



航空交通管理部負責在國際民用航空組織（國際民航組織）指定的香港飛行情報區內提供航空交通管制（空管）、航行資料及飛機事故警報服務。

二零零二年十一月，香港空域實施「縮小垂直間隔」新規定，把在41 000呎以下高度飛行，配備適當儀器的飛機之間的最低垂直間隔定於1 000呎。在此以前，在29 000呎以上高度飛行的飛機之間的最低垂直間隔為2 000呎。實施新規定後，飛機能在最理想的飛行高度巡航，既可節省航空運輸所需燃料，減少飛機延誤，亦有助提升空域的使用量和提高運作效率。

The Air Traffic Management Division is responsible for the provision of air traffic control (ATC) service, flight information service and alerting service within the Hong Kong Flight Information Region (FIR) as assigned by the International Civil Aviation Organization (ICAO).

In November 2002, the Reduced Vertical Separation Minimum (RVSM) was implemented in Hong Kong airspace. Under RVSM, a minimum vertical separation of 1 000 feet is applicable between suitably equipped aircraft below altitudes of 41 000 feet, whereas the previous minimum was 2 000 feet between aircraft operating above altitudes of 29 000 feet. As a result, aircraft have better opportunities to operate at their optimum cruising levels. The resultant advantages include improvement to the fuel economy of air transportation, reduction in ground delays to aircraft, enhancement of airspace capacity and optimisation of operational efficiency.



航空交通量

年內，本部共處理了223 371架次在香港國際機場升降的國際及本地航班，並為98 509架次飛越香港飛行情報區的航班提供服務。與去年比較，在香港國際機場升降及飛越香港的航班數目分別增加約7%和6.9%。儘管全球經濟下調令航空交通量減少，以及南中國海航路重組以致香港航空交通服務覆蓋的面積縮減，香港仍錄得以上增長。

AIR TRAFFIC

During the year, the Division handled a total of 223 371 international and local aircraft movements at the Hong Kong International Airport (HKIA) and 98 509 flights overflying the Hong Kong FIR. Compared to the previous year, the number of aircraft movements at the HKIA and overflights increased by about 7 per cent and 6.9 per cent respectively, despite the overall reduction in air traffic due to worldwide economic downturn, and the major reorganisation of air routes over the South China Sea area. The reorganisation resulted in a reduction of the area in which Hong Kong provides air traffic services.



招聘及培訓航空交通管制人員

空管是一門需要特別技能及專門知識的職業，而有關技能和知識是透過理論及在職訓練獲取的。礙於本地勞工市場未能提供這方面的人力資源，空管人員都是由民航處按既定計劃在內部培訓。

為確保有足夠人手應付日常運作、預期的交通增長及長遠的人事升遷需求，招聘及培訓仍是部門其中一項主要任務。在二零零二／零三年度，本處共招聘16名見習航空交通管制主任及七名航空交通事務員。截至二零零三年三月三十一日，本處共有225位航空交通管制主任及105位航空交通事務員。

為了讓公眾和求職人士對空管行業有更多認識，本處在二零零三年參與勞工處及貿易發展局合辦的「教育及職業展覽2003」。此外，我們亦與中學合辦就業講座，讓學生認識空管這個專業。

RECRUITMENT AND TRAINING OF AIR TRAFFIC CONTROL STAFF

ATC is a very specialised profession requiring technical skills and expertise that are acquired through theoretical and practical on-the-job training. As such, human resources are not readily available in the local labour market. Training of ATC staff is conducted in-house in accordance with an established departmental training programme.

With a view to ensuring that adequate staff is made available to meet the demand of daily operation, the anticipated traffic growth and the long term manpower succession requirement, recruitment and training continued to be one of the major tasks of the Department. In 2002/03, a total of 16 Student Air Traffic Control Officers (SATCOs) and seven Air Traffic Flight Services Officers (ATFSOs) joined the service. As at March 31, 2003, the strength of Air Traffic Control Officer (ATCO) and ATFSO was 225 and 105 respectively.

