried out a total of 8,594 inspections, a significant increase compared to 7,458 in 2006 and 5,457 in 2005. The inspections were performed on 984 different operators coming from 132 states and operating 215 different aircraft (sub)types. 54.18% (4,656) were performed on EU operators while the remaining 45.82% (3,938) were carried out on third country operators. Those inspections revealed 12,073 findings (4,954 minor (cat. 1) findings, 4,923 significant (cat. 2) findings and 2,196 major (cat. 3) findings). The ratio findings/inspections for 2007 was lower than the values registered in the previous three years.

Aggregating the results on a regional basis provides a fairly sound indication of the safety level in a certain region (see table 1).

Based on these results, it can be noted that operators from States in the EU 27, ECAC and Oceania have fewer findings than the average. Encouraging is also the fact that in most geographic regions, the average number of findings (per inspection) has also decreased in the last four years (see graph 1).

**Corrective actions**\_ If the findings indicate that the safety of the aircraft and its occupants is impaired, corrective actions will be required. Normally, the

GEOGRAPHIC REGION <sup>2</sup>	INSPECTIONS	NUMBER OF FINDINGS (TOTAL)	RATIO OF FINDINGS (TOTAL)
EU 27	4,656	5,205	1.118
Europe (EU 27 + ECAC)	5,944	7,288	1.226
Russian Federation, Belarus and Central Asia	802	1,490	1.858
North America	351	495	1.410
Latin America and the Caribbean	159	276	1.736
Middle East and North Africa	877	1,608	1.834
Africa	189	514	2.720
Asia	249	379	1.522
Oceania	23	23	1.000

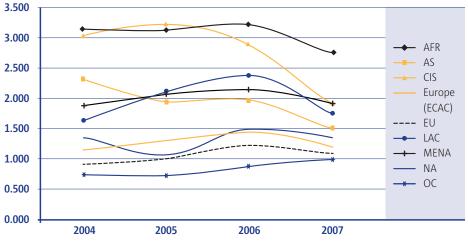
Average/all States

#### Table 1: Inspection findings on a regional basis

captain of the aircraft is debriefed about the findings. He/she will be required to take corrective actions before the next flight is authorised. In other cases, the aircraft may depart under operational restrictions. In rare cases, inspectors may even formally ground the aircraft. Category 2 and category 3 findings are additionally reported to the responsible Aviation Authority and the operator to prevent reoccurrence. When the findings on an aircraft are considered important, individual states may decide to revoke the entry permit of that aircraft until the unsafe condition is corrected (see table 2).

Whilst giving important indications on the safety of an operator, the SAFA inspection does not provide a "full picture" taking into account the inherent limitations of the inspecting environment. Further efforts will have to be made to maximise the use of the available resources and to improve the quality and the standardisation of inspections. New developments include a common taxonomy of findings, the implementation of common qualification criteria for SAFA inspectors and development of qualitative criteria for the prioritisation of SAFA inspections at European level.

AVERAGE NUMBER OF FINDINGS PER REGION – EVOLUTION OVER THE LAST 4 YEARS



	Number of inspections Number of findings	8,594 12,073
ACTIONS TAKEN	Information to the Authority and the operator Restriction of the aircraft operation Corrective actions before flight authorisation	3,386 126 1,318
	Aircraft grounded  Entry permit repercussions	1,318

 $^{1}\,\mbox{The 2007 SAFA}$  report is available at www.easa.europa.eu/ ws\_prod/s/s\_safa.php.

Graph 1: Average number of findings per inspection per region (evolution 2004 – 2007)

Table 2: Overview of corrective actions taken in 2007

 $<sup>^2</sup>$  A table detailing the attribution of countries to regions can be found in the aggregated SAFA report.

# Focus on: EASA's new regulatory tasks



# Strengthening Cooperation

Jules Kneepkens joined the Agency in September 2008 as Rulemaking Director. Before, as Director of Civil Aviation in the Netherlands (2002–2006) and as Director-General of Civil Aviation in Belgium (2007–2008), he was already deeply involved in the Agency's work as a member of its Management Board.

