



WORKING PAPER

**SPECIAL AFRICA-INDIAN OCEAN (AFI)
REGIONAL AIR NAVIGATION (RAN) MEETING**

Durban, South Africa, 24 to 29 November 2008

Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)

**SOUTH AFRICAN WEATHER SERVICE (SAWS) – PROGRESS OF TQM
IMPLEMENTATION**

(Presented by South Africa)

SUMMARY

The SAWS has embarked on a journey of implementing Total Quality Management (TQM). The major objectives of this programme is to ensure service delivery of international standard and ICAO compliancy by obtaining ISO 9001 certification as well as aligning the relevant elements of its TQM programme with the WMO Quality Framework. The fundamental constructs of its Quality Management System (QMS) are now in place. These forms the foundation upon which all outstanding elements will be built in order to deliver quality-assured products and services to all stakeholders.

Action by the meeting is in paragraph 5.

1. INTRODUCTION

1.1 SAWS's quality journey – planning for achieving success

1.1.1 One of the strategic objectives of the South African Weather Service (SAWS) is being customer-focused. This is also in line with the ICAO requirements for organisations providing services to international airlines to be ISO certified. In order to achieve this objective the decision was taken to adopt a total quality management (TQM) approach to managing itself. By implementing and obtaining accreditation of the International Standards Organization (ISO) 9001 SAWS will not only ensure the required standard of service delivery but its clients will have the assurance that the meteorological and climatological services satisfy internationally accepted standards. In order to achieve all of the above, the assistance of IRCA Global was enlisted to plan for, and assist in the building of the Quality Management System fundamentals according to an agreed upon project plan, this being seen as the first phase of SAWS's Quality Management Journey.

1.2 ISO 9001 : 2008 – the revised/updated version

1.2.1 As part of its commitment to show leadership in the area of continuous improvement, the International Organisation for Standardisation (ISO) revises its Quality Management standard (namely ISO 9001) every five years and amends the requirements of the standard as per developments within the sectors it serves. The newest version (2008) will soon be released. The information

received from ICAO is that Quality Management System (QMS) requirement will be upgraded to a standard in 2010 Nov while the conformity to ISO 9000 series of quality assurance will remain a Recommended Practice. All organizations who wish to achieve or maintain certification need to adapt to this newest version of the standard. SAWS is therefore building its QMS and planning the implementation thereof with this in mind.

2. DISCUSSION

2.1 Progress that has been made thus far

2.1.1 A project plan was established between SAWS-Executive Projects (TQM Unit) and IRCA Global (appointed consultants) for the building of the Quality Management System fundamentals. This initial project ran from 14 April until 29 August 2008. This project was completed to requirements, within budget and on time.

2.1.2 In SAWS's quest for attaining ISO 9001 certification, the following QMS fundamentals have been completed and are in place:

- A Web-based (HTML version) electronic management system containing the elements below - to which all staff have access via the link provided on the SAWS Intranet Home page
- SAWS Value Chain (Enterprise View)
- Main underlying processes of the Value Chain constituents with relevant supporting documents
- Document Control and Record Control Matrices
- Quality Manual
- Quality Policy Statement and Quality Management Policy
- Six ISO 9001 System Level Procedures (as required by the standard)
- Majority of Staff received awareness training on Quality Management and the manner in which SAWS was to apply it within the organization
- Preventive and Corrective Action processes and supporting document structures
- Business Risks assessed for inclusion in Action Management practices as Preventive Actions
- Internal Audit Team, established, trained and functional
- First internal audit completed
- First Management Review Completed

2.2 Tasks and activities still required for a successful QMS and certification thereof

2.2.1 QMS integration – Whilst the QMS structures have been built, it still needs to be integrated into the mainstream business activities of SAWS. This integration will be effected in all offices, regions and business units through a QMS integration programme as facilitated by the TQM unit.

