第五章 航空交通管理
Chapter 5 Air Traffic Management

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，航空交通管理(空管)、航行資料及飛機事故警報服務。

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).

航空交通量

年內，本部共處理了201 430架次在香港國際機場升降的國際及本地航班，並為63 927架次飛越香港飛行情報區以及27 055架次進出澳門國際機場的航班提供服務。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減少了9.7%和7.6%。航空交通量下降，是因為受到嚴重急性呼吸系統綜合症（「沙士」）影響。

AIR TRAFFIC

During the year, the Division handled a total of 201 430 international and local aircraft movements at the Hong Kong International Airport (HKIA). In addition, the Division handled 63 927 flights overflying the Hong Kong FIR and 27 055 flights into and out of Macau International Airport. Compared with the previous year, the number of aircraft movements at the HKIA and overflights decreased by 9.7 per cent and 7.6 per cent respectively. These overall reduction in air traffic was due to the outbreak of SARS.

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廣泛的理論及內部在職訓練獲取的。礙於本地勞動市場未能提供這方面的專業人力資源，空管人員都是由民航處按部門既定計劃、程序及國際標準在內部培訓和頒發資格。

RECRUITMENT AND TRAINING OF AIR TRAFFIC CONTROL STAFF

ATC is a very specialised profession requiring technical skills and expertise that can only be acquired through extensive theoretical and practical in-house on-the-job training. As such, professional human resources are not readily available in the local labour market. Training and qualifying of ATC staff are conducted in-house by CAD in accordance with the established departmental programme, procedures and international standards.

航空交通管制員在模擬指揮塔台接受複訓。
Air traffic controllers receive refresher
training in the tower simulator.

為確保有足夠人手應付日常運作、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。由於政府全部暫停招聘公務員,年內我們只能從在職人員中招聘了9名見習航空交通管制主任。截至二零零四年三月三十一日,本處共有226位航空交通管制主任及94位航空交通事務員。

為了讓求職人士和公眾對空管行業有更多認識,本處在二零零三年航空日舉辦就業講座,向兩所大學學生介紹空管這個專業。

期內,指導班及在職訓練活動非常頻密。除了已計劃的內部職業培訓,航空交通管制主任也在模擬器接受技術複訓,以提高他們應付不常見事件和緊急事故的能力。年內,本處舉辦了24項空管培訓課程,包括入職至高級等不同程度的雷達控制訓練,共有199位來各級的人員接受訓練,其中27位獲頒發資格及取得各類空管執照。

In order to ensure adequate staff is made available to meet the human resource demand of daily operations, traffic growth and long term manpower succession requirement, recruitment and training continued to be one of the major tasks of the Department. Under the general freeze of civil service recruitment in the year, nine Student Air Traffic Control Officers (SATCOs) were recruited through in-service transfer. As at March 31, 2004, the strength of Air Traffic Control Officer (ATCO) and Air Traffic Flight Services Officer (ATFSO) was 226 and 94 respectively.

With the objective of introducing the profession to potential applicants and the public, career talks were delivered to students in two universities and during the Aviation Day 2003.

Intensive courses of instruction and on-the-job training activities were conducted during the period. Apart from the in-house ATC professional training, ATCOs were also given refresher training in the ATC simulators to enhance their competency in responding to unusual occurrences and aircraft emergencies. During the year, a total of 24 ATC training courses ranging from ab-initio to advanced radar control training were conducted for 199 officers of different ranks leading to the attainment of the various professional qualifications. Amongst them, 27 officers were qualified and awarded different categories of ATC Ratings.

處長林光宇在「第一次內地、香港和澳門三方空中交通管理規劃和實施工作組會議」上，與中國民航總局空中交通管理局局長蘇蘭根（中）和署理澳門民航局局長陳穎雄簽署會議紀要。
Director-General Mr Albert Lam signs the Notes of Meeting at the 1st PRD ATM Planning and Implementation Working Group Meeting with Director General of Air Traffic Management Bureau, CAAC, Mr Su Lan Gen (middle), and Acting President, CAAM, Mr Simon Chan.

航空交通管理

二零零四年二月，本處與內地及澳門的民航管理部門成立三方工作組，目的在檢討珠江三角洲地區的空域結構和飛行程序。工作組內的專家成員會緊密合作，製訂協調航空交通管理計劃，以提高區內飛行安全，並確保未來二十年航空交通在區內可持續發展。

安全及質保管理

安全、質保及發展組繼續致力確保各級空管人員有系統地採納安全管理系統原則。為此，本處推行積極風險管理，並根據國際民航組織規定，確立及推行管理政策和程序。按照這些規定，航空交通服務系統有任何主要變動前，本部會進行安全評估，並定期監察和評估安全程度。

AIR TRAFFIC MANAGEMENT

In February 2004, CAD joined with the civil aviation authorities of the Mainland and Macao in establishing a tripartite working group to review the airspace structure and flight procedures in the Pearl River Delta (PRD) region. Members of the working group comprised ATC specialists who worked closely together to formulate a coordinated air traffic management plan to enhance flight safety and ensure sustainable growth of air traffic within the PRD region in the next 20 years.

SAFETY AND QUALITY

The Safety, Quality and Development (SQD) Section continued to ensure the systemic application of Safety Management System principles by ATC personnel at all levels. This was accomplished by proactive risk management and the establishment and implementation of safety management policies and procedures in compliance with ICAO provisions. In accordance with such provisions, ATMD conducted safety assessments before introducing any significant changes to ATS systems and regularly monitored and assessed the safety levels.