You became Rulemaking Director in a very important phase of the Agency. The new Basic Regulation extended the Agency's responsibilities. Your new colleagues are busy writing the Implementing Rules. What are your priorities for the first months?

I chaired the Management Board working group on the evaluation of the Agency, so one of my first priorities will be to address the recommendations coming from this evaluation. Another important task - apart from the current and future extensions of scope - is to progress our Rulemaking programme. In future, I want the programmes to be manageable and realistic so that we can accomplish our targets.

The recommendations of the evaluation were adopted by the Management Board in September 2008. What are the most important conclusions of the evaluation?

The suggestions either concern our work internal-

ly, or they are addressed to the Member States, the Commission, or the European Parliament. Here are some of the most important recommendations:

-- We have to review the Rulemaking process to make the rules more user-friendly. Currently, it is not easy for companies, organisations or individuals to access the applicable rules.

# "We have to make the rules more user-friendly."

\*\* Member States should establish a national Agency focal point for companies, organisations, individuals within each National Aviation Authority (NAA) – someone who speaks their language, who can be contacted by industry and who will also ensure that they receive the necessary information from the Agency.

### CONTINUED: INTERVIEW

→ In general, the cooperation with the NAAs and industry in the Rulemaking process has to improve. The NAAs are and will remain vital reference points for aviation safety in Member States. This is why, for example, we intend to organise more stakeholder workshops at national level, together with the NAAs. NAAs have the best experience of how to communicate regulatory changes in their countries.

### You are reviewing the Rulemaking process. Why is this review so important?

The Agency was set up because harmonisation wasn't really happening — even though it became more urgent, after the EU enlargement. Also, a quicker way of working was needed. Some of the JAA harmonisation groups had not found a consensus after more than 10 years. The Single Engine Instrument Meteorological Conditions (SE-IMC) proposal is an example. Because of time constraints and transition problems we did not consult

For rules where the Agency takes the lead, we can strengthen cooperation with our stakeholders by including them in the "conceptualisation phase" right from the beginning.

All of this is a challenge. Our so-called Total Systems Approach requires, from all players, a change in thinking and in working. The European regulatory system is quite different from the old JAA system. The rules have to be drafted in a specific way so that they can "fit" into the EU legislative structure.

We are confident that we will succeed in improving the cooperation with our stakeholders, and that this will lead to a more efficient and streamlined work process. The results will be better in the end.

# "The Total System Approach requires from all players a change in thinking and working."

→ In parallel with the growth of the Agency's tasks we must continue all efforts to ensure that the Agency is fully staffed. Colleagues within the Agency currently have to deal with an immense workload – this cannot be increased any more. If Parliament, European Commission, the Member States or the industry ask us to do more they will also have to make sure we receive adequate resources to accomplish these tasks.

The Commission is expected to comment on the recommendations of the Management Board during the first quarter of 2009. In the meantime, the Agency will of course already start to work on internal improvements.

stakeholders as many expected us to do. Even though this has improved in recent years, stakeholders were not really able to take part in the development of new rules. This has often created a distance between the NAAs and the Agency. We want this situation to change.

### What are the main recommendations for Rulemaking?

We need to streamline our work programme, and we will also need assistance from outside. For certain tasks, NAAs and also industry have the capacity to assist. For certain rules, we can envisage developing the Terms of Reference together with an NAA, which then takes over the drafting. This could be a win-win situation for all parties involved.

## Rulemaking in the EU framework

### Combining uniform regulations with flexibility\_

In the early of ICAO, aviation operations were not as complex and dense as they are today, and technological choices were relatively limited. Today, the situation is the opposite: sophisticated operations, high traffic volumes and technological progress have lead to a wider range of regulatory decisions that need to be taken to ensure safety.

It is questionable whether the traditional style of aviation rulemaking – which is to set all the technical details in mandatory rules – is the best option to cope with the challenges of the 21st century.

