

CONTINGENCY PLAN FOR NATURAL DISASTERS

**(INCLUDING THOSE ARISING FROM
SEVERE WEATHER CONDITIONS)**

**Emergency Support Unit
Security Bureau
Government Secretariat
October 2019**

File Ref. SB FR/1-90/4

Contents

Section	Subject	Page
	List of Annexes and Appendices	2
	List of Abbreviations	3-4
1	Introduction	5
2	Government Strategy	6-8
3	Controlling Authorities	9-16
4	Responsibilities of Bureaux/ Department and other Utilities Companies	17-27
5	Alerting System, Coordination and Common Scenarios in Hong Kong	28-36
6	Revision of the Plan	37

List of Annexes and Appendices

Annex	Title	Page
A	Hong Kong's Tropical Cyclone Warning Signals System	38
	<i>Appendix A - Special Announcement - No. 8 Signal likely within 2 hours</i>	39
	<i>Appendix B - Warning Message - No. 8 Signal issued</i>	40
	<i>Appendix C - Warning Message - Precautionary Announcements with No. 8 Signal (Sample)</i>	41
	<i>Appendix D - Warning Message - Precautionary Announcements with No. 9 or No. 10 Signal (Sample)</i>	42
B	Rainstorm Warning System	43
	<i>Appendix A - Rainstorm Warning System - Sample Rainstorm Warning Signal Messages</i>	44
	<i>Appendix B - Rainstorm Warning System - Sample Special Announcements</i>	45 - 47
C	Thunderstorm, Rainstorm, Flood and Landslip Warning Services in Hong Kong	48
	<i>Appendix A - Landslip Special Announcement (Sample)</i>	49
	<i>Appendix B - Special Announcement on Flooding in the Northern New Territories (Sample)</i>	50
	<i>Appendix C - Thunderstorm Warning Announcement (Sample)</i>	51 - 52
	<i>Appendix D - Water Discharge from Shenzhen Reservoir Announcement (Sample)</i>	53
	<i>Appendix E - Announcement on Localised Heavy Rain</i>	54
D	Tsunami Warning Service in Hong Kong	55 - 57
	<i>Appendix A - Tsunami Warning</i>	58
	<i>Appendix B - Precautionary Announcements to Accompany a Tsunami Warning</i>	59
	<i>Appendix C - Tsunami Information Bulletin</i>	60
E1 – E5	Full Alerting System	61-68
F	Emergency Stores List for Natural Disasters at Government Logistics Centre	69

List of Abbreviations

AAHK	Airport Authority Hong Kong
AEC	Airport Emergency Centre
AFCD	Agriculture, Fisheries and Conservation Department
AMS	Auxiliary Medical Service
ArchSD	Architectural Services Department
BBS	Bulletin Board System
BD	Buildings Department
B/DCO	Bureau/Departmental Coordination Officer
BLO	Border Liaison Officer
CACCS 3	Third Generation Computer Aided Command and Control System
CAD	Civil Aviation Department
CAS	Civil Aid Service
CE's	Chief Executive's Office
CEDD	Civil Engineering and Development Department
CEO	Civil Engineering Office
CEU	Casualty Enquiry Unit
CESC	Chief Executive's Security Committee
CS	Chief Secretary for Administration
DECC	District Emergency Coordination Centre
DEVB	Development Bureau
DH	Department of Health
DLO	Departmental Liaison Officer
DO	District Officer
DS(S)	Deputy Secretary for Security
DSD	Drainage Services Department
ECC	Emergency Control /Command Centre
EDB	Education Bureau
EMSC	Emergency Monitoring and Support Centre
EMSD	Electrical and Mechanical Services Department
ESDO	Emergency and Storm Damage Organization
ESU	Emergency Support Unit
ETA	Estimated Time of Arrival
ETCC	Emergency Transport Coordination Centre
FCP	Forward Control Point
FEHD	Food and Environmental Hygiene Department
FSCC	Fire Services Communications Centre
FSD	Fire Services Department

GEO	Geotechnical Engineering Office
GFS	Government Flying Service
GLD	Government Logistics Department
GOWISE	Government Weather Information Server
HA	Hospital Authority
HAD	Home Affairs Department
HD	Housing Department
HKO	Hong Kong Observatory
HKPF	Hong Kong Police Force
HKT	PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited
HyD	Highways Department
ISD	Information Services Department
LandsD	Lands Department
LCSD	Leisure and Cultural Services Department
LD	Labour Department
MD	Marine Department
NTLs	Natural Terrain Landslides
NWPTAC	Northwest Pacific Tsunami Advisory Centre
OFCA	Office of the Communications Authority
PHQCCC	Police Headquarters Command and Control Centre
PPRB	Police Public Relations Branch
PS for S	Permanent Secretary for Security
PTWC	Pacific Tsunami Warning Centre
PTWS	Pacific Tsunami Warning and Mitigation System
SB	Security Bureau
SBDO	Security Bureau Duty Officer
SCSTAC	South China Sea Tsunami Advisory Centre
S for S	Secretary for Security
SIMAR	Systematic Identification of Maintenance Responsibility of Slopes in the Territories
SWD	Social Welfare Department
TD	Transport Department
WCATWC	West Coast and Alaska Tsunami Warning Centre
WSD	Water Supplies Department

1. INTRODUCTION

1.1 Natural disasters that occur in Hong Kong are generally the result of severe weather conditions such as heavy rain, storm surges, thunderstorms and tropical cyclones. These events can result in considerable disruption to transport and other essential services and cause floodings, landslides and other incidents giving rise to casualties. Tsunami, which is a geophysical hazard that poses a threat to coastal communities worldwide, has a very small chance of affecting Hong Kong significantly. The consequences of any natural disaster and the counter measures required to deal with it will vary according to the circumstances.