With the objective of introducing the profession to the public and potential job applicants, CAD participated in the Education and Career Expo 2003 organised jointly by the Labour Department and the Trade Development Council. Career talks were also arranged with secondary schools to introduce students to the profession.



**由左至右
From left to right**

空管中心內訓練有素的管制員，日以繼夜為航機提供服務。

The ATC Centre houses teams of well-trained controllers who deliver round-the-clock services to aircraft.

助理處長劉道全向求職人士介紹空管人員的晉升機會。

Assistant Director-General Mr John Lau introduces the career prospect of ATC personnel to potential job applicants.

導修課堂是航空交通管制員培訓計劃的重要一環。

Classroom lectures form an essential part of the air traffic controllers' training programme.

航空交通管制主任需要定期在模擬器接受技術複訓，以確保他們有能力應付不常見的操作環境，例如航機遇到惡劣天氣和緊急事故等情況。此外，本處在實施會對系統構成重大轉變的新運作程序前，會為空管人員提供適應訓練。年內，本處舉辦了25項空管訓練課程，包括一項複訓及三項適應訓練，為各級航空交通管制主任和航空交通事務員提供共565次訓練機會。

ATCOs are required to receive periodic refresher training in the ATC simulators to ensure that their competency in responding to unusual circumstances, such as poor weather operations and aircraft emergencies, is well maintained. Conversion training is also provided to ATC staff prior to implementation of new procedures that will bring major changes to system operation. During the year, a total of 25 ATC training courses for various purposes, including one refresher training and three conversion training courses, were conducted providing a total of 565 training opportunities for the various ranks of ATCO and ATFSO grades.

航空交通管理

香港在二零零二年十一月一日如期成功實施「縮小垂直間隔」規定。亞太區提供航空交通服務的部門已應國際民航組織要求，採用這套新標準。新規定把在29 000呎以上高度飛行，配備適當儀器的飛機之間的最低垂直間隔縮小，以充分利用空域，提高飛機運作效率，節省燃料和減少飛機延誤。

AIR TRAFFIC MANAGEMENT

Hong Kong successfully implemented RVSM on November 1, 2002 as scheduled. The new standard was adopted by providers of air traffic services in the Asia Pacific region under the auspices of ICAO to optimise airspace utilisation by reducing the vertical separation standard between suitably equipped aircraft above altitudes of 29 000 feet. With RVSM, aircraft operations are more efficient, fuel economy is improved and ground delay is minimised.



由左至右
From left to right

航空交通管理部不時檢討空管運作的程序。
Operating procedures of ATC are constantly reviewed.

政府飛行服務隊在每年一度的搜救演習中，示範從甲板吊救傷者。
A GFS helicopter performs deck winching demonstration as part of the annual search and rescue exercise.

為確保珠江三角洲地區的航空交通服務既安全又有效率，本處繼續與國內及澳門的民航管理部門保持緊密聯繫，並舉行定期會議，檢討空管和協調程序，在有需要時因應當前操作環境而作出修訂。

As part of our continuous effort to ensure the provision of safe and efficient air traffic services in the Pearl River Delta, a close liaison was maintained with the civil aviation authorities in the Mainland and Macao. Regular meetings were conducted with these authorities to review ATC and coordination procedures, and refinements were made in light of prevailing operating requirements.

安全及質素管理

為配合國際民航組織建議成員國於二零零三年十一月前引入「安全管理系統」，本部於年內開始確立一套「安全管理系統」。本部的安全、質素及發展組制訂安全管理政策手冊，載列安全政策和空管運作的目標。在「安全管理系統」下，各級空管人員有系統地採納安全及質素管理的原則，着重滿足客戶需求，並以不斷提升空管服務的安全為目標。

SAFETY AND QUALITY

In line with an ICAO recommendation for States to put in place a Safety Management System (SMS) by November 2003, the Division embarked on the establishment of a SMS in the year. In this regard, the Safety, Quality and Development (SQD) Section of the Division compiled a Safety Management Policy Manual, which prescribes safety policies and objectives in ATC operations. Under SMS, ATC personnel at all levels are involved in the systematic application of safety and quality management principles, with focus on customer satisfaction, and with an aim on continuous safety improvement in the provision of ATC services.

為確保安全管理系統能成功並持續推行，本部人員需參加安全管理系統入門課程，認識相關的理論和技巧。此外，為配合安全管理系統的分階段實施，本部將進一步籌辦各類訓練課程，內容包括人為因素、風險識別及控制和為安全運作做好評估及準備等多個範疇。

To ensure the successful implementation of SMS and its perpetuation, ATMD staff attended SMS induction course to have an overview of the relevant philosophies and techniques. Further training is being provided to coincide with the staged implementation of SMS in the areas of human factors, hazard identification and control, and safety assessment, etc.

搜索及救援

一年一度的大型搜索及拯救演習在二零零二年四月二十三至二十六日順利舉行。是項演習旨在：(一)測試香港搜救系統的效率；(二)為空管協調搜救的人員提供熟習執行和協調搜救行動的機會；及(三)讓本地和外地搜救人員相互交流經驗，加強合作。

除了民航處和本地搜救組織包括中國人民解放軍駐香港部隊(駐港部隊)、香港警務處、海事處、消防處、政府飛行服務隊、香港天文台及民眾安全服務處積極參與演習外，海外搜救組織則有美國空軍、海軍和海岸防衛隊。此外，來自內地、澳門、馬來西亞、新加坡、泰國和越南的搜救專家和觀察員亦有到港觀摩。

搜救演習主要分三部分。第一部分是在香港國際機場展示搜救設備及器材，讓參觀人士認識各類搜救裝備的功能。其後，駐港部隊和政府飛行服務隊分別派出直九直升機和新超級美洲豹直升機，在香港國際機場以南海域示範拯救及吊送行動。最後是大規模的空中及海上搜救演習，模擬香港以南約60海里發生飛機墜海事故，由兩架搜救飛機和一艘駐港部隊船隻參與搜救行動。在各個參與單位的通力合作下，整個搜救演習取得豐碩的成果。

SEARCH AND RESCUE

The annual Search and Rescue (SAR) Exercise was successfully conducted from April 23 to 26, 2002. The main objectives of this annual exercise were: (i) to test the effectiveness of Hong Kong SAR system; (ii) to provide ATC SAR personnel an opportunity to practise their skills in conducting and coordinating SAR operations; and (iii) to provide a forum for local SAR personnel as well as their overseas counterparts to share experience and to foster working relationship.

In addition to the active participation by CAD and other local SAR agencies including the Hong Kong Garrison of the People's Liberation Army (PLA), Hong Kong Police Force, Marine Department, Fire Services Department, Government Flying Service (GFS), Hong Kong Observatory and Civil Aid Service, SAR units of the United States Air Force, Navy and Coast Guard also participated in the exercise. Experts and observers from SAR organisations of the Mainland, Macao, Malaysia, Singapore, Thailand and Vietnam were also present at the exercise.

The exercise was divided into three major parts. The first part was a display of SAR equipment and appliances at HKIA. Through the display, observers had a good appreciation of the capability of the tools available for SAR missions. It was followed by a demonstration of rescue and winching operations in the sea channel south of the airport platform involving a Z9 helicopter from the PLA and the new Super Puma helicopter from GFS. The final part of the exercise was a comprehensive air and sea search by two SAR aircraft and a PLA vessel for a target that was simulated to be an aircraft that had crashed into the sea about 60 nautical miles to the south of Hong Kong. The whole exercise was successfully conducted with fruitful results and excellent co-operation amongst participating units.