



European Commission
Directorate-General for Transport and Energy

Ex Post and Mid Term Evaluation of the Safety Assessment of Foreign Aircraft Programme (SAFA)

TREN/04/ST/S07.38506

Final Report

April 2005

COWI

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Abbreviations

SAFA	Safety Assessment of Foreign Aircraft Programme (European)
EASA	European Aviation Safety Agency
ECAC	European Civil Aviation Conference ¹
JAA	Joint Aviation Authorities (European)
ICAO	International Civil Aviation Organisation
FAA	Federal Aviation Administration (USA)
IATA	International Air Transport Association
USOAP	Universal Safety Oversight Assessment Programme (ICAO)
NAAs	National Civil Aviation Authorities - Generic
DGAC	National Civil Aviation Authority - France
NLA	National Civil Aviation Authority - The Netherlands
ENAC	National Civil Aviation Authority - Italy
FOCA	National Civil Aviation Authority - Switzerland
RCAA	National Civil Aviation Authority - Romania

¹ The ECAC member states are: Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom

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Executive Summary

At the request of the European Commission and in response to the Terms of Reference included under Work Order TREN/04/ST/S07.38506, COWI has conducted an ex post & mid term evaluation of the management of the SAFA programme.

SAFA is a programme of the European Civil Aviation Conference (ECAC), designed with the overall objective of protecting the EU citizens from potential aircraft operators unequally performing with their international safety obligations. This is done by building-up and animating a series of ramp inspections for foreign aircraft common to all the ECAC countries, associated to a common database of findings.

The inspections are carried on in each ECAC member state, by a set of national inspectors, trained on common procedures and inspection criteria. The results of these inspections are loaded in the common database, for sharing of the findings and for warning of all member states in case of major infringement. The programme was started and is directed by the ECAC since 1996, with its management delegated to the JAA, including harmonisation, procedure manuals, animation of the common work groups, common training and management of the database. Since 1999, the European Commission decided to contribute to the programme through a series of grants, used for co-financing of the programme management. Since 1999, 3 grants were awarded, for a total of 600 000 €, representing 50% of the management effort over the relating periods. A new grant was requested for 2005, with the principle that the European contribution could be raised up to 70% of the programme management budget.

The evaluation was performed through a detailed documentation review, followed by a series of interview meetings with relevant contacts at the ECAC, JAA and National Coordinators.

From this detailed review of the documentation and of the notes taken during the interviews, it appears that:

- A total of 320 inspectors were trained since the beginning of the programme, representing a total of 34 participating states. New training sessions are continuously organised, with a frequency of 2 to 3 sessions per year, and large attendance. A new initiative was started in 2003 for

an inspector exchange programme throughout the member states, in addition to the formal training lectures.

- The common database is fully operational. The level of satisfaction of its users appeared to be controversial, and several improvements were made. However, in spite of the fact that the database is not fully satisfactory yet, it is accessible to all member states, used by all of them, and constantly filled with valuable information.
- More than 19 000 inspections were performed since the start of the programme. They are continuously carried on, at a present rate around 3 000 inspections per year, with a trend of constant slight increase over the last 4 years.
- The inspections are generally well accepted by the operators, who usually consider it a necessary and useful measure.
- Although very unequal, the participation of the member states is high, and involves the 41 ECAC states (i.e. all EU + 16 non-EU states). In spite of its limitations in nature of findings, in time and in depth of inspections, the inspection provided under the SAFA programme provide valuable information and influence on most international operators.

The data collected from the documents and from the interviews was analysed in order to measure the programme performance in terms of efficiency, effectiveness, impact and utility, on a scale of Excellent, Good, Average, Poor, Unacceptable. This lead to the following results:

	Effectiveness	Efficiency	Impact	Utility	Sustainability
Grant	Excellent	Excellent	Good	Excellent	N/A
Management by JAA: - Day to day management - Database	Excellent Average	Excellent Average	Excellent	N/A	N/A
Quality of the Programme	Good				
EU relevance	Good				

Concerning the programme sustainability no scoring was applied (not relevant), but an evaluation was conducted on the consequences of possible reduction or stopping of the EC contribution. In this case, it is still unclear whether ECAC will be able/willing to continue. But in any case, the quality of the programme would be seriously reduced, with consequences as a losses in participation of

some of the countries with lower economy levels. As a conclusion, the main findings resulting from this evaluation are:

- In order to assure air safety performance up to the highest international standards for flights in/to/from Europe, a widely accepted inspection programme is a clear necessity.
- In this way, the SAFA programme is needed and useful. It is a valuable complement to the duties of foreign National Aviation Authorities and to the ICAO audits.
- With evaluation ratings from good to excellent, except for one point still at average level (Database), the management by JAA is fully satisfactory. It is effective, efficient, and contributes to a good level of participation of most of the ECAC member states.
- In spite of a high level of involvement of the participating states, further improvement still may be advisable for the Database, and also in actions to reach better levels of participation in some member states

In the coming year, significant evolutions are foreseen, with entry into force of the EU Directive, and with transfers of duties from JAA to EASA.

- These evolutions may be used to reinforce SAFA, by bringing a legal basis to the programme.
- This will require particular attention to decide whether/how to continue participation of the non-EU ECAC member states.
- If the SAFA programme was not existing/continued, the EU would have to build-up an equivalent organisation to be able to manage actual application of its Directive.

