

CONTROLLING OFFICER'S REPLY**THB(T)001****(Question Serial No. 1424)**Head: (28) Civil Aviation DepartmentSubhead (No. & title): (-) Not SpecifiedProgramme: (3) Air Traffic ManagementControlling Officer: Director-General of Civil Aviation (Simon LI)Director of Bureau: Secretary for Transport and HousingQuestion:

Please tabulate the number of aircraft distress calls or requests for emergency assistance as received by the Civil Aviation Department (CAD) in the past three years and, among which, the number of cases classified as urgent or dangerous.

Asked by: Hon LAM Kin-fung, Jeffrey (LegCo internal reference no.: 39)Reply:

Whenever the CAD receives aircraft requests for assistance, its Air Traffic Control (ATC) unit will alert the relevant government departments or organisations according to the level of emergencies. If there is no imminent danger to the aircraft, the ATC will initiate a "Local Standby" to alert the Airport Fire Contingent and the Airport Authority Hong Kong (AA) to attend to the landing of the concerned aircraft. If the aircraft is in imminent danger or is expected to have difficulties in making a normal landing, the ATC will initiate a "Full Emergency" standby. Besides the Airport Fire Contingent and the AA, other relevant government departments and organisations will also be alerted to assist. For example, fire appliances and ambulances will be dispatched to the airport and hospitals will be prepared to receive casualties.

The number of aircraft requests for assistance received by the CAD in the past three years is as follows:

Financial Year	Total number of requests for assistance by landing aircraft	Number of requests that resulted in "Full Emergency" standby
2016-17	115	5
2017-18	170	2
2018-19 (Up to 11 March 2019)	149	1

- End -

CONTROLLING OFFICER'S REPLY

THB(T)002

(Question Serial No. 1425)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (3) Air Traffic Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

In Matters Requiring Special Attention in 2019-20, the Civil Aviation Department (CAD) stated that it would continue to improve the efficiency of air traffic management in order to further enhance the runway capacity of the Hong Kong International Airport (HKIA). Is the current runway capacity adequate to meet flight demands in the coming three to five years? Has any target been set in respect of the enhancement of runway capacity? If yes, what are the target figures? What is the expenditure involved?

Asked by: Hon LAM Kin-fung, Jeffrey (LegCo internal reference no.: 40)

Reply:

The runway capacity at the HKIA is reaching its maximum under the existing Two-Runway System, which can only be significantly increased upon the implementation of the Three-Runway System (3RS). However, to meet the robust increase in air traffic demand, the CAD and the Airport Authority Hong Kong (AA) have been exploring and implementing various measures to marginally increase the runway capacity before the full commissioning of 3RS. These measures include increase in air traffic control manpower, implementation of new technologies and optimisation of operating procedures.

On new technologies, AA is conducting studies on the applicability of Performance Based Capacity Declaration (PBCD) and European Wake Vortex Re-categorisation (RECAT-EU) in Hong Kong, while the CAD mainly provides technical advice and assistance to the studies with existing resources. It is anticipated that the studies will be progressively completed in about two years. At this stage, the studies have preliminarily concluded that PBCD should be applicable in Hong Kong and work is being done to prepare for its implementation. The study on RECAT-EU is still on-going. Depending on the recommendations of the studies, the CAD will proactively cooperate with the AA in implementing the above measures through system optimisation and operating procedures enhancement.

In addition, the CAD is actively exploring and implementing measures such as increasing air traffic control manpower and optimising operating procedures to marginally enhance runway capacity of the HKIA. In 2019-20, the CAD plans to recruit 52 Air Traffic Control Officers (ATCOs) III/Student ATCOs to fill new posts and existing/anticipated vacancies. The total salary expenditure involved for these posts in terms of notional annual mid-point salary value is \$26 million. We will also continue to work with the AA to optimise the relevant operating procedures.

In 2018, the HKIA recorded an increase of aircraft movement figure over 2017 by 1.5%. With all the above efforts, our objective is to marginally increase the runway capacity in the next few years before the full commissioning of 3RS, depending on the outcome and progress of the various studies and measures.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)003

(Question Serial No. 1428)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (3) Air Traffic Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

The third runway of the Hong Kong International Airport (HKIA) is targeted for completion in 2022. With the expansion of the HKIA, the demand for air traffic control staff will also increase. Does the Civil Aviation Department (CAD) have any training plan for these staff in the 2019-20 financial year? If so, what are the estimated expenditure and details of the plan? If not, what are the reasons?

Asked by: Hon LAM Kin-fung, Jeffrey (LegCo internal reference no.: 45)

Reply:

To ensure the competency of air traffic control (ATC) personnel to meet the current operational needs and future operational requirements under the Three-Runway System, the CAD has been arranging various professional and technical training to its ATC staff, including newly recruited ones, through in-house training unit or other local and overseas professional institutions. These trainings range from basic ATC training to various aspects of daily ATC operations, including flight procedure design, airspace strategy/design, safety and risk management, safety investigation and analysis, training plan development, and instructional techniques, etc.

