



International Civil Aviation Organization

**The Second Meeting of the ICAO Asia/Pacific Search and Rescue Task Force
(APSAR/TF/2)**

Singapore, 27 – 30 January 2014

Agenda Item 7: Any Other Business

STANDARDIZED TRAINING PACKAGE FOR SEARCH AND RESCUE

(Presented by Singapore)

SUMMARY

This paper provides information on Singapore's development of the ICAO Standardized Training Package (STP) for Search and Rescue.

This paper relates to –

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

Global Plan Initiatives:

Not Applicable

1. INTRODUCTION

1.1 Civil Aviation Authority of Singapore (CAAS) is responsible for providing aviation search and rescue services within the Singapore Search and Rescue Region (SRR). Quick, efficient and prompt actions by Search and Rescue Mission Coordinators (SMCs) can help prevent loss of lives, properties and minimize damages that may occur to an aircraft experiencing problems.

1.2 Singapore Aviation Academy (SAA), the training arm of CAAS, as part of its commitment to obtain full member status of the ICAO TRAINAIR PLUS network, developed a Standardized Training Package (STP) for the training of Aeronautical SMCs responsible for managing and coordinating search and rescue (SAR) operations when there is an aircraft in distress within the SRR.

1.3 The purpose of this SAR STP is to assist states in meeting their own search and rescue needs and their obligation under the convention of ICAO. Using structured guidance materials, this STP will assist States to achieve its objective by providing SMCs with the required knowledge, skills and attitudes to carry out SMC functions effectively and efficiently in accordance with ICAO Standards and Recommended Practices (SARPs). The proficiency of graduates will be maintained periodically through paper exercises as well as physical exercises which involves the actual deployment of search objects and search assets available.

1.4 This STP was endorsed by ICAO TRAINAIR PLUS and the course was recognised as valid on 9 April 2012. Hence, the SAR STP developed by the SAA Courseware Development Unit (CDU) was officially accepted in the TRAINAIR PLUS library and was coded 057/003/SAR/OPS.

2. DISCUSSION

2.1 Previously the Search and Rescue Courses conducted at SAA to prepare a participant for the role of a SMC, had been developed based on the instructor-dependent approach. Although effective, this approach provided for varied imparting of knowledge based on the teaching techniques of the instructors. The STP however focus on competency based training using high quality training materials and modern training techniques in accordance with TRAINAIR PLUS methodology which ensures consistency in the course materials and instructors' deliveries whereby enhancing the training value to participants

2.2 The STP is a modular based training package which breaks down relevant contents so as to ensure that all necessary topics required for SAR are adequately covered and proper process of training is covered from start to finish. The module based structure of the STP also allows an individual State to structure their training according to their needs.

2.3 A team of three officers from SAA CDU attended and successfully completed the TRAINAIR PLUS Courseware Developers Course which was conducted by two ICAO TRAINAIR PLUS experts at Incheon International Airport Corporation (IIAC) from 25 April to 6 May 2011.

2.4 The three trained courseware developers were then given the task to upgrade and develop the SAR STP. Professional opinions and advice were sought from subject matter experts from the Singapore Rescue Coordination Centre (RCC), SAR lecturers and SAR liaison officers from the Republic of Singapore Air Force and Republic of Singapore Navy. The SAA CDU corresponded with ICAO TRAINAIR PLUS Training Section on the 16th September 2011 to register its intent to develop the SAR STP implementing the TRAINAIR PLUS methodology. The core function of a SMC was clearly defined by the CDU members and the SMC's sub-tasks were also identified. The CDU members designed the teaching lessons over seven modules. The proposed schedule to complete the course would be fifteen work-days.

The Stages of Development

2.5 The TRAINAIR PLUS STP encompassed three stages, namely:

Stage 1

- a) Step 1 - Preliminary Study
- b) Step 2 - Job Analysis
- c) Step 3 - Population Analysis

Stage 2

- d) Step 4 - Design of Curriculum
- e) Step 5 - Design of Modules
- f) Step 6 - Production & Development Testing

Stage 3

- g) Step 7 - Evaluation

The STP Lesson

2.6 The seven modules are:

- a) Module 1 - Aircraft Emergency Phase
- b) Module 2 - Plotting of Aircraft Interception
- c) Module 3 - Determine datum of aircraft
- d) Module 4 - Prepare SAR Action Plan
- e) Module 5 - Allocate Resources to Search Area
- f) Module 6 - Follow up SAR Operations Progress
- g) Module 7 - Evaluate search and rescue operations outcome

The STP Validation

2.7 The newly developed STP was evaluated on-site by an appointed TRAINAIR PLUS expert. All completed documents, processes, mastery tests, lesson plans and job aids which were created from Step 1 to Step 6 were submitted at various stages to ICAO TRAINAIR PLUS Training Section to ensure compliance with prescribed methodology. The final phase, Step 7, included the actual conduct of a three week course from 19 March to 9 April 2012 with the upgraded curriculum.

2.8 Lecturers were briefed on the training methodologies. Specifically designed questionnaires were handed to participants for the purpose of evaluating the training materials, lecturers' deliveries and programmed schedules. The duration and contents of all lectures were closely monitored to ensure efficient time-keeping. The examination results for all seven modules were analyzed to determine the participants' understanding of the lessons.

The STP Outcomes

2.9 The three weeks course ran smoothly and successfully without any major problems. The participants, evaluator and instructors displayed great satisfaction to the course activities. In reference to the participants' validation questionnaires, mastery test results and average outcome of each module, the TRAINAIR PLUS criteria were met. The TRAINAIR PLUS experts recognized the course as valid on 9 April 2012. Hence, the SAR STP developed by SAA CDU was officially accepted in the TRAINAIR PLUS library

3 ACTION BY THE MEETING

3.1 The meeting is invited to note the information provided.

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