As a conclusion, and as final recommendations:

- For application of the EU directive, the EC has the choice between building up its own organisation, or continuing its contribution and use the existing SAFA programme. Considering the quality of the SAFA organisation and its present achievements, the solution of continuing seems preferable.
- The management by JAA is fully satisfactory. However, if future transfer of its duties to EASA is inevitable, it is essential to organise it when both organisations are ready for a seamless transition.
- Whichever choice is made, it is advisable to include in the future agendas discussions to decide how to continue inspecting aircraft of the EU members that are still considered as requiring vigilance, and also whether/how to continue participation of the non-EU ECAC member states.

1 Introduction

The present report has been prepared by COWI under the existing COWI Service Framework Contract with DG TREN covering Ex Post and Mid Term Evaluations (Ref. TREN/A1/17-2003 Lot 2) and in response to the Terms of Reference included under Work Order TREN/04/ST/S07.38506.

The purpose of the evaluation is to make an assessment of the actions already undertaken or on-going on the Safety Assessment of Foreign Aircraft (SAFA) programme, in order to establish a cost-opportunity finding and determine the choice to continue with further funding for management and improvement of the programme.

Readers should note that the report presents the views of the Consultant, which do not necessarily coincide with those of the Commission.

1.1 Project background

As a first general statement, it should be noted that air transport is one of the safest transportation means in the world. Accident statistics may be controversial and significantly vary according to the sources. But still all statistics concur to show a world average risk of accident (with hull loss or casualties) below 1 per 1 million departures. The statistics also concur to show largely unequal safety performance in the different regions of the world, where North America and Western Europe are among the best performers. Figures may vary in a ratio up to 1 to 25 according to the regions, in spite of the fact that the International Civil Aviation Organisation (ICAO) edicts common rules, that are officially accepted by 188 countries.

Therefore, taking in account the lower safety performance of some foreign countries, the SAFA programme was started in 1996, with an overall objective of general improvement of the air transport safety in/to/from Europe through an inspection policy in accordance with the ICAO safety standards.

Through a series of inspections (ramp checks), the programme basically consists in enabling the member states of the ECAC to ensure that the other states are adequately complying with their safety oversight responsibilities, as defined by the ICAO. It includes the creation and use of common procedures and database accessible to all the ECAC member states, enabling full sharing of the in-

formation on the inspection findings and common application of the resulting decisions.

SAFA is a programme of the ECAC, with its management delegated to the JAA. Each country has its own set of inspectors. The harmonisation, procedure manuals, and common training are done by the JAA, as well as the management of the database. In this database, the findings are classified in 3 categories. The 1st category applies to minor/non-critical findings. The 3rd category applies to major defects, which require immediate action and possible grounding of the aircraft. This also implies formal reporting to the Aviation Authority of the country of origin, and possible extension of the measures to a series of aircraft or to the operator.

In April 2004, EC Directive 2004/36 of the European Parliament and of the Council on the safety of third countries aircraft using Community airports was adopted. This directive contains the same basic principles as the SAFA programme with the addition of a number of provisions to give greater common positions for example in the case of decisions to ban an operator or submit it to traffic rights restrictions. As a consequence, it is considered that EU Member States, through their participation in the SAFA programme, would be discharging their Community obligations stemming from the Directive.

Since its beginning, and particularly after the Flash Airlines accident of January 2004, the SAFA programme had to be considered as a vital part of the European air safety dispositive, for protection of the passengers flying on foreign companies, and for European citizens living in the vicinity of the European airports.

1.2 Objectives

Objectives & scope
of the programme

The SAFA programme is not intended to replace or take over from the States of Registry/Operator their responsibilities for safety oversight. Although limited in their scope and depth, SAFA inspections have the objectives of:

- Giving a general indication of the safety of foreign operators.
- Organising inspections to contribute to the safe operation of the particular aircraft, which has been inspected, so that operators undertake corrective measures with regard to discrepancies discovered, before the flight is resumed.
- Providing the opportunity for the Aviation Authorities of the inspecting State and the State of the Operator or the State of Registry to cooperate in resolving specific safety-related problems.
- Providing for ECAC States an opportunity to mutually alert themselves of cases of significant safety problems involving particular foreign aircraft or operator.
- Allowing ECAC, through sharing and analysing information, to identify eventual generic safety problems and to develop and implement adequate measures to tackle them.

The EU contribution	<p>The EU contribution to the programme is a co-financing of the management tasks, i.e. of the part of the programme delegated to the JAA.</p> <p>For the inspections and tasks in each participating country, the actions are carried on by the national inspectors, financed by the country itself.</p>
Scope of the evaluation	<p>The present mission is an ex post & mid term evaluation of the management of the SAFA programme, i.e. the part of the programme that benefits of the European contribution.</p> <p>As required in the ToR and inception phase, this evaluation provides conclusions and recommendations qualifying:</p> <ul style="list-style-type: none">• The grant itself (cost effectiveness, efficiency, impact, utility criteria)• The management by the JAA (same criteria)• Quality of the programme (criteria of impact)• Relevance relating to EU policy (taking into account links between the SAFA programme and the EU Directive).