1.2 Taking into consideration the experience accumulated by the Government in handling natural disasters, this contingency plan sets out the Government's strategy, organisational framework and alerting system for responding to natural disasters. Functions and responsibilities of Government bureaux/departments, utilities companies and non-government organisations (NGOs) in the event of natural disasters are also set out in this Contingency Plan.

1.3 In addition to this Plan, each department may have its own detailed operational instructions which are required to be reviewed annually to reflect the highest level of readiness commensurate with the prevailing circumstances to prepare for, respond to and recover from natural disasters. All departmental operational instructions are required to be submitted to the Security Bureau (SB) on an annual basis for house-keeping purpose.

2. GOVERNMENT STRATEGY

2.1 The Government has developed a dynamic and proactive disaster management strategy addressing actions required before, during and after a natural disaster. The strategy is a cycle of preparedness, response, recovery and post-disaster review. This Contingency Plan for Natural Disasters (CPND) seeks to elaborate on this strategy. It is also a plan setting out the duties of all relevant bureaux and departments (B/Ds) so that they could work in close partnership as outlined in this Plan.

Preparedness

2.2 Tropical cyclones can affect Hong Kong between April and December, with July to September being the mostly affected months. Hong Kong is also prone to other natural disasters such as rainstorms, floodings, landslides, etc. In view of the escalating impacts brought by climate-related threats, the Emergency Support Unit (ESU) of SB and all the related B/Ds, will adopt the concept of “Prior Risk Assessment” by conducting pre-disaster risk assessment and risk reduction control measures to minimise the potential threats on the community and city infrastructure.

2.3 A Bureau/Departmental Coordination Officer (B/DCO) and a Deputy B/DCO shall be designated by relevant B/Ds involved in this Plan (See para. 3.5 for details.) B/DCOs and Deputy B/DCOs would act as primary points of contact for all natural disaster-related matters, including information exchange and coordination. B/DCOs and Deputy B/DCOs must also be familiar with the contents of their own department’s plan on the subject, and must ensure that the plan is included in the overall training programme of the B/Ds. Training courses should be given as early as possible to all new staff who will be involved in the plan, whilst refresher courses should be organised for existing staff on a regular basis.

2.4 Whilst each year, all B/DCOs in relevant B/Ds should test in advance their individual operational procedures and conduct drills for those of their sections that are involved in the plan, the adequacy and effectiveness of the plan should be fully tested before the typhoon season, including covering suitable scenarios of natural disasters in interdepartmental exercises as and when necessary.

2.5 The role played by NGOs (e.g. the Hong Kong Red Cross and the Hong Kong St. John Ambulance) in the handling of natural disasters has been taken into consideration in this Plan. NGOs play a supporting role in emergency response and disaster relief. Before the commencement of typhoon season each year, where appropriate, the Government may consider inviting NGOs to provide suitable training on emergency awareness and self-help knowledge to the community. In addition, they might also be invited to participate in interdepartmental exercises, as appropriate, with a view to enhancing their communication and cooperation with various emergency departments. Territory-wide publicity campaigns will also be arranged when necessary.

Response and Recovery

2.6 In each of the two phases of response and recovery, a bureau or department would be designated, where the circumstances warrant, as the “lead coordinator” to oversee the corresponding efforts of bureaux and departments. With the assistance of Information Services Department (ISD), the “lead coordinator” can consider appointing an official spokesperson to appear in the media and/or social media regularly to round up disaster situation, address public concerns, rebut rumors, give safety tips and provide response and recovery information. (See

paras. 2.7 to 2.10 below for the handling of super typhoons and other natural disasters of a substantial scale.)

Activation of Steering Committee

2.7 In the event of super typhoons (or other natural disasters of a substantial scale) where advanced and enhanced coordination would be needed in all the three stages of preparedness, response and recovery, a special institutional set-up called Steering Committee will be set up under the chairmanship of the Chief Secretary (CS) with relevant Principal Officials (POs) as members to oversee the preparedness, response and recovery stages and assisted by the relevant B/Ds. Whether the Steering Committee will be formed, and if so for which stage(s) of the work (i.e. preparedness, response or recovery) and which B/Ds are to provide the required support would depend on the nature and degree of gravity of the issues to be addressed, operational needs, problems encountered and circumstances involved. Secretariat support would be provided by the Emergency Monitoring and Support Centre (EMSC) of SB (during the preparedness and response phases, as well as the early part of the recovery phase), and assisted by other relevant Emergency Control/Command Centres (ECCs) operated by other B/Ds.