In 2019-20, the CAD plans to arrange basic as well as specialised training courses organised by other local and overseas professional institutions for the various ranks of its ATC staff. As the provision of in-house training forms part of the normal duties of CAD staff, no additional staffing expenses are incurred. External courses include Controller Competency Assessor provided by the Eurocontrol, Procedures and Design Process for Performance Based Navigation Airspace provided by the Singapore Aviation Academy, Airspace Design for Terminal Area Optimization by the École nationale de l'aviation civile, Aviation Cyber Security provided by the International Air Transport Association Training Centre in Singapore, etc.

The estimated expenditure for basic ATC training and specialised training for 2019-20 is around \$26 million.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)004

(Question Serial No. 2777)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (5) Air Services and Safety Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

It is mentioned under Programme (5) that the Department will continue to review the regulation of unmanned aircraft systems (UAS) in Hong Kong.

1. Please inform this Committee of the legislative progress of any laws to regulate UAS. Drone maps with delineation of no-fly zones should also be made public as soon as possible.
2. To help promote the proper and safe operation of UAS, will the Government open up real-time air traffic data so that UAS application developers may inform their users of live air traffic conditions, thereby effectively reducing accidents? If yes, what is the plan? If no, what are the reasons?
3. To publicise the proper and safe operation of UAS, will the Department work with other government departments to identify UAS training venues so that members of the public may learn how to operate UAS at safe venues (e.g. the rooftops of service reservoirs)? If yes, what is the plan? If no, what are the reasons?

Asked by: Hon TAM Man-ho, Jeremy (LegCo internal reference no.: 6)

Reply:

1. The Civil Aviation Department (CAD) is reviewing the regulatory regime for UAS in Hong Kong with a view to safeguarding public safety while accommodating the technological development and diversified uses of UAS. To assist the Government in reviewing the existing statutory requirements and exploring ways to refine the prevailing regulatory regime, an overseas consultant was engaged in 2017 to conduct a study on the regulation of UAS. In April 2018, the CAD published the consultancy report and launched a three-month public consultation on the directions for regulating UAS.

The CAD is now drawing up detailed proposals for an enhanced regulatory regime of UAS and its implementation arrangements (including the publication of a map to indicate areas restricted from the flying of drones for UAS operators) taking into

account the recommendations of the consultancy study and the views gathered during the consultation exercise. The CAD plans to consult the Legislative Council on the proposed legislative amendments for the enhanced regime in 2019.

2. In accordance with the safety guidelines for operations of UAS published by the CAD (https://www.cad.gov.hk/english/Unmanned_Aircraft_Systems.html), UAS should not be operated in the vicinity of an airport / heliport and aircraft approach and take-off paths, and the altitude of operations should not exceed 300 feet above ground level in order to ensure aviation safety. While there is currently no international standard on operating UAS and manned aircraft within the same airspace, the CAD will keep in view the latest development and international standards / requirements on this front.
3. Given the increased use of UAS for recreational and professional use, the CAD has been liaising with relevant government departments to identify suitable venues for UAS training and other flying activities, etc. The CAD will continue to work with the industry and stakeholders with a view to striking a balance between aviation safety and development of UAS in Hong Kong.

Meanwhile, the CAD is working proactively to promote the safe operations of UAS through different channels. For instance, the CAD has been promoting the safe operation of UAS through various television and radio programmes such as "Police Magazine" and "Innovation GPS" since May 2017. The CAD has also distributed over 41 000 safety leaflets to UAS operators as well as general public through major distributors, manufacturers, flying clubs/associations and Home Affairs Enquiry Centres since October 2016. Meetings with UAS organisations and manufacturers are also held from time to time to strengthen cooperation on safety promotion.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)005

(Question Serial No. 2781)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (4) Air Traffic Engineering Services

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

The Civil Aviation Department (CAD) is responsible for the operation and maintenance of Air Traffic Control (ATC) systems. In this connection, please advise on the following:

- (1) It is mentioned under Programme (4) that “system improvement work” will be conducted. What are the details of the improvement work? Why is it necessary to carry out improvement work? What are the objectives to be achieved? What is the expected completion time of the work? How much money has been earmarked for carrying out such work?
- (2) On the maintenance of ATC systems, which contractors are responsible for the relevant services (e.g. system maintenance, debugging or updating hardware and software)? How many paid service sessions are covered by each service contract and how much money is involved?
- (3) Regarding the above maintenance contracts, what are the respective figures on the used and unused service sessions? Has the Government ever procured additional service sessions? If yes, please detail for each procurement the time of procurement, the service category, the number of service sessions available and the expenditure involved. Please also set out the respective figures on the service sessions used and the expenditure involved for each category of contractor services since the full commissioning of the new ATC system.
- (4) There have been media reports that the technical performance of the new ATC system is deteriorating and the issues reported include slow system operation, frozen screens, software applications not responding to mouse and keyboard commands, and failures in immediate flight data updating, etc. Will the Government give details of the various technical incidents experienced by the new ATC system since its commissioning, using the table below to specify the types and numbers of incidents?

Technical Incident	Number of Occurrences Per Year				
	2014	2015	2016	2017	2018
Workstations not responding to mouse or keyboard commands					
Displays of target flights frozen on screens					
Slow screen responses					
Slow operation at workstations					
Slow flight data updating					
Mouse operation failed in some screen areas					
Workstations responded to mouse commands very slowly					

- (5) It is also mentioned under Programme (4) that co-ordination is underway for the provision of new ATC systems. What are the work progress and timetable concerned? On the provision of new ATC systems, when will a tendering exercise be conducted and when will the new systems go into operation? It is stated under Programme (4) that the new ATC systems are to be used in a “backup Air Traffic Control Centre (ATCC)”. What does it mean by “backup”? Will the “Raytheon” system be fully replaced in future?