**Different levels of regulatory material**\_ The EASA legal framework contains different levels of law. There are two basic types. First, EASA's "Basic Regulation" is adopted by the Council and the European Parliament in co-decision procedure. Second, technical "implementing" rules are decided in working groups of Member States' representatives and the European Commission. This is known as the "comitology" process. Both forms of regula-

tions are directly applicable and legally binding in all Member States.

However, the high speed of advancement in modern technology in the field of aviation makes it impossible to keep up with events through those legislative processes. Therefore, EASA also adopts "soft" law, i.e. non-binding standards for voluntary application, such as Acceptable Means of Compliance (AMC), Certification Specifications (CS) or Guidance Material (GM). Since these instruments are of a non-binding nature, deviations are allowed, providing that an equivalent level of safety is attained.

Harmonisation and flexibility – performance-based Rulemaking\_ When developing its rulemaking tasks, the Agency conducts an analysis of which requirements should be of a binding nature - because safety can only be ensured by their strict implementation - and which should be non-binding, i.e. "soft law". This is the fundamental aspect of the "performance-based approach" that the Agency has followed for the development of the



### Focus on: EASA's new regulatory tasks

#### CONTINUED RULEMAKING IN THE EU FRAMEWORK

NPAs on Air Operations, Flight Crew Licensing and Third Country Operators. This approach is not only considered the most adequate and efficient in the EASA institutional environment, but also the one best adapted for the implementation of the Safety Management System concept as defined by ICAO.

**Alternative Means of Compliance\_** To ensure that this approach does not compromise safety, the Agency is proposing a uniform and clear process for the use of alternative means of compliance (see also NPA 2008-22: OR.GEN.O20 and AR.GEN.O20).

If a stakeholder or the competent authority wishes to use such an alternative AMC it will have to demonstrate that these comply with the safety objective established in the Implementing Rules. A safety assessment must be performed and/or evaluated by the competent authority. This does not represent a significant change to the current system, as this should be the process that is already being followed today. What is new is that the competent authority has to publish the alternative AMC and to inform EASA. Upon receiving notification of such alternative means of compliance, the Agency will analyse them and notify the competent authority of its conclusions. If the Agency considers that the process was not properly followed, this will constitute a finding in relation to AR.GEN.020, which will be dealt with in accordance with EASA's standardisation procedure.

Conversely, if the Agency considers that the alternative means of compliance fully meet the safety criteria, it will initiate a rulemaking task in order to adopt them as EASA AMC.

This system will guarantee an equal playing field, transparency and harmonisation, while still allowing for the necessary flexibility for stakeholders. Initially, it will only apply to Air Operations and Flight Crew Licensing, but the Agency intends to propose its application to other fields of the EASA system in the future.

You can find summaries on the current NPAs – Air Operations, Flight Crew Licensing, Third Country Operators, Operational Suitability Certificate / Safety Directives – on our mini-site www.easa.europa.eu/flightstandards.

# **EASA** extension of scope: timetable

Following its extension of scope, the Agency is drafting Implementing Rules which will be sent to the European Commission as Opinions after a consultation period.

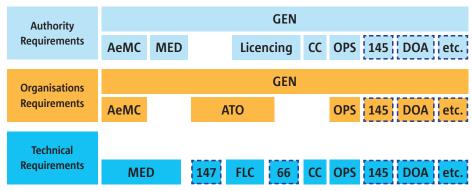
The Agency's draft Implementing Rules are published as Notices of Proposed Amendment on its website where they are open for public comment (more information on the Agency's Rulemaking Procedure can be found at www.easa.europea.eu). The timetable below reflects the current planning regarding the publication and adoption of the new Implementing Rules:

PUBLICATION DATE	TITLE	END OF COMMENT PERIOD	OPINION TO COMMISSION	PUBLICATION OFFICIAL JOURNAL
05 June 2008	Pilot Licensing NPA 2008-17(a)-(c)	28 February 2009	August 2009	May 2010
31 October 2008	Organisation Requirements and Authority Requirements NPA 2008-22(a)-(f) (general elements and those related to NPA-2008-17)	15 April 2009	August 2009	May 2010
16 January 2009	Operational Suitability Certificate (21.039)	30 April 2009	October 2009	July 2010
30 January 2009	Air Operations (OPS.001); Organisation Requirements and Authority Requirements (elements related to air operations)	30 May 2009	November 2009	July 2010
16 February 2009	Third Country Operators (OPS.004)	16 June 2009	November 2009	July 2010

# Focus on: EASA's new regulatory tasks

# The new EASA rule structure – a horizontal approach

With the Implementing Rules detailing the new responsibilities of the Agency as laid out in the amended Basic Regulation (216/2008), EASA is introducing a horizontal structure of its rules. The reason for this new structure is the need for a global regulatory framework for aviation safety.



Graph 1: The new rule structure - a horizontal approach

The implementing rules are separated into technical requirements for personnel, air operations and Third Country Operators as well as authority and organisation requirements (see graph 1). The new structure is introduced to avoid the duplication of requirements. It is designed to accommodate for the future air traffic management and aerodrome implementing rules as well as for the existing airworthiness implementing rules, which will successively be added to this new structure.

## The following elements were considered when developing this new structure:

- --- The scope of the Basic Regulation which encompasses more activities, persons and organisations than ever regulated on an European level before
- → The Total System Approach
- → Legal considerations and constraints on the drafting of Community legislation
- → The conclusions of A-NPA 15-2006 on Consistency of Organisation Approvals
- → The ICAO Safety Management System and State Safety Programme leading to harmonised organisation and authority requirements as well as to a system of performance-based rulemaking

**Total System Approach\_** The Total System Approach is based on the fact that the aviation system components – products, operators, crews, aerodromes, Air Traffic Management, Air Navigation Systems, on the ground or in the air – are part of a single network. Uniformity is achieved through common implementing rules adopted by the Commission. The

Total System Approach eliminates the risk of safety gaps or overlaps, of conflicting requirements and of confused responsibilities. Regulations are interpreted and applied in one single way throughout the 31 EASA Member States and best practices are recommended. Uniformity also means protecting citizens and providing a level playing field for the internal market and in the perspective of interoperability. The Total System Approach also streamlines the certification processes and reduces the burden on regulated persons.

# **Ditching!**





Ditching, the word has a sense of desperation, expectation of the worst. It's possible that the aviation term arose from early pilots describing their "last ditch" option to land a misbehaving aeroplane in a convenient body of water. Recent events in New York on the other hand have shown that today the prospect of an aircraft ditching need not be viewed with quite the same foreboding.

The possibility of a water landing, although exceedingly unlikely, has been considered very carefully in the development of the EASA rules that aircraft designers and operators must follow.

Airliner designs intended for long flights over water are required by EASA Certification Specifications to undergo a range of analyses and tests to show that a water landing, without critical damage and without injury to the occupants, is feasible and that the aircraft will subsequently float for a time compatible with evacuation. In addition to calculations and computer modelling to verify sufficient structural strength, tests with scale models dropped into a water tank are performed when necessary to evaluate the general behaviour of the aircraft during a water landing and to support the analyses.

As with any evacuation, highly competent cabin crew significantly contribute to rapid egress. Therefore, European requirements for cabin crew

training, which involve actual practice in water demonstrating the use of life-rafts, aim at ensuring that cabin crew achieve and maintain the level of proficiency required to perform efficiently in case of an emergency.

Having left a successfully ditched aircraft, passengers and crew may clearly benefit from life jackets and rafts. Operational rules demand the provision of easily reached lifejackets for all occupants, on flights over water. This applies even in the case where the only water intended to be crossed is at the airfield of origin or destination, for instance because of location close to the coast or a lake. Furthermore, the cabin crew's pre-flight briefing on donning and use of lifejackets, familiar to all air travellers, is a requirement.