在民航處籌辦的國際民航組織搜索及拯救研討會上，與會者
交流搜救意見和經驗。
Participants share their views and experiences on
SAR at the ICAO SAR Seminar organised by CAD.

搜索及救授

國際民航組織搜索及拯救專題研討會

二零零三年度搜索及拯救演習舉行前，中國香港於二零零三年十一月二十四日至二十五日主辦國際民航組織搜索及拯救專題研討會。研討會的目的，是提醒參與者締約國的搜救責任，並向他們提供有關搜救技術、措施及支援基建最新發展的資訊。研討會上，國際民航組織、美國海岸巡邏隊、香港機場管理局、政府飛行服務隊及民航處發表了12份文件，而出席的代表有32位，他們來自柬埔寨、印度、日本、澳門(中國)、馬來西亞、蒙古、中華人民共和國、南韓、新加坡、泰國、美國及越南等13個地區的民航管理部門，研討會有超過110人參與。此外，香港機場管理局、政府飛行服務隊、海事處、消防處、保安局、香港警察、航空公司及地勤服務代理等共派出80多位本地觀察員。

SEARCH AND RESCUE

ICAO SAR Seminar

An ICAO Search and Rescue (SAR) Seminar was hosted by Hong Kong, China on November 24-25, 2003. The objectives of the ICAO Seminar were to enhance the awareness of the participants with respect to the States' responsibilities in SAR and to keep them informed of the latest development in SAR techniques, practices and supporting infrastructure. Altogether, 12 papers were presented by ICAO, US Coast Guard, Airport Authority Hong Kong (AAHK), Government Flying Service (GFS) and CAD. Thirty-two representatives from the following 13 civil aviation authorities attended the Seminar: Cambodia, India, Japan, Macao (China), Malaysia, Mongolia, People 's Republic of China, Republic of Korea, Singapore, Thailand, United States of America and Vietnam. Over 110 participants and 80 local observers including representatives from AAHK, GFS, Marine Department, Fire Services Department, Security Bureau, Hong Kong Police Force, airlines and ground handling agents, etc. Over 110 participants attended the Seminar.

駐港部隊、政府飛行服務隊和多個政府部門於短程搜救演練中展示搜救能力。
PLA, GFS and various Government departments display their SAR capabilities at the short range SAREX.

二零零三年度搜索及拯救演習

國際民航組織的搜索及拯救專題研討會結束後，香港在二零零三年十一月二十六日至二十九日舉行二零零三年度搜索及拯救演習。香港民航處根據國際民航組織《附件十二》建議，每年都舉辦這項演習，旨在測試航空救援協調中心的警報、協調和通訊設施的效率，及搜救程序，以及為擁有搜救資格的空中交通管制員、空勤人員和可能參與這些行動的搜救單位提供持續訓練，使他們熟習各種搜救技巧。

搜救演習分三部分，即搜救設備及器材展覽、短程拯救示範、長程搜索及拯救演習。搜救設備及器材展覽於十一月二十六日在香港國際機場舉行。美國海岸巡邏隊及美國空軍派出大力士C-130飛機，政府飛行服務隊則展示捷流J-41定翼機、超級美洲豹AS332 L2直升機、EC155 B1直升機。

短程海陸拯救示範於十一月二十七日早上在南丫島東澳灣舉行。示範由中國人民解放軍駐港部隊、香港水警、香港消防處、香港民安隊及政府飛行服務隊聯合進行。參觀演習人士超過150名，當中包括在新聞媒體廣泛報導是次演習的本地及海外記者。

最後一部分為大規模的空中及海上搜救演習，在十一月二十八日舉行，模擬香港西南約80海里發生飛機墜海事故，由四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。

SAREX 2003

Following the ICAO SAR Seminar 2003, the Hong Kong Search and Rescue Exercise 2003 (SAREX 2003) was conducted from November 26 to 29, 2003. This is an annual exercise organised by CAD in accordance with the recommendations laid down in ICAO Annex 12. The main objectives of SAREX were to test the effectiveness of the alerting, co-ordination and communication facilities of the Aeronautical Rescue Coordination Centre (ARCC) as well as the search and rescue procedures. It will also provide continuation training and familiarisation in search and rescue technique for SAR qualified air traffic controllers, aircrews and other SAR units likely to be involved in such operations.

The program consisted of three parts, namely, Static display, Short Range Rescue Demonstration and Long Range SAREX. A static display of participating aircraft and emergency appliances was held at the HKIA on November 26, 2003. Aircraft on display were Hercules C-130 from United States Coast Guard; Hercules C-130 from United States Air Force; Jetstream J-41, Eurocopter Super Puma AS332 L2 helicopter, and Eurocopter EC155 B1 helicopter from GFS.

The short range mountain and sea rescue demonstration was conducted at Tung O Wan of Lamma Island in the morning on November 27, 2003. It was jointly conducted by the People's Liberation Army Forces Hong Kong, Hong Kong Police Force (Marine Region), Fire Services Department, Civil Aid Service and GFS. Over 150 spectators, including local and overseas journalists attended the event and wide news coverage was accorded.

The final part held on November 28, 2003 was a comprehensive air and sea search for a target that was simulated to be an aircraft that had crashed into the sea about 80 NM southwest of Hong Kong. Four SAR aircraft and a PLA vessel participated in the search. The exercise was successfully concluded with fruitful results and excellent co-operation amongst participating units.