2.2.2 Documentation Systems & Programmes – There are numerous documents within SAWS that are used in various processes that yield organisational outputs. The creation, use and control of these documents are critical to the success of the QMS and the certification thereof. For this purpose a documentation system and a standardisation programme will be developed for integration with, and in support of the QMS. SAWS has also purchased an electronic document management system to facilitate movement of documents between document owners and users thereof.

2.2.3 Internal Audit – The skills of the SAWS QMS internal audit team will be further developed through a workshop dedicated to this purpose and thereafter the second QMS internal audit will take place involving all business areas of SAWS.

2.2.4 Action Management Systems – Action management (which includes Preventive Actions, Corrective Actions, and Management of Change etc.) is the cornerstone of QMS continuous improvement. SAWS have introduced an electronic Action Management System so that adequate tracking of events and close-out of actions may be managed more effectively. This will also form part of the QMS integration process.

2.2.5 Certification Preparation – Prior to being audited for ISO 9001 certification, a Certification Preparation plan will be implemented to ensure that the QMS is functioning effectively in all business areas of SAWS and that the organisation is ready for the ISO 9001 certification audit.

3. COST OF IMPLEMENTING AND MAINTAINING ISO 9001 ACCREDITATION

3.1 The successful implementation of a TQMS is reliant on suitable funding being available. Whilst costs may vary from one organisation to the next, the implementation of a TQMS has certain activities which need to be performed such as training of staff, developing business processes, auditing the system at all locations, and the accompanying logistical costs of those responsible for implementation, such as accommodation, meals, transport, security, etc. To this end SAWS has made approximately US\$ 200 000 available to cover its implementation costs for a two year programme. This amount also takes into account the limited use of external consultants, appointment of staff (specifically tasked with TQMS implementation) and certification costs.

3.2 As the provision of aeronautical meteorological service is estimated at about 30% of SAWS total activities, this percentage will be recovered from aviation users.

4. CONCLUSION

4.1 Success dependant on commitment of key internal stakeholders

4.1.1 The QMS involves role players and stakeholders at all levels within the organisation. The QMS is intended to be cohesive by nature and therefore all owners and drivers of business and operational processes are responsible for ensuring that this remains the status quo. Meeting customer requirements and driving continuous improvement of systems, products and services lies at the heart of a successful QMS, which will only be realised when all internal role players and stakeholders are committed to applying the QMS principles, values and requirements within their ambit of involvement and responsibility.

4.2 Broader benefits of QMS implementation and certification

4.2.1 Implementing the SAWS QMS will provide motivation and leadership to National Weather Services and other stakeholders of SAWS who wish to implement a QMS. After certification, SAWS may also lend its expertise and assistance to stakeholders and thereby promote TQM principles and values within the meteorological fraternity, and the business and social community to which it belongs.

4.3 Cost implications of ISO 9001 certification to SAWS

4.3.1 While acknowledging the benefits of having ISO 9001 certification, it needs to be noted that it comes at a cost. In the larger meteorological organizations, providing a variety of meteorological and climatological services and having to compete with international service providers the benefits to the individual user can easily outweigh the costs. However, this may not be the case where there are few users from whom to recover the costs or where the funding for services is very limited, in fact a good case can be made that the cost of having to implement ISO 9001 could reduce the ability of the service provider to provide the service.

4.3.2 Aviation cost recovery mechanisms are not fully and effectively implemented in most African countries and taking the economic realities into account those African States will find it very difficult to fund the costly implementation of QMS. Alternative means of funding of such system should be investigated.

4.3.3 On this basis, the meeting is invited to adopt the following recommendation on funding:

Recommendation 6/x — Funding support to States in relation to QMS

That ICAO investigates various alternative sources of funding to assist States with the implementation of the required QMS.

5. ACTION BY THE MEETING

5.1 The meeting is invited to:

- a) note the benefits QMS will have for SAWs and, in particular, its service to international air navigation; and
- b) approve the draft Recommendation at paragraph 4.3.3 above.

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