Asked by: Hon TAM Man-ho, Jeremy (LegCo internal reference no.: 10)

Reply:

The Finance Committee of the Legislative Council approved a funding of \$1,565 million in 2007 to implement the new ATC system project. The new ATC system is implemented in two phases through eight major system contracts, including the commissioning of a new air traffic management system (ATMS) which was put into full operation on 14 November 2016. The work of phase 1 mainly involves the implementation and commissioning of the new ATC system (including the ATMS), while that of phase 2 involves the installation of the new ATC system (including the ATMS) in the old ATCC as a back-up ATCC, which is one of the matters requiring special attention in 2019-20 under Programme (4), presently targeted for completion by the end of 2019. As a contingency arrangement, together with the back-up Control Tower which will also be equipped with the new ATC system, the back-up ATCC will serve as an immediate back-up to the operational ATCC so that the 24-hour ATC operations can be maintained.

Since the full commissioning of the new ATC system, despite the fact that the ATMS encountered occasional teething issues which neither affected aviation safety nor posed any substantial impact on the overall operation of the Hong Kong International Airport (HKIA), it has been operating smoothly in general. In 2018, the total number of aircraft movements handled by the ATMS increased by 7.1% as compared with 2017, affirming the performance of the ATMS and professional performance of frontline ATC officers and technical personnel. The ATMS also successfully handled the increased air traffic during the traditional busy travel periods. During the peak air traffic flow of the Lunar New Year, the ATMS handled 2 467 flights on 2 February 2019, setting a new single-day record. In

August 2017 and September 2018, when the HKIA recovered from the impact of Super Typhoon Hato and Super Typhoon Mangkhut respectively, the ATMS performed satisfactorily and no irregularity was detected during the period. All these demonstrate the capability of the ATMS in overcoming the challenges brought by adverse weather and clearing the traffic backlogs caused by severe weather.

The CAD has all along been keeping the public informed of the operation of the ATMS in an open and transparent manner, including the occasional teething issues during the initial period after the full commissioning of the new system through various channels (including press releases and media meetings)¹. Since the full commissioning of the ATMS on 14 November 2016, there were seven cases of individual screen/keyboard/mouse not being responsive to commands (and none of which happened during 2018-19). During the occurrences, all flight targets and data were shown on the screen. Aviation safety was not affected in all these incidents. Without affecting the operation of the air traffic control, the maintenance staff rebooted individual workstation concerned during period with relatively low air traffic flow. The individual workstation concerned resumed smooth operation after rebooting. The CAD continues to carry out regular housekeeping procedures of the ATMS and its sub-systems in accordance with the requirements of aviation safety management, the recommendations of the system contractor as well as the experience gained from actual operation. The CAD does not have a complete statistic of individual screen/keyboard/mouse not being responsive to commands from 2014 to 2016.

Generally speaking, the hardware and software maintenance of the ATMS consists of two levels, i.e. day-to-day/frontline maintenance, and faults/deficiencies identification and rectification. These two levels of maintenance work are provided by the maintenance service provider of the ATC system (i.e. PCCW Solutions Limited) and the ATMS contractor (i.e. Raytheon Company) respectively. The scope of contracts and the provision of hardware and software maintenance services are specified in the relevant contracts. These services are time-based and cover all the follow-up work needed on a continuous basis. The maintenance of the ATMS is part of the regular work of the CAD and, as such, do not entail additional civil service staff costs. The total maintenance costs for the ATMS in 2018-19 and 2019-20 are \$18.2 million (actual) and \$19 million (projected) respectively.

In the light of the challenges brought about by fast growing air traffic, particularly with the expansion of the HKIA, the ATC system has to be fine-tuned and/or upgraded when circumstances warrant – for instance, to meet the latest requirements of the International Civil Aviation Organization, to enhance efficiency by introducing new features progressively according to operational necessity, and to support the long-term ATC manpower plan. The CAD will keep reviewing the situation and seek the required funding in accordance with established mechanism for the fine-tuning and/or upgrading work as and when necessary in maintaining the capability and resilience of the ATMS on a sustained basis.

- End -

¹ For details, please refer to the CAD's website: https://www.cad.gov.hk/english/pressrelease_2017.html and http://www.cad.gov.hk/english/pressrelease_2018.html

CONTROLLING OFFICER'S REPLY

THB(T)006

(Question Serial No. 0825)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (3) Air Traffic Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

Regarding “continue to improve the efficiency of air traffic management in order to further enhance the runway capacity of the Hong Kong International Airport (HKIA)”:

- (1) The Civil Aviation Department (CAD) has mentioned on a number of occasions that studies on the feasibility of implementing the Performance Based Capacity Declaration (PBCD) and European Wake Vortex Re-categorisation (RECAT-EU) are underway with a view to enhancing the runway capacity. What are the expenditure and staff establishment involved for the two studies? When are the studies expected to be completed and are there any preliminary conclusions?
- (2) Apart from the two studies, what is the progress of other CAD efforts in enhancing the runway capacity? For instance, what is the earliest expected date of installing the Ground Based Augmentation System (GBAS) at the airport?
- (3) Has the CAD estimated the maximum runway capacity in each of the coming three years upon implementation of the various enhancement measures?
- (4) On optimising airspace utilisation in the Pearl River Delta (PRD) region, is there any actual progress? For example, with enhanced co-ordination among the concerned airports over the past three years, did their respective runway capacities (particularly that of the HKIA) show any increases?
- (5) What is the work plan of the CAD in 2019-20 on optimising airspace utilisation in the PRD region?