1.3 Present situation

The SAFA programme is presently on-going, with continuous activity since its start in 1996, and since 2000 constant increase of the quantity of inspections and number of participating states.

In each ECAC country, the programme is supported by a National Co-ordinator. They work under the general supervision of a Steering Committee which reports regularly, through the Focal Point for Safety Matters, to meetings of the Directors General of Civil Aviation of ECAC Member States. The ECAC is in charge of supervising the programme policy and decisions. The operation/day to day management is done by the JAA, which regularly reports to the ECAC through the Steering Committee.

Funding of the operations in each member state is provided by the states themselves through their National Aviation Authorities. Funding of the programme management has been supported since 1999 by the European Commission through a series of grant agreements signed with the JAA.

Up to 2003, 50% of the programme management budget was provided by the JAA, and the remaining 50% were covered by the 2 following European grants:

- 1st grant of 200 000 € covering the 26 months period from 26/10/1999 to 26/12/2001
- 2nd grant of 200 000 € covering the 15 months period from 1/5/2002 to 31/7/2003

For 2004, due to the reduction of JAA's role and resources, the non-EU funded part was taken over by the ECAC. The remaining 50% were covered by:

- 1 grant of 200 000 € covering the 12 months period from 1/1/2004 to 31/12/2004

For 2005, a new grant has been requested by JAA to the EC, with the principle that the European contribution could be raised up to 70% of the programme management budget.

- 1 grant covering the 12 months period from 1/1/2005 to 31/12/2005

1.4 Related programmes

In Europe, SAFA is the only programme allowing ramp inspections of foreign aircraft. Its main features are:

- Its application by all 41 ECAC Member States
- The sharing of information through an on-line centralised database
- Its bottom-up approach: the programme is built around ramp inspections of aircraft
- Its non-discriminatory nature — SAFA applies equally to aircraft from ECAC and non-ECAC States
- Its close relationship with the ICAO Universal Safety Oversight Audit Programme.

In the rest of the world, the following programmes concur to the same objective of home/international air safety:

FAA programme	In 1992, the United States Federal Aviation Authority (FAA) launched its International Aviation Assessment (IASA) programme. Taking a top-down approach, IASA focused on a country's, and not on an individual air carrier's, ability to adhere to the international Standards and Recommended Practices established by ICAO. The programme is limited to countries with air carriers providing, or wishing to engage in the operation of, international air services to/from the United States.
ICAO programme	In 1996, ICAO began a voluntary programme of assessments of national authorities. As a result of decisions taken during the 32nd Session of the Assembly in 1998, the ICAO programme is now operating on a universal, transparent and mandatory basis. A top-down approach is used, concentrating on systematic auditing and monitoring of the ability of individual States to conform to the safety-related Standards and Recommended Practices of the Organization.
Future programmes	For the time being, there is no equivalent programme in other regions of the world (except USA). For the future, the ECAC was contacted by other state organisations (Singapore, Australia), who consider developing an equivalent programme in their regions.
SAFA specificities	Due to its bottom-up approach, the SAFA programme is not redundant with the ICAO programme, but on the contrary must be considered as a complement to the ICAO audits. There is no duplication either with the FAA programme, as it applies to a different region of the world. The same comment applies to possible future programmes in Asia and Oceania.

2 Data collection and analysis

2.1 General

According to the approach defined during the inception phase, the present evaluation was based on the following information sources:

- Review of the existing administrative and technical documentation
- Interviews and phone conversations with key stakeholders of the programme

It was also agreed during the inception phase that the evaluation will not be based on statistical analysis of accident records for the following reasons:

- The number of yearly accidents is low, and therefore not appropriate for analysing yearly evolutions, nor for correlating results with such or such measure
- As the SAFA programme is still young and not yet stabilised in terms of participating countries, statistical data is likely to be insufficient and difficult to interpret. As an example, would variations in the number of findings reflect a variation in the number of infringements, or a variation in the quality of inspections?

The safety criteria taken into account in the SAFA programme are the **indirect indicators** provided by checking the aircraft compliance to the ICAO rules. In other terms, it is widely recognised in the profession that:

- Strict compliance with the ICAO rules cannot be a guarantee that no accident will happen. But it assures that the best has been done to keep safety up to the highest possible standards using the best existing world practice
- Lack of compliance to these rules jeopardises air safety with an absolute certainty

Documentation

The available documentation was received, during / following the initial briefing meeting held in Brussels on January 14th (CF annex A - Documentation list). This documentation mainly contains:

- The detailed status of actions taken on a yearly basis (ECAC's annual reports, available from Internet)
- The work papers for Steering Committee meeting held in January 2005
- Minutes of Steering Committee meetings (last 4 meetings)
- List of contact points
- Technical attachment to grant agreement (typical)

In addition to these documents, interim and final reports from the JAA were received during the visit to Hoofddorp.

Interviews

Further to the documentation review, interview meetings were organised with relevant contacts at the ECAC and JAA. Contacts were also established with a selection of National Coordinators, including meetings for the French and Dutch administrations, and by phone with random choice of other coordinators, covering participating states in EU, non-EU and pre-accession countries. The meetings were held in Paris on February 11th & 12th (ECAC & DGAC), and Hoofddorp on February 21st & 22nd (JAA & NLA - CF annex C for detailed agenda).