2.8 The establishment of the Steering Committee mechanism as a standing institutional set-up for handling super typhoons (or other natural disasters of a substantial scale) offers the following advantages:-

- ensuring that all stages – from preparedness to response work and recovery planning and operations thereafter – are coordinated and supervised by one single high-level body;
- enabling the work to be handled in a more practical, coordinated and efficient manner, with strengthened input from the concerned B/Ds; and
- co-ordinated priority-setting can be achieved after taking into account the information across B/Ds represented in the Steering Committee, thus ensuring that the resources available (in particular that for the necessary recovery work) can be effectively utilised to enable the normal daily lives of the community to resume as quickly as practicable.

2.9 The activation of the Steering Committee should not be a routine protocol but to be decided on a case-by-case basis by the CS. Factors to be taken into account should include the anticipated force and the predictability of the natural disasters, the duration that Hong Kong will likely be affected, the damage and disruption it would cause to Hong Kong, in addition to the anticipated time needed for recovery work. It can be activated at all the three stages of this Plan, or at any one or two stages, as considered appropriate. This can be decided based on the actual needs and circumstances, to be decided by CS as the chairman.

2.10 When Steering Committee is formed, it will require the participation of relevant POs and departments. That said, different professional departments should continue to handle the relevant aspects of their work independently, but incidents or situations which would require the Steering Committee's special attention should be related as soon as possible through the EMSC (if it is in operation), or via their respective PO/Head of Department (HoD) for onward report to CS. The Steering Committee will also consider whether a press conference and/or other media arrangements (e.g. press release) will be necessary to enhance public alertness and their awareness of the government's preparatory efforts. In case a press conference is to be held, CS could take the lead and be supported by key POs/ HoDs involved. Actual participants will be decided on a case-by-case basis.

Post-disaster Review

2.11 On top of effective preparedness, response and recovery, a post-disaster review would need to be concluded in order to complete the whole cycle of disaster management strategy. After the passage of typhoon season each year or a super typhoon or other major natural disaster, the relevant B/Ds will review the preceding preparedness, response and recovery work under their respective ambits. At the departmental level, the review scope includes the workflow, division of labour, human resources constraints, equipment and infrastructure enhancement, internal and external information dissemination, etc. for the purposes of identifying the best practices for future enhancement that would be fed back into the next cycle of preparedness. In the interim period, i.e. before the preparedness cycle of the following year, it shall be incumbent upon all the relevant B/Ds to progressively implement the review deliverables under their respective purviews. Where necessary, this Plan will also be reviewed at government level and suitably refined to reflect enhancements adopted to strive for continuous improvements.

3. CONTROLLING AUTHORITIES

3.1 *Phase I: Preparedness*

3.1.1 The objectives of this phase are to conduct pre-disaster risk assessment and risk reduction control measures to minimize the potential threats to the community and city infrastructure by all relevant B/Ds and public organisations under their respective purview. B/Ds and relevant public organisations should be prepared for the coming typhoon season in respect of their respective areas of responsibility. Inter-departmental meeting(s) should be arranged as and when necessary.

3.1.2 A platform hosted by SB will be held annually before the typhoon season for enhancing interdepartmental collaboration, stock-taking departments' readiness and preparedness primarily on the following aspects:-

- Response plans of various B/Ds and relevant public organisations, including but not limited to emergency departments and works departments;
- Protective measures of critical infrastructures by works departments and relevant public organisations;
- Information flows between the B/Ds and relevant public organisations, and public announcement;
- Procedures on handling incidents involving trees;
- Internal logistic support; and
- Monitoring and coordination.

3.1.3 Special circumstances and needs may warrant the formation of the Steering Committee, such as in the case of super typhoons (or other natural disasters of a substantial scale) (see para. 2.7). In this regard, the Hong Kong Observatory (HKO) will discuss with the Security Bureau (SB) the potential impact of the super typhoon on Hong Kong for SB's reporting to CS as necessary. CS will then consider if there is a need to form a Steering Committee. (Details regarding the activation of the Steering Committee are set out in Section 2 above - see paras. 2.7 to 2.10.)

3.2 *Phase II: Response*

3.2.1 The objectives of this phase are the rescue of life, protection of property and containment of the situation/incident to prevent any further deterioration. The rescue operation will be under the direction of the emergencies services, with Fire Services Department (FSD) taking the lead and the support of Hong Kong Police Force (HKPF) and/or other departments and agencies. In the extreme situation, SB would be the "lead coordinator" to coordinate efforts for the response phase.

3.2.2 In the event of a disaster, it will be necessary to exercise strict control over access to the disaster site in order to ensure that the emergency services are not deflected from their task of saving lives, protecting properties and safeguarding the disaster site for subsequent expert investigation. This control will apply to both members of the Civil Service and the public.

3.2.3 A disaster site normally consists of 2 zones, namely, the