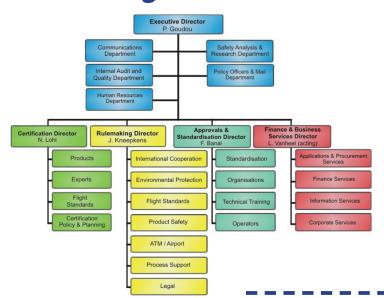
Life rafts with places for all on board and containing survival equipment such as food, water, signalling equipment and a radio locator transmitter are also required for aircraft making longer flights over water. In the larger aircraft the raft function is of-

ten neatly incorporated into the inflatable escape slides needed for ground evacuations.

The safety regulation of aircraft design and operation and the technologies developed by manufacturers and airlines have reached very high levels of maturity, thus the need to land away from an airport is now no more than a faint possibility. Nevertheless, the enormous size of the air travel industry means that this may occasionally happen. The EASA ditching regulations are in place to provide those involved in a water based event the best chance of coming through unscathed. Real life testing of these regulations' effectiveness is thankfully a remote occurrence. EASA's stock of knowledge in this regard has recently increased, the more so as investigation of the New York accident progresses. EASA will naturally be looking for all possibilities to learn valuable lessons and improve still further the state of the art where appropriate.

# // QUICK NEWS / // QUICK NEWS / // QUICK NEWS //

## **EASA** reorganisation



As of 1 January 2009, a new organisational structure applies to the Agency. The main change is that a new Finance and Business Services Directorate is created while the old Administrative Directorate ceases to exist. Within the Finance and Business Services Directorate all applications for the certification of products or organisations including flight permits are processed.

The Directorate also coordinates the Agency's outsourcing activities to National Aviation Authorities and will be in charge of Financial Services and Procurement. The main reason for this reorganisation is the need to streamline processes and workflows especially in the light of the Agency's extension of responsibilities and the expected increase in applications.

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### Publisher:

European Aviation Safety Agency (EASA) Postfach 101253

D-50452 Cologne

Germany

Phone +49 221 8999 0000 Fax +49 221 8999 0999

### **Editor-in-Chief:**

Dr. Daniel Höltger

### Editor:

Elisabeth Schöffmann

### Contributors to this issue:

Peter Chittenden, Eduard Ciofu, Luana Herescu, Ula Loew. Reinhard Menzel

### Layout:

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For more information about this publication, reactions or subscriptions please write to easa.news@easa.europa.eu

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# The e-tool for customised access to rules

To facilitate access to EASA rules, the Agency will develop a web-based tool that will allow users to filter them according to their specifications. While initially envisaged for air operations and crew licensing only, the tool will also be extended

to initial and continuing airworthiness, environmental protection, as well as aerodromes and air traffic management. A first version of the e-tool is planned to be operational beginning 2010.

### **Product Safety**

End of October 2008, the European Commission has adopted the amendment to Part-M that introduces alleviations for general aviation. This is the result of extensive dialogue with general aviation stakeholders and is one component of the efforts undertaken by EASA to simplify the regulations applicable to this activity.

The certification specifications applicable to large aeroplanes (CS-25) have been amended to introduce new specifications for Electrical Wiring Interconnection Systems. This is an important amendment that has been developed in close coordination with the US Federal Aviation Administration as a result of air accident investigation recommendations.

In 2009, significant opinions will be published concerning the following topics: (i) certification of light aircraft, (ii) creation of a license for aircraft engineers for light aircraft, and (iii) improvement of the operational suitability of aircraft.

### **International Cooperation**

EASA recently signed 12 Working Arrangements with the Chinese Authorities on the validation of certificates issued by EASA on several European civil aeronautical products. Furthermore, EASA held the first International Cooperation Forum in Cologne last November. This event attracted around 100 delegates representing more than 50

states and organisations around the world that are using the European Aviation Safety rules as their national or regional framework. Currently, the Agency is preparing Working Arrangements with 13 ECAC countries to ensure the pan-European cooperation for aviation safety after the closure of the JAA (June 2009).