2.2 Documentation review

Steering Committee minutes and technical attachment

The Steering Committee minutes and the technical attachment to the grant agreements define the duties of the programme management as follows:

1. Collect data from the ECAC Member States relevant to safety information on foreign operators.
2. Further develop and maintain the SAFA Database containing said safety information.
3. Analyse the SAFA Database information and other relevant SAFA information concerning safety of foreign operators and advise on immediate actions or define follow-up policy
4. Report potential safety problems to the ECAC member States, ECAC and the European Commission
5. Propose ECAC co-ordinated actions when the safety issue requires it. Where agreed, co-ordinate such actions
6. Organise working groups to help further develop and ensure continuous updates of the Handbook of SAFA Ramp Inspection Procedures
7. Review and analyse the SAFA programme and advise on future development and strategy of SAFA programme
8. Identify to ECAC and other bodies (e.g. JAA, EASA) all evolving aspects of this post in relation to the future evolution and development of the SAFA programme
9. Represent the JAA at SAFA Steering Committee and SAFA National Co-ordinators meetings
10. Liase with international organisations (i.e. ICAO) and National Aviation Authorities (i.e. US, Canada, Russian Federation) on co-operation and information exchange
11. Develop and perform training courses and organise workshops for inspectors to help improve the understanding of SAFA programme and reach a common standard in the performance of Ramp Inspections
12. Facilitate and co-ordinate the inspector exchange programme which allows inspectors to obtain practical experience and is an effective tool in the harmonisation efforts
13. Prepare and give lectures at international conferences on the operational aspects of the SAFA programme
14. Liase with the International Co-ordinator in fields of funding and interna-

- tional policies
15. Perform data analyses and advice on maintenance and operational issues
 16. Participate in the review and analyses of the ICAO USOAP programme results in the framework of the ECAC Safety Oversight Issues (SOI)
 17. Liaise with European institutions (i.e. TAIEX) on co-operation and information exchange
 - Provide requested changes / new and dedicated server for the SAFA database application
 - SAFA database enhancement

For easier visibility and reporting purposes, JAA proposed the following clustering of the above listed duties:

1. SAFA Database
2. Promotion of the SAFA programme
3. Training
4. Attendance of meetings
5. Development of procedures
6. Reporting system
7. Future developments

ECAC annual reports

The annual reports have been issued regularly since 1999. They provide:

- A general presentation recalling the features of the programme, overall policy, orientations of the year
- A status of the training actions (specific section since 2002)
- A status of the achievements concerning the database (specific section since 2002)
- A comprehensive status of the inspections performed in the year
- Analysis of the inspection results, with a “Top 3” of significant and major findings
- Actions taken in the year
- Detailed annexes with lists of inspections sorted by states of operators, aircraft types, operators, and ratios per items.

After review of these reports, the following figures and statements are worth noting:

Training

A total of 320 inspectors were trained since the beginning of the programme, representing a total of 34 participating states.

- In 2003, 2 training sessions were provided, for more than 60 inspectors.
- In 2002, 3 training sessions were provided, for more than 60 inspectors.

In 2003, a new initiative was launched, for exchange of inspectors between the member states. This initiative is expected to provide a higher level of training, based on sharing and exchange of experience. It is also expected to facilitate uniformisation of the training and of the work procedures.

Database

In 2000, the SAFA database became fully operational. The database contains the reports of the ramp inspections performed by ECAC States. Although it is managed and maintained by the JAA, the inclusion of reports in the database remains a responsibility of the individual National Aviation Authorities (NAA)

of ECAC member states. Data contained in the database is considered confidential in the sense that it is only shared with other ECAC Member States and is not available to the general public.

Up to 2002, it was accessed via a secure private communication network. Some National Aviation Authorities of ECAC member states then had no direct access to the database. It was therefore decided to develop a series of modifications to enhance the user friendliness and provide secure access by internet. These modifications were made in 2003-2004, and are now operational.

The number of reports contained in the database reflects the actual number of inspections carried out. The annual reports are based upon the reports that are contained in the database.

Inspections

A total of more than 19 000 inspections have been carried out since 1996, by inspectors from the 34 participating states (not constant participation for some of the states):

Year	1996	1997	1998	1999	2000	2001	2002	2003
No. of inspections	75	1748	2767	2833	2394	2706	3234	3414
No. of states	9	19	23	21	22	25	25	27

Since the year 2000, a steady increase in the total number of inspections can be observed. The main reason for this is the fact that the total number of States participating in the Programme has increased. However, in most of the States the total number of inspections performed per State also tends to increase over the years.

