

For Information

Replacing and Upgrading Meteorological Facilities for the Hong Kong International Airport

Justifications for the Additional Manpower Sought

Introduction

At the Panel meeting on 16 December 2008, when considering the proposal to replace and upgrade the meteorological facilities for the Hong Kong International Airport (HKIA) (ref: CB(1)372/08-09(05)), Members requested the Administration to provide more information for substantiating the case for the proposed creation of six non-directorate posts (three time-limited and three permanent posts) by the Hong Kong Observatory (HKO). This note gives the information sought.

Need for Additional Manpower

2. HKO needs extra hands to provide the expert inputs required for procuring, implementing and operating the replacement and additional meteorological equipment, as well as for developing new aviation-specific weather services. The related activities are expected to peak in the years 2009/10 to 2014/15. After discounting the extra workload that the existing team could absorb, a total of six additional posts (two Scientific Officers, one Experimental Officer, one Radar Specialist Mechanic and two Scientific Assistants) are required. When the installation of equipment is completed by 2014-15, three posts (one Scientific Officer, one Experimental Officer and one Radar Specialist Mechanic) would need to be retained on a permanent basis to provide the expert inputs required for supporting the on-going operations and for sustaining the development of the new aviation-specific weather services.

3. The holders of these six proposed additional posts will work together with existing staff as a team, under the Senior Scientific Officer who assists the Assistant Director (Aviation Weather Services) and heads the Division responsible for the Airport Meteorological Office, the nerve centre of HKO's meteorological services for HKIA. An organization chart incorporating the six additional posts is at [Annex](#).

4. Detailed justifications for these additional posts are set out below.

(a) *Developing new aviation-specific weather services*

5. The demand for the development of new aviation-specific weather services to ensure efficient and safe flight operations has been increasing in recent years because of the growth in air traffic and rising expectations on the part of the aviation community. A dedicated unit is necessary for developing and following through the delivery of the new services. At present, HKO could not spare staff for manning such a unit.

6. To ensure timely development of new services to meet the requirements of the aviation community in the years ahead, and with the forthcoming procurement of additional equipment under the proposal, HKO needs to create two additional permanent posts (one Scientific Officer and one Experimental Officer) early to start developing the new services (which are complex, sophisticated and highly technical). The work required includes scientific studies, technique development and consultation with the aviation community. An example of one such desired new service is an improved system which would provide more comprehensive advice to air traffic control personnel and pilots about expected weather changes along the flight paths, mitigating flight delays due to thunderstorms.

(b) *Procuring and maintaining the new and additional Terminal Doppler Weather Radar (TDWR)*

7. An additional permanent post of Radar Specialist Mechanic is needed to see through the whole procurement process for the new TDWR. The Radar Specialist Mechanic will be responsible for assisting in the planning, tendering and installation of the new TDWR, as well as providing support to the preparation for the capital works associated with the radar station.

8. After the new TDWR is installed, this Radar Specialist Mechanic will work together with the existing TDWR team (consisting of 2 Radar Specialist Mechanics) to oversee the operation and maintenance of both the new and the backup TDWR, as well as the associated facilities, including power system, alarm system and remote monitoring system, at the two radar stations. Additional manpower is needed because the backup system will be kept on a stand-by mode so that it could quickly become fully functional as and when the main system is for whatever reasons out of service.

(c) *Procuring, operating and maintaining the other meteorological facilities*

9. Three time-limited posts (one Scientific Officer and two Scientific Assistants) are needed to assist Assistant Director (Aviation Meteorological Services) and the relevant Senior Scientific Officer in overseeing the

procurement and implementation processes for the other meteorological facilities. Given the scale of the exercise (which entails the replacement or upgrading of nearly all the aviation meteorological facilities now in use), internal deployment of staff alone could not absorb the additional workload. Added manpower with the appropriate expertise is needed to oversee and provide support in following through various steps including the drafting of tenders, liaison with relevant parties including the Civil Aviation Department (CAD) and the Airport Authority, testing, implementation and commissioning of the facilities.

10. HKO needs to integrate its meteorological facilities with CAD's replacement Air Traffic Control (ATC) System. Given the expanded functionality and capability of CAD's future ATC System comprising advanced electronic systems, additional meteorological and infrastructural facilities (including software) will need to be installed. Added manpower is hence needed for operating and maintaining the additional equipment, including the administration of minor upgrading in the course of time. Holders of the three additional permanent posts (as set out in paragraphs 6 and 7 above) will help take up much of such work.