Asked by: Hon WU Chi-wai (LegCo internal reference no.: 20)

Reply:

The runway capacity at the HKIA is reaching its maximum under the existing Two-Runway System, which can only be significantly increased upon the implementation of the Three-Runway System (3RS). However, to meet the robust increase in air traffic demand,

the CAD and the Airport Authority Hong Kong (AA) have been exploring and implementing various measures to marginally increase the runway capacity before the full commissioning of 3RS. These measures include increase in air traffic control manpower, implementation of new technologies and optimisation of operating procedures. Detailed responses to individual parts of the question are set out below.

- (1) The studies on the applicability of PBCD and RECAT-EU in Hong Kong are being conducted by the AA, while the CAD mainly provides technical advice and assistance to the studies with existing resources. It is anticipated that the studies will be progressively completed in about two years. At this stage, the studies have preliminarily concluded that PBCD should be applicable in Hong Kong and work is being done to prepare for its implementation. The study on RECAT-EU is still on-going. Depending on the recommendations of the studies, the CAD will proactively cooperate with the AA in implementing the above measures through system optimisation and operating procedures enhancement.
- (2) Apart from the studies in (1), the CAD is actively exploring and implementing measures such as increasing air traffic control manpower and optimising operating procedures to marginally enhance runway capacity of the HKIA. In 2019-20, the CAD plans to recruit 52 Air Traffic Control Officers (ATCOs) III/Student ATCOs to fill new posts and existing/anticipated vacancies. We will also continue to work with the AA to optimise the relevant operating procedures. As for the installation of GBAS at the HKIA, we have conducted a trial in end 2018 with satisfactory results. It is anticipated that the system will be implemented between 2022 and 2024, and we are exploring if the timetable can be expedited having regard to inter alia, results of the trial.
- (3) As mentioned above, the CAD is exploring and implementing various measures to marginally increase the runway capacity. In 2018, the HKIA recorded an increase of aircraft movement figure over 2017 by 1.5%. We do not have an estimate of the increase in runway capacity in each of the coming three years. However, our objective is to marginally increase the runway capacity in the next few years before the full commissioning of 3RS, depending on the outcome and progress of the various studies and measures.
- (4) & (5) In order to rationalise and optimise the PRD airspace management, the Civil Aviation Administration of China (CAAC), the CAD and the Civil Aviation Authority of Macao (CAAM) have been working together to formulate measures to enhance the air traffic management arrangements in the PRD region.

The three authorities are jointly working on the modeling and simulation of the airspace and air traffic in the Greater Bay Area using the Fast Time Simulation (FTS) to evaluate the impact of air traffic demand in Greater Bay Area. The three authorities will formulate specific measures to further optimise airspace and air traffic management based on the results of the assessment and analysis. The evaluation result will provide data and technical support in airspace optimisation for facilitating the 3RS operations at the HKIA and the sustainable development of the Macao, Guangzhou, Shenzhen and Zhuhai airports. At this stage, air traffic

management and technical experts from Mainland China, Hong Kong and Macao are working closely in adjusting and testing the parameters of the simulation model. Our objective is to have preliminary results within 2019.

CAD will continue to enhance cooperation with CAAC and CAAM, including expanding the implementation of electronic flight handover procedure with adjacent air traffic control units, sharing of real time surveillance data and flight information, as well as further enhancing air traffic flow management coordination mechanism among the three civil aviation authorities, with a view to optimising the efficient use of the PRD airspace.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)007

(Question Serial No. 1053)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (1) Flight Standards

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

On mutual recognition of aircraft maintenance organisations, will the Government inform this Committee of:

- (1) the places that have signed memoranda of understanding on aircraft maintenance with Hong Kong and the latest progress of this initiative; and
- (2) the staff establishment and estimated expenditure involved?

Asked by: Hon YICK Chi-ming, Frankie (LegCo internal reference no.: 31)

Reply:

- (1) On mutual recognition of aircraft maintenance organisations, the Civil Aviation Department (CAD) has established the following arrangements with other aviation authorities:
 - (a) Cooperation Arrangement on Mutual Acceptance of Approval of Aircraft Maintenance Organisations with the Civil Aviation Administration of China and the Civil Aviation Authority of Macao on 21 May 2002 (with the latest version signed on 2 June 2006);
 - (b) Technical Arrangement on Aircraft Maintenance with the Transport Canada Civil Aviation on 22 March 2006; and
 - (c) Technical Arrangement on Aviation Maintenance with the Civil Aviation Authority of Singapore on 29 August 2008.