Concerning the number of findings since 2000, the share of Category 1 and Category 2 findings related to the number of inspections shows a downward trend. The number of Category 3 findings related to the number of inspections remains more or less stable. The general trend is:

- The overall number of findings per inspection is decreasing
- The contribution of Category 1 and Category 2 findings is decreasing
- The contribution of Category 3 findings remains the same

Concerning the resulting actions over the same period, the following figures are provided:

Year	2000	2001	2002	2003	TOTAL
No. of inspections	2,394	2,706	3,234	3,414	11,748
No. of findings	2,587	2,868	3,064	3,242	11,761
Information to the authority and operator	150	262	289	360	1,061
Restriction on the aircraft operation	0	2	17	23	42
Corrective actions before flight authorisation	184	210	225	321	940
Aircraft grounded	16	28	12	20	76
Entry permit repercussions	9	4	6	7	26

2.3 Interviews

The interview meetings were conducted in the form of open discussions, with a common core according to a supporting check list (see annex B). It addressed at least the following points: general impression of the interviewee on the programme, strengths, limitations, results, vision of the future works (roadmap), identification and comparison to other existing programmes, European Commission's contribution, expectancies for the next period, comments and suggestions for improvements, if any.

The interviews included 9 full meetings, and 3 additional phone interviews, in order to cover programme managers as well as national co-ordinators, and a relevant selection of EU/non-EU countries (France, the Netherlands, Italy, Switzerland, Romania).

General impression

As a general statement, all the interviewees expressed their satisfaction on the programme. The common impression is that this type of initiative is absolutely necessary, and that it actually contributes to ensure air safety in/to/from the ECAC member states, at pan-European scale.

All the National Co-ordinators participating in the interviews also agreed in considering that the management of the programme is fully satisfactory (in terms of day-to-day management, policy and decision making, animation of the working groups, ...).

The work produced in the working groups is commonly recognised and accepted. It is also a general opinion that it adequately answers the need for common procedures and common training. The working groups are productive, useful, and their results are widely enforced at the levels of the National Aviation Authorities.

Inspections	<p>The number of inspections is increasing, and reflects a good involvement of the member states, albeit with very unequal levels of participation.</p> <p>The average number of findings (0,93 to 1,08 per inspection) shows that the inspections are needed and productive.</p> <p>The inspections are usually well accepted by the operators, who are now all familiar with the programme. The ECAC inspectors have instructions not to interfere with the planning of flight operations, except in cases of major findings. As a result, they report no difficulties for access to the aircraft, but they are often limited in the time available for the checks. As an average, the number of items checked is 30 per inspection, out of a list of 54 items.</p>
Strengths	<p>The level of participation of the ECAC member states is generally considered as satisfactory. Almost all of them are active, and significantly involved in enforcing the programme, in spite of (or because of) its voluntary aspect.</p> <p>Another point usually considered a strength by the interviewees is the number of ECAC states, which gives to the programme a pan-European scale.</p>
Weaknesses/limitations	<p>The results of inspections give a general indication of the safety of foreign operators. This indication is limited in the sense that no full picture is obtained about the safety of that particular aircraft or operator. This is due to:</p> <ul style="list-style-type: none">- the fact that certain aspects are difficult to assess during an inspection (e.g. Crew Resource Management)- the limited time available to perform an inspection- the limited depth of inspection, due to the nature of the programme (ramp inspections). <p>A full assessment of a particular aircraft or operator can only be obtained through the continuous oversight by the responsible Aviation Authority.</p> <p>Another weak point is in the unequal level of resources/participation devoted to the programme in the different member states. Presently, more than 60% of the inspections are undertaken by only 3 member states. In some countries, only the capital airports have inspections, due to the lack of resources available for the other airports.</p> <p>In case of major findings leading to a banning decision in one state, there is no obligation for the other member states to adopt the same measure. Each NAA keeps full authority to decide within its own state (weak cohesion of the measures). Recent improvements were brought to the information system, to be sure that no warning information can be missed. However, on this point, as well as on the minimum number of inspections, the lack of legal basis can be considered as a drawback.</p>
Database	<p>Several users mentioned that the database needs to be improved. They consider it too slow, expensive, and cumbersome for states dealing with a large number of inspections, not able to receive information from another national information system (double entry often required).</p>

The JAA indicated that major improvements were brought to the database in 2003-2004. Nevertheless, it seems that these improvements were not sufficient to reach users' full satisfaction.

Next evolutions

For the coming years, the following initiatives are already launched:

- Inspectors exchange programme, allowing temporary exchange of inspectors between member states. This is expected to provide valuable extension of the training, and possibly better cohesion between the different NAAs.
- Operational Review Board, for extended follow-up of the information already collected in the database. By a statistical analysis of the data available, it will be possible to separate the structural findings and the ad-hoc findings. In this way, targeting of the inspections is expected in a near future, for better identification and tracking of the "weakest links".

The entry into force of the EU Directive will bring a legal frame, and possibly better cohesion within the EU NAAs. This is considered by all interviewees as an essential progress, but all draw the attention on the necessity to:

- Take into account the non-EU ECAC member states, in order not to lose their involvement and participation to the programme
- Preserve the present level of motivation of the participants to the programme, which compensate the lack of legal frame by a good level of involvement.

3 Results and findings

3.1 General

The data collected from the documents and from the interviews was analysed in order to measure the programme performance in terms of efficiency, effectiveness, impact and utility, on a scale of Excellent, Good, Average, Poor, Unacceptable. A discussion is also presented on the programme sustainability, with no scoring (not relevant), but with evaluation of the consequences of possible reduction or stopping of the EC contribution.