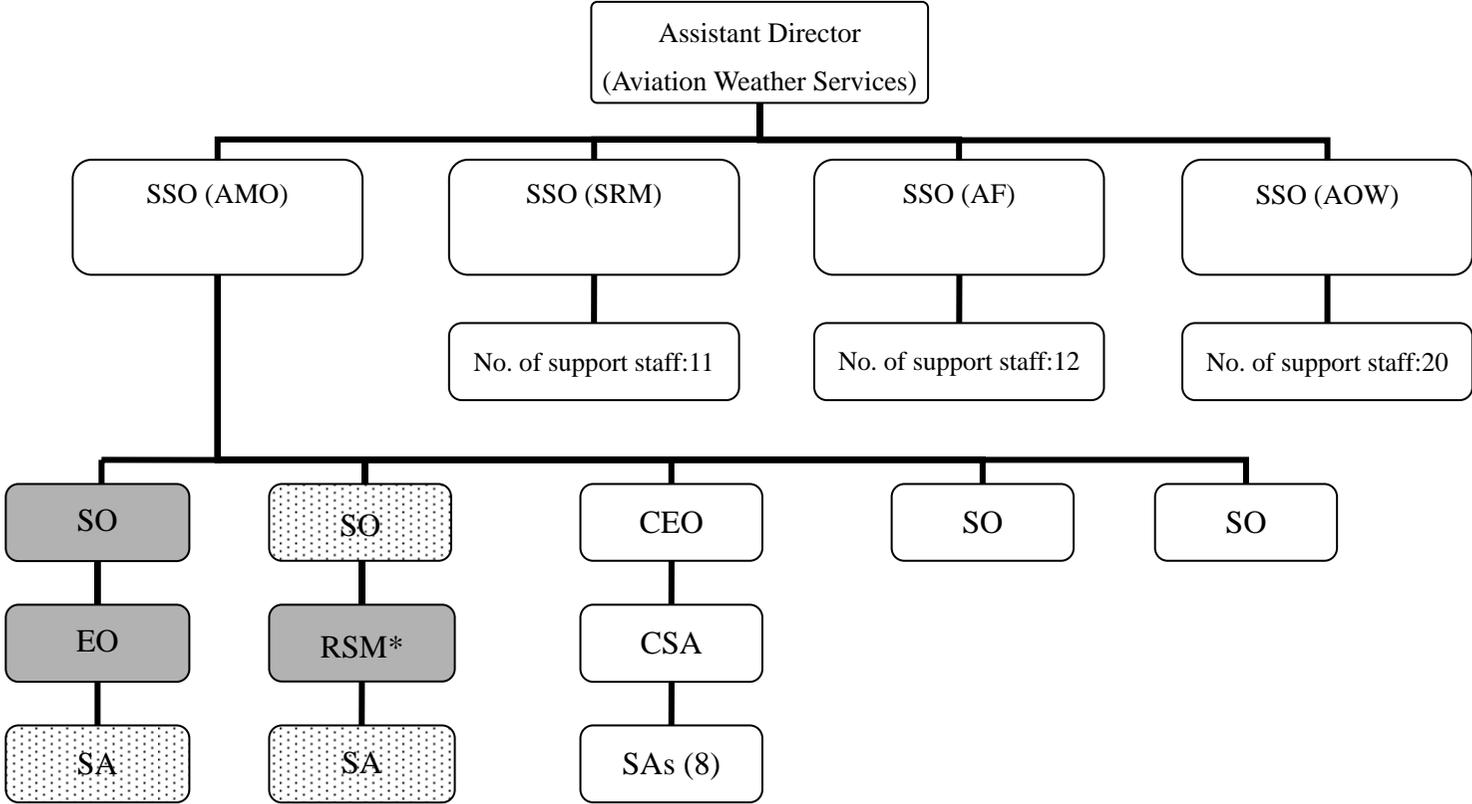
Need for Civil Service Posts

11. The proposal covers many items of specialized equipment involving the use of advanced technology. Their proper performance is mission critical. HKO needs to have staff with the necessary experience and expertise to commission and operate the equipment to ensure sustainable provision of professional and quality weather services. Accumulation of experience for operating/maintaining the new equipment is also essential. Contracting out the duties is therefore not desirable.

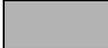
Room for Internal Redeployment

12. HKO has tried its best to redeploy its existing staff for aviation weather services to absorb as much of the additional workload as possible so as to minimize the number of additional staff required. We have critically reviewed the establishment of HKO and concluded that further redeployment of staff from other parts of the department is not feasible. At present, HKO has 287 staff. It has not increased its manpower strength in the past five years.

Proposed Organization Chart for the Aviation Weather Services Branch of the Hong Kong Observatory



Total no. of staff: 66 (including 3 additional permanent posts and 3 additional time-limited posts)

Key:
 Proposed permanent posts
 Proposed time-limited posts (2009/10-2014/15)

* RSM to be posted under SSO(SRM) from 2013/14 onwards after installation of the new TDWR.

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| AMO | Airport Meteorological Office | SSO | Senior Scientific Officer | SA | Scientific Assistant |
| SRM | Satellites and Radar Meteorology | SO | Scientific Officer | CEO | Chief Experimental Officer |
| AF | Aerodrome Forecast | EO | Experimental Officer | CSA | Chief Scientific Assistant |
| AOW | Aerodrome Observation and Warnings | RSM | Radar Specialist Mechanic | | |