Under these arrangements, participating aviation authorities mutually recognise the aircraft maintenance standards of each other, and thus eliminate the need for duplicate inspections on recognised aircraft maintenance organisations. This reduces the economic burden on aviation industry while maintaining a high level of aviation safety.

The CAD will continue to explore opportunities for similar arrangements with other aviation authorities that are of compatible aircraft maintenance standards.

- (2) The above work is undertaken by existing CAD staff as part of their normal duties under Programme (1). No additional expenses are involved.

- End -

CONTROLLING OFFICER'S REPLY**THB(T)008****(Question Serial No. 1055)**Head: (28) Civil Aviation DepartmentSubhead (No. & title): (-) Not SpecifiedProgramme: (3) Air Traffic ManagementControlling Officer: Director-General of Civil Aviation (Simon LI)Director of Bureau: Secretary for Transport and HousingQuestion:

Regarding the recruitment of air traffic controllers, will the Government inform this Committee of:

- (a) the staff establishment and actual staffing of air traffic controllers in the past three years; and
- (b) the estimated number of air traffic controllers to be recruited in 2019-20 and the expenditure involved?

Asked by: Hon YICK Chi-ming, Frankie (LegCo internal reference no.: 33)Reply:

- (a) The establishment and strength as at 31 March (except otherwise stated) of the Air Traffic Control Officer (ATCO) grade under Programme (3) of the Civil Aviation Department (CAD) for the past three years are as follows:

Financial Year	Establishment	Strength
2016-17	277	243
2017-18	293	242
2018-19	299 (as at 28 February 2019)	248 (as at 28 February 2019)

- (b) The CAD plans to recruit 52 ATCOs III/Student ATCOs in 2019-20 to fill new posts and existing/anticipated vacancies. The total salary expenditure involved for these posts in terms of notional annual mid-point salary value is \$26 million.

- End -

CONTROLLING OFFICER'S REPLY**THB(T)247****(Question Serial No. 5783)**Head: (28) Civil Aviation DepartmentSubhead (No. & title): (-) Not SpecifiedProgramme: Not SpecifiedControlling Officer: Director-General of Civil Aviation (Simon LI)Director of Bureau: Secretary for Transport and HousingQuestion:

Please advise this Committee on the following:

- (1) concerning the requests for information under the Code on Access to Information (the Code) received by the Civil Aviation Department (CAD) for which only some of the required information was provided, please state in table form: (i) the content of the requests for which only some of the required information was provided; (ii) the reasons for providing some of the information only; and (iii) how the requests were eventually handled.

Year

(i) Content of the requests for which only some of the required information was provided	(ii) Reasons for providing some of the information only	(iii) How the requests were eventually handled

- (2) concerning the requests for information under the Code received by the CAD for which the required information was not provided, please state in table form: (i) the content of the requests refused; (ii) the reasons for refusal; and (iii) how the requests were eventually handled.

Year

(i) Content of the requests refused	(ii) Reasons for refusal	(iii) How the requests were eventually handled

Asked by: Hon CHAN Tanya (LegCo internal reference no.: 149)Reply:

Among the requests for information under the Code received by the CAD during the period from January to September 2018, there was only one request refused by the CAD.

In respect of the refused request mentioned above, the applicant requested the CAD to provide the marked examination papers of the licence examinations taken by him in the CAD. The CAD refused the request in accordance with paragraph 2.9(c) of the Code, which states that “Information the disclosure of which would harm or prejudice the proper and efficient conduct of the operations of a department”.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)248

(Question Serial No. 3658)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (3) Air Traffic Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

Did the Civil Aviation Department (CAD) conduct any Search and Rescue Exercise (SAREX) in the previous financial year? If yes, what were the details? If no, what were the reasons? When will the exercise be conducted again to strengthen the CAD's co-operation and co-ordination with other government departments as well as the relevant Mainland and overseas agencies?

Asked by: Hon MA Fung-kwok (LegCo internal reference no.: 22)

Reply:

The Standards and Recommended Practices published by International Civil Aviation Organization stipulate that regular training shall be provided to the search and rescue (SAR) personnel and that SAREX should be arranged as appropriate to achieve and maintain maximum efficiency in SAR operations. Accordingly, the CAD conducts SAREX from time to time with a view to strengthening co-operation and co-ordination in SAR operations between the CAD and the other SAR organisations, including the relevant Mainland and overseas agencies. The exercise also provides qualified air traffic control officers, aircrew and other SAR units likely to be involved in such operations with continued training and familiarisation with SAR techniques.

While the CAD did not conduct a SAREX in the previous financial year, two SAR training courses were conducted to prepare more air traffic control officers for the SAR duties. The CAD will continue to keep in view the schedule of the next SAREX, taking into account the training needs of the department and other relevant organisations.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)249

(Question Serial No. 5121)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Airport Standards

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

Flights at Gatwick Airport in London were suspended twice late last year due to the intrusion of unmanned aircraft systems (UAS), affecting a large number of passengers. After the incident, the authority of the airport has procured an anti-UAS system at a cost of £5 million to cope with similar incidents in future. The Civil Aviation Department (CAD) is responsible for ensuring the safety of Hong Kong's airport. In this connection, please advise on the following:

(1) whether equipment with the following functions has been installed at the Hong Kong International Airport (HKIA): detecting UAS flying within the Bylaw Area, manipulating such UAS to land safely and stop operating, and tracking down the location of the person who has flown the UAS; if so, the details, if not, the reasons.