The organisation defined for this analysis is the following:

- The grant itself (criteria: effectiveness, efficiency, impact, utility, sustainability)
- The management by the JAA (effectiveness, efficiency, impact)
- Quality of the programme (criteria of impact)
- Relevance relating to EU policy (taking into account links between the SAFA programme and the EU Directive)

3.2 The grant / SAFA programme

Effectiveness

According to the clustered list of duties (specific objectives) drawn from the grant agreement, the status of results at the end of the last reporting period (2003) is the following:

Specific objective	Status	Comments
SAFA Database	Specified changes done	Additional changes still recommended
Promotion of the programme	Done / continuously on-going	
Training	Done / continuously on-going	Training courses developed
Attendance of meetings	Done / continuously on-going	
Development of procedures	Done / continuously on-going	Development in animating working groups
Reporting system	Done	Improved since early 2004

Other developments	<ul style="list-style-type: none"> - Changes in database access achieved. - Liaison with international organisations done / continuously on-going
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All action lists decided in the Steering Committee meetings are completed.

In this way, the performance in terms of effectiveness can be qualified as **Excellent**.

Efficiency

Review of the statements of costs from the interim/final reports shows that the expenditures comply with the allowed budgets (no extra cost / no bonus either). The reports are detailed, and allow full control of staff & travel expenses, purchase costs, supplies & consumables and contingency reserve.

The specific advantages brought by the ECAC to the programme are:

- Involvement of the 25 EU states
- Additional involvement of 16 non-EU states
- Execution of the programme in the member states financed by the countries themselves (inspections performed with no EU contribution).

These advantages must be compared to the total annual cost of the programme of 200 000 €, which is approximately equivalent to 1 man-year + travel expenses. Furthermore, it should be noted that they are brought by ECAC at no cost, in sense that the totality of the grant is used for the part of management delegated to JAA (see following section)

In this way, the performance in terms of efficiency can be qualified as **Excellent**.

Impact

The SAFA inspections are now well accepted in all the ECAC member states. The number of inspections steadily increases, as well as the number of states participating in these inspections.

In spite of weaknesses in cohesion of the different NAAs, the level of motivation and involvement of the participants is remarkable.

In this way, taking into account the fact that the participation is excellent but that a weakness exists, the resulting performance in terms of impact can be qualified as **Good**.

Utility

The overall objective of the programme is to improve the air safety in the ECAC member states. This fully includes the EU, but also non-EU European states (pan-European scale).

Furthermore, the interviews indicated that the programme is fully accepted by the operators (airlines), who understand the purpose and recognise that such inspections are needed.

In this way, taking into account the pan-European scale and the fact that the programme is fully accepted by the airlines, the utility can be qualified as **Excellent**.

Sustainability

The programme is an ECAC programme, where the European contribution was decided with respect to the fact that the results of the programme directly interest the safety of European citizens. In this way, there was no intention of bringing the programme to self-sustainability, but on the contrary the intention was to support the programme as long as it can be considered beneficial to its objective of air safety of flights in/to/from Europe.

In case of an EC decision to reduce or stop its contribution to the programme:

- The EU will have very little control on the decisions taken at ECAC level, and it is still unclear whether ECAC will be able/willing to continue. Such decision would certainly be interpreted by the member states as a denial of the present organisation and achievements
- The EU will have to build up its own organisation for applying the EU directive with an increase in the cost of the programme and a consequent loss in efficiency. Furthermore, if the ECAC programme continues on its own, there will be a risk of duplication and a risk of discrepancies with the new EU programme
- For compensating the resulting budget reduction, an increase of the contribution of the member states would be required. According to the opinions expressed in the interviews, this would very probably cause reduction or cancellation of the participation of some of the countries with lower economy level.
- The JAA would not be able to continue its management. Transfer of JAA's duties to EASA would then need to be considered. In this case, EASA would also need to be financed, but perhaps with different modalities (and different budget lines) Such a transfer would also require particular attention to assure a seamless transition, with no loss in handing over the duties.

As a result regarding the opportunity of continuing the EC contribution, it can be noted that:

- Continuing the EC contribution to the SAFA programme provides a valuable tool to facilitate application of the EU Directive regarding the safety of third countries aircraft
- Stopping this contribution creates the risk of reducing the quality of the existing programme, and of losing the benefit of its present achievements. It also carries the risk of creating duplicated or discrepant initiatives between the existing and the new programme, and it would be inefficient because of the higher costs of a similar EU programme
- If a transfer of the management responsibilities is inevitable, this transfer must be organised with no loss nor discontinuity. It must be kept in mind that the quality of such transfer may directly impact lives of EU citizens.

3.3 The management by JAA

Effectiveness

The results of the interviews can be summarised as follows:

	Activity	General appreciation	Mark
1	General management/policy	- All interviewees expressed a high level of satisfaction - The objectives are fulfilled (cf para. 3.2)	Excellent
2	Animation of the working groups	All interviewees expressed a high level of satisfaction	Excellent
3	Database	Most NAAs had critics on the database, although it has been recently largely improved	Average

Therefore, the resulting performance in terms of effectiveness can be qualified as **Excellent** for the management and animation tasks (Activities 1 & 2).

For the database, the resulting performance in terms of effectiveness should be qualified as **Average** (Activity 3).