(2) If the details requested in question (1) cannot be disclosed due to security reasons, can the Government publicise the current performance indicators of the HKIA's UAS detection system? What were the respective numbers of UAS (i) successfully detected and (ii) forced to stop operating by the system in the past three years?

(3) According to the Government's reply earlier, the authorities concerned are "making reference to the experience of and equipment adopted by other international airports and further exploring various viable technologies to be applied to the HKIA". Please provide the relevant details.

Asked by: Hon TAM Man-ho, Jeremy (LegCo internal reference no.: 306)

Reply:

(1) & (2) UAS are classified as aircraft and are governed, as far as aviation safety is concerned, by the civil aviation legislation. Article 48 of the Air Navigation (Hong Kong) Order 1995 (Cap. 448C) stipulates that a person who recklessly or negligently causes or permits an aircraft (including an UAS and a model plane) to endanger any person or property is liable to prosecution, and upon conviction, to a fine and to imprisonment for two years. Moreover, under section 35 of the

Airport Authority Bylaw (Cap. 483A) (“the Bylaw”), no person shall, within the Bylaw Area, fly a model plane (including UAS). Offenders shall be liable on conviction to a maximum penalty of a fine of HK\$50,000 and imprisonment for six months.

To ensure aviation safety, the CAD and Airport Authority Hong Kong (AA) have been monitoring and taking precautions against the operation of UAS at the HKIA. Currently, the HKIA is equipped with certain UAS detection systems but the details of which, including the specific functions and statistics on individual functions, could not be disclosed due to security reason.

According to the record of the AA, there was one case of illegal operation of UAS within the aforesaid Bylaw Area over the past five years which happened in July 2017. The offender was subsequently convicted of “causing or permitting an aircraft to endanger any person or property” under the Air Navigation (Hong Kong) Order 1995 (Cap. 448C) and was fined HK\$2,000.

- (3) The CAD and AA are making reference to the experience of and equipment adopted by other international airports in Asia, Europe and North America, and further exploring various viable technologies to be applied to the HKIA in a bid to further enhance the monitoring and precautionary measures against illegal operation of UAS in the Airport Area, thereby minimising the possible impact on airport operation and aviation safety. The CAD and AA conducted market research and technical visits to understand more about the experience of other international airports and are considering the technologies available, overall system configurations, system siting requirements, applicability at the airport environment as well as integration with other airport systems and operations.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)250

(Question Serial No. 3608)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (5) Air Services and Safety Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

Regarding “review the regulation of unmanned aircraft systems (UAS) in Hong Kong”, what are the current progress and the estimated schedule? For example, the respective anticipated dates of introducing the proposed legislative amendments into the Legislative Council and formal commencement of the registration system, etc.

Asked by: Hon WU Chi-wai (LegCo internal reference no.: 63)

Reply:

The Civil Aviation Department (CAD) is reviewing the regulatory regime for UAS in Hong Kong with a view to safeguarding public safety while accommodating the technological development and diversified uses of UAS. To assist the Government in reviewing the existing statutory requirements and exploring ways to refine the prevailing regulatory regime, an overseas consultant was engaged in 2017 to conduct a study on the regulation of UAS. In April 2018, the CAD published the consultancy report and launched a three-month public consultation on the directions for regulating UAS.

The CAD is now drawing up detailed proposals for an enhanced regulatory regime of UAS (which include the setting up of a UAS registration system) taking into account the recommendations of the consultancy study and the views gathered during the consultation exercise. The CAD plans to consult the Legislative Council on the proposed legislative amendments for the enhanced regime in 2019.

- End -

CONTROLLING OFFICER'S REPLY**THB(T)251****(Question Serial No. 4666)**Head: (28) Civil Aviation DepartmentSubhead (No. & title): (-) Not SpecifiedProgramme: (5) Air Services and Safety ManagementControlling Officer: Director-General of Civil Aviation (Simon LI)Director of Bureau: Secretary for Transport and HousingQuestion:

Regarding the provision of support to the negotiation and implementation of Hong Kong's air services agreements with other places under this Programme, please inform this Committee of the following:

- (1) What were the ports added or suspended in each of the past three years by type of traffic right?
- (2) What are the number of ongoing negotiations on air services agreements and their details as of February 2019?

Asked by: Hon WU Chi-wai (LegCo internal reference no.: 118)Reply:

- (1) Every year, ports are being added or suspended subject to an airline's network planning and market strategy. In the past three years, the number of new and suspended ports is tabulated as follows:

New Ports

Type of traffic right	2016	2017	2018
Third/Forth freedom ¹	1. Chiang Rai 2. Taegu 3. Gold Coast 4. Ishigaki 5. London (Gatwick) 6. Madrid 7. Manado 8. Mandalay 9. New York (La Guardia) 10. Okayama	1. Christchurch 2. Huangshan 3. Indianapolis 4. Komatsu 5. London (Stansted) 6. Prague 7. Sihanoukville 8. Toowoomba 9. Yekaterinburg 10. Zhangjiajie	1. Cairo 2. Copenhagen 3. Cape Town 4. Brussels South Charleroi 5. Darwin 6. Dublin 7. Davao 8. Hohhot 9. Washington 10. Krasnoyarsk*