Efficiency

For the management and animation activities, the 2004 budget indicates:

- 145 000 € for manpower costs, with a total manpower of 1.35 man-year
- 15 000 € for the travel costs
- 13 000 € for 2 training sessions

This means that the resulting cost for manpower is $145\,000/1.35 = 107\,000$ €. Taking into account the level of qualification required for the project management, the market price for an equivalent long-term expert would be higher. Therefore, JAA's performance on this point is excellent.

The same applies to the travels, which are considered as necessary by all the interviewees, and performed at the following costs:

- Paris: 600 € (2 days)
- Rome: 900 € (2 days)
- Washington: 2 750 € (2 days)
- Moscow: 1 500 €
- London: 800 €
- Etc ...

This level of expenses is verifiable, and consistent with usual travel prices. Concerning each training session:

- 2 500 € are dedicated to the presence of an ICAO speaker (1 week - each session), i.e. a daily rate of 500 €

- 3000 for JAA speakers (total = 6 days – each session), i.e. a daily rate of 500 €

This level of expenses is verifiable, and at rates rather below the usual rates for experts of similar qualification.

For the database, the investment for the requested changes was about 60 000 €, and the annual running cost will be now about 25 000 €. On this point, the performance is controversial, as some of the interviewees believe that lower costs could be found on the market. However, their comment does not take into account the recent changes brought to the database. The costs were now reduced. According to JAA's declaration, they were now brought to a level consistent with **average** service available in IT support. The JAA expects that the last improvements will be enough to satisfy the users. However, if the users' dissatisfaction persists, a dedicated IT evaluation is recommended.

As a result, the final performance in terms of efficiency can be qualified as **Excellent** for all management tasks (costs below or at market price) except those relating to the Database, which are qualified as **Average**.

Impact

As a result of the management by the JAA:

- The common procedures exist, and are continuously evolving
- The training sessions are organised and regularly attended
- The database exists, is accessible to all member states, and a valuable quantity of results is loaded in the database.

Therefore, the performance in terms of impact can be qualified as **Excellent**.

3.4 Quality of the programme

The programme already showed a certain number of good points:

- Participation of the 41 ECAC member states
- Good involvement of most of these states (34 states presently participating in the inspections)
- Database used and containing valuable information
- Good recognition and acceptance by the operators
- Good recognition and acceptance by the international organisations
- In several cases, positive effect already obtained on the local authority in foreign countries

It also showed a certain number of limitations:

- Ramp checks cannot provide full coverage of the potential deficiencies
- The absence of legal basis may be a factor of self-motivation, but still induces a low level of cohesion in the volume of actions and in application of the measures resulting from findings

There are also some major issues that still need to be debated at the Steering Committee level:

- Deciding minima applicable to the number of inspections required, by country and by airport²
- Deciding whether the results should be kept confidential as it is now (only accessible to the NAAs and programme management), or whether there should be some level of dissemination to the public

However, in spite of the above limitations, the information gained through the SAFA Programme is useful and the inspections contribute to the safe operation of the particular aircraft/operator which has been inspected. SAFA also provides the opportunity for the Aviation Authorities of the Inspecting State and of the State of the Operator to co-operate in resolving specific safety-related problems.

The SAFA Programme has its place in the safety chain and therefore provides a valuable contribution to aviation safety in Europe. In this way, the quality of the programme is qualified as **Good**.

3.5 Relevance relating to the EU policy

The European Commission has proposed to the European Union Council and to the European Parliament a “Directive on the safety of third countries aircraft using Community airports”. The Directive provides a legal basis for the performance of ramp checks on aircraft by EU Member States. It will enter into force in April 2006.

Within the SAFA programme, having a legal basis will hopefully bring a higher level of cohesion between the different aviation authorities within the European Union.

It should also be considered that if the SAFA programme was not existing/continued, the EU would have to build-up an equivalent organisation to be able to manage actual application of its Directive.

Countries participating in the SAFA programme will comply “de facto” with the EU Directive. However, some differences still exist, the major of which are:

- The SAFA programme applies to “foreign aircraft”, where the EU Directive only concerns “third countries” aircraft. This excludes from the scope some EU countries that, from experience, require more vigilance, while still addressing some non-EU countries that are among the “good performers”.
- The SAFA programme involves the 41 ECAC countries, i.e. 16 non-EU European countries. In the future, particular attention must be given to decide on continuing participation / equal treatment of these countries.

Therefore, the relevance of SAFA to the EU policy can be considered as **Good**, but vigilance is recommended concerning the participation of 16 non-EU ECAC member states.

² In some countries, only the airports in the state capital are inspected, for lack of resources and insufficient budgets for domestic travels.

3.6 Summary of results

The ratings detailed in the above sections are summarised as follows:

	Effectiveness	Efficiency	Impact	Utility	Sustainability
Grant	Excellent	Excellent	Good	Excellent	N/A
Management by JAA: - Day to day management - Database	Excellent Average	Excellent Average	Excellent	N/A	N/A
Quality of the Programme	Good				
EU relevance	Good				

4 Conclusions & further recommendations

In order to assure air safety performance up to the highest international standards for flights in/to/from Europe, a widely accepted inspection programme is a clear necessity.

In this way, the SAFA programme is needed and useful. It answers the requirement for a European / pan-European programme. Its specificities (such as bottom up approach) make it a valuable complement to the duties of foreign National Aviation Authorities and to the ICAO audits.

With evaluation scores from good to excellent, except for one point still at average level (Database), the management by JAA is fully satisfactory. It is effective, efficient, and contributes to a good level of participation of most of the ECAC member states.

Concerning possible weaknesses and limitations to the programme, unequal levels of participation of the different member states was noted. This may be due sometimes to differences in resources, but probably also reflects the lack of legal basis, and insufficient cohesion between the National Administrations involved.

In the coming year, significant evolutions are foreseen, with entry into force of the EU Directive, and with transfers of duties from JAA to EASA. For application of the EU directive, the SAFA programme provides a valuable existing structure/organisation. If this structure/organisation was not existing/continued, the EU would have to build-up something equivalent to be able to manage actual application of its Directive. Furthermore, these evolutions can bring more strength to the SAFA programme, by bringing a legal basis and a reinforced official EU presence.

As a conclusion, and as final recommendations:

- For application of the EU directive, the EC has the choice between building up its own organisation, or continuing its contribution and use the existing SAFA programme. Considering the quality of the SAFA organisation and its present achievements, the solution of continuing seems preferable.

- The management by JAA is fully satisfactory. However, if future transfer of its duties to EASA is inevitable, it is essential to organise it when both organisations are ready for a seamless transition.
- Whichever choice is made, it is advisable to include in the future agendas discussions to decide how to continue inspecting aircraft of the EU members that are still considered as requiring vigilance, and also whether/how to continue participation of the non-EU ECAC member states.

Appendix A - List of Reference Documents

Annual reports of the SAFA programme (1999 to 2003):

ECAC/JAA Programme - SAFA - Report 2003
ECAC/JAA Programme - SAFA - Report 2002
ECAC/JAA Programme - SAFA - Report 2001
ECAC/JAA Programme - SAFA - Report 2000
ECAC/JAA Programme - SAFA - Report 1999
ECAC/JAA Programme - SAFA - Report 1996-1998

Steering Committee meeting – Paris, 18 & 19 January 2005:

DGCA122DP2E.pdf	SAFA programme developments
SAFA-29-WP-2.pdf	Recommendation for a minimal number of SAFA inspections to be required from individual ECAC states
SAFA-29-WP4.pdf	Proposal for SAFA procedures manual
SAFA-29-WP6.pdf	Impact on the SAFA programme from the EU Directive 2004/36/CE
SAFA-29-WP6.2.pdf	Appendix to SAFA-29-WP6.pdf
SAFA-29-WP7.pdf	Progress report on the Operational Review Board
SAFA-29-WP7.2.pdf	Example 1: table Operator Ratio's and Trends
SAFA-29-WP7.3.pdf	Operators Top 10 ratio board

Minutes of the last Steering Committee meetings:

SAFA STC28SD.pdf	28th SC meeting: Summary of decisions
SAFA ST.C_27-SD.pdf	27th SC meeting: Summary of decisions
SAFA STC26SD.doc	26th SC meeting: Summary of decisions
SAFA StC25-SD.pdf	25th SC meeting: Summary of decisions

Contact points:

Listcoordinators.doc

Technical attachment to grant agreement:

Technical Attachment.pdf

Appendix B: Interview Template

Date:	Location:
Person met:	
Organisation:	
Title / role in the programme:	

CHECK LIST / POINTS OF INTEREST

General comment about the programme
Strengths
Limitations
Mode of apprehension of the results
Vision of the future works (roadmap)
Other existing programmes – complementarities / redundancies
Budget & resources: Impact / criticality of the European Commission's contribution
Expectancies for the next period
Comments & suggestions for improvement

<i>Interview notes</i>

Appendix C: Meeting agenda in Hoofddorp

MONDAY - 21 FEBRUARY 2005

10.00 – 12.00: Wim Ovaa, JAA (SAFA Coordinator)

12.00 – 13.00: Pim van Santen, JAA (Contracts Management)

Lunch

14.00 – 16.00: Ernst van Duffelen, NLA (SAFA National Coordinator)

TUESDAY – 22 FEBRUARY 2005

09.00 – 10.00: Frank Manuhutu, JAA (Legal Coordinator)

10.00 – 11.00: Joost Jonker, JAA (Administrations Manager)

11.00 – 12.00: Wim Ovaa

Appendix D: List of interviews

	Country	Organisation	Title
Full interviews:			
Jude Mariadassou	France	ECAC	Deputy Executive Secretary
Orlin Tonchev	France	ECAC	Technical officer
Claude Labbé	France	DGAC	National co-ordinator France
Rejane Lavenac	France	DGAC	Division Exploitation
Wim Ovaa	Netherlands	JAA	SAFA programme co-ordinator
Pim van Santen	Netherlands	JAA	Contracts management
Ernst van Duffelen	Netherlands	NLA	National co-ordinator Netherlands
Frank Manuhutu	Netherlands	JAA	Legal co-ordinator
Joost Jonker	Netherlands	JAA	Administration manager
Phone interviews:			
Benedetto Marasà	Italy	ENAC	Steering Committee Chairman
Laurence Fontana-Jungo	Switzerland	FOCA	National co-ordinator Switzerland
Mihai Draghici	Romania	RCAA	National co-ordinator Romania