	11. Portland 12. Takamatsu 13. Yonago		11. Medan 12. Tokushima 13. Moscow (Vnukovo) 14. Yancheng
Fifth freedom ²	1. Ahmedabad	1. Frankfurt (Hahn) 2. Warsaw	* Krasnoyarsk is a new fifth freedom port as well
Total:	14	12	14

Suspended Ports

	2016	2017	2018
Third/Forth freedom ¹	1. Cheongju 2. Huangshan 3. Mahe Island 4. Yekaterinburg	1. Changzhou 2. Detroit 3. Davao 4. Hefei 5. Hohhot 6. Langkawi 7. Lijiang 8. Luoyang 9. Manado 10. Xishuangbanna 11. Yancheng 12. Yinchuan	1. Beihai 2. Indianapolis 3. Khabarovsk 4. Kalibo 5. Komatsu 6. New York (La Guardia) 7. Lanzhou City 8. Nairobi 9. Yekaterinburg 10. Jieyang 11. Huangshan 12. Verona
Fifth freedom ²	1. Ashgabat 2. Chittagong 3. Frankfurt (Hahn) 4. Lahore	1. Maastricht	Nil
Total:	8	13	12

¹ In respect of scheduled international air services, third/fourth freedom right refers to the right or privilege granted by one Party to another Party to put down and to take on, in the territory of the first Party, traffic coming from or destined to the home state/region of the carrier.

² In respect of scheduled international air services, fifth freedom rights refer to the right or privilege granted by one Party to another Party to put down and to take on, in the territory of the first State, traffic coming from or destined to a third Party.

The ports added or suspended above mainly reflect the commercial decisions of the airlines, which may not cover all the air services arrangements signed between Hong Kong and its aviation partners in a particular year and they may not be related to the availability of traffic rights.

- (2) The Government has been progressively liberalising our air services regime with a view to expanding Hong Kong's aviation network and strengthening our status as an international hub and the primary gateway to the Mainland. To date, Hong Kong has signed Air Services Agreements with 67 aviation partners. We will seek to further liberalise existing air services agreements/arrangements and to negotiate new air services agreements/arrangements with other aviation partners as opportunities arise.

- End -

CONTROLLING OFFICER'S REPLY

THB(T)252

(Question Serial No. 4667)

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (5) Air Services and Safety Management

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Transport and Housing

Question:

Regarding the review of the regulation of unmanned aircraft systems (UAS) in Hong Kong under this Programme, please inform this Committee of the Civil Aviation Department (CAD)'s work, manpower involved and estimated expenditure in 2019-20.

Asked by: Hon WU Chi-wai (LegCo internal reference no.: 119)

Reply:

The CAD is reviewing the regulatory regime for UAS in Hong Kong with a view to safeguarding public safety while accommodating the technological development and diversified uses of UAS. To assist the Government in reviewing the existing statutory requirements and exploring ways to refine the prevailing regulatory regime, an overseas consultant was engaged in 2017 to conduct a study on the regulation of UAS. In April 2018, the CAD published the consultancy report and launched a three-month public consultation on the directions for regulating UAS.

The CAD is now drawing up detailed proposals for an enhanced regulatory regime of UAS taking into account the recommendations of the consultancy study and the views gathered during the consultation exercise. The CAD plans to consult the Legislative Council on the proposed legislative amendments for the enhanced regime in 2019.

To cope with the workload arising from the preparation and implementation of the new regulatory regime of UAS, two new posts (one Senior Operations Officer and one Assistant Operations Officer) will be created in 2019-20 involving an annual salary cost (in terms of notional annual mid-point salary) of \$1.9 million. Together with existing staff, there will be a total of seven staff in the Unmanned Aircraft Office of CAD. The CAD will review the workload arising from tasks and duties related to UAS from time to time and adjust or redeploy manpower as appropriate accordingly.

- End -

CONTROLLING OFFICER'S REPLY**SB198****(Question Serial No. 2773)**

Head: (28) Civil Aviation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Airport Standards

Controlling Officer: Director-General of Civil Aviation (Simon LI)

Director of Bureau: Secretary for Security

Question:

The International Civil Aviation Organization (ICAO) has announced a new policy direction requiring airports to conduct screening on 100% of air cargoes by 2021. Given that the current required screening percentage for consigned cargoes in Hong Kong is only 1%, the new requirement will very likely put an onerous financial burden on consignment companies and slow down the consignment of cargoes, undermining Hong Kong's position as an international air cargo centre.

It is mentioned in this Estimate (Head 28: Civil Aviation Department; Programme (2): Airport Standards; Matters Requiring Special Attention in 2019-20) that the Civil Aviation Department (CAD) will "provide guidance and facilitation to the air cargo trade for meeting the enhanced air cargo security requirements as promulgated by ICAO". In this connection, please advise on the following:

- (1) What were the actual volume of consigned cargoes screened and the total volume of consigned cargoes last year? What is the estimated volume of consigned cargoes to be screened after the new security standard is implemented?
- (2) It is stated in the Estimate that "facilitation" will be provided to the air cargo trade. What are the details of the facilitation measures and the estimates involved?
- (3) Will the Government consider, inter alia, allowing the industry to conduct off-airport X-ray screenings (such as establishing Regulated Air Cargo Screening Facilities (RACSF) at the warehouses of Regulated Agents (RAs) or their subcontractors), providing common screening facilities, allowing detection by canines and allowing CT scanning for palletised cargoes?
- (4) Will the Government consider offering franchise fee concessions to airport cargo terminals temporarily during the transitional period? If yes, what are the details? If not, what are the reasons?

Asked by: Hon TAM Man-ho, Jeremy (LegCo internal reference no.: 2)

Reply:

To enhance the level of aviation security in view of the rising threats of terrorism worldwide, the ICAO issued a new policy direction in September 2016 to strengthen air cargo security. Apart from enhancing regulatory oversight over the air cargo supply chain, security screening of air cargoes is another way to achieve this end. The new policy direction will come into force globally by 30 June 2021.

Since the ICAO's announcement of the new policy direction, the Government has been liaising closely with the relevant industries, especially the air cargo industry. Our efforts include holding frequent meetings with trade representatives, organising briefing sessions, visiting warehouses of the logistics sector and airport cargo terminals, etc. These in-depth exchanges with the sectors concerned on how to implement the latest ICAO requirements in Hong Kong have enabled us to formulate measures that not only meet the new international aviation security requirements but also benefit, as far as possible, the modus operandi and development of the local air cargo industry, with the aim of reinforcing Hong Kong's status as an international air cargo hub. After extensive consultation with the industries, the CAD launched the new RACSF Scheme on 30 October 2018 and details of the Scheme have been uploaded onto the CAD's website (<https://www.cad.gov.hk/english/icao2021.html>).

Our consolidated reply to the various parts of the question is as follows:

- (1) In Hong Kong, the total annual volume of export air cargoes reached 2.58 million tonnes in 2018. Under the existing RA Regime, the CAD requires RAs to screen 1% of their known cargoes for quality control purpose. Apart from that, individual airlines may adopt higher screening percentages in respect of their air cargoes due to various reasons (e.g. as per the requirements of the destination countries). The Airport Authority Hong Kong (AA) estimates that the actual volume of export air cargoes subject to security screening represents about 12% of the total volume of export air cargoes.

According to the AA's forecast on air cargo volume, the total annual volume of export air cargoes in Hong Kong will be about 3.1 million tonnes in 2021, i.e. the year in which the new ICAO policy direction takes effect. After the new policy direction takes effect, it is anticipated that most export air cargoes will be subject to security screening.

- (2) When considering how to implement the new ICAO policy direction as well as studying and formulating the new measures concerned, the Government has taken full account of the impact of the policy on the air cargo industry and has been in close dialogue with the sector. Security screening of air cargoes in Hong Kong now primarily takes place at airport cargo terminals. To meet the new ICAO requirement and in view of Hong Kong's high volume of air cargo throughput, our air cargo screening capacity has to be gradually increased over the next few years. It is therefore necessary to allow security screening of air cargoes at off-airport locations.

Launched by the CAD, the RACSF Scheme allows interested parties to establish and operate off-airport cargo screening facilities (i.e. outside airport cargo terminals) and such facilities will be regulated by the Government. This measure not only effectively enhances our overall security screening capacity for export air cargoes, but also offers more options on screening facilities to the air cargo industry to facilitate their operations.

The establishment of off-airport screening facilities will facilitate air cargoes to be screened at warehouses or similar premises before such cargoes are delivered to the airport for loading onto aircraft. The operation of off-airport screening facilities has to meet specific aviation security requirements in various aspects, including screening equipment, training and supervision of screening personnel, site security and post-screening handling and transportation of cargoes, etc. As it takes time to procure screening equipment, when the CAD processes an application for operating an off-airport screening facility, it will first assess the technical specifications and models of the screening equipment as proposed by the applicant for earliest confirmation of whether such screening equipment meets the requirements, with a view to facilitating the early procurement of the equipment by the applicant.

In addition, to help the air cargo industry prepare for the full implementation of the ICAO security requirements, the Government has drawn up a set of transitional arrangements in consultation with the sector. Our initial plan is to gradually increase the screening percentage to 100% in phases, starting from November 2019, to ensure that the trade has sufficient time to procure or hire screening equipment, re-configure their warehouses, employ screening personnel and adjust their workflow, etc.

To take forward the above measures, the CAD will initially create 1 Senior Operations Officer post and 2 Assistant Operations Officer posts in 2019-20. In parallel, 1 Operations Officer post (a time-limited post) will also be extended. The salary expenditure involved for these 4 posts in terms of notional annual mid-point salary value is about \$3.27 million.

- (3) The Government is open to the adoption of new technologies for cargo screening. The CAD and AA have been keeping a close watch on the latest international development on cargo screening technologies, such as the feasibility of using large-scale CT scan equipment or canines for the screening of palletised air cargoes. To this end, the Government will communicate with the industry and disseminate latest information from time to time.
- (4) The relevant franchises of the cargo terminals and logistics services at the Hong Kong International Airport have been awarded by the AA through open tenders. No franchise fee has been charged by the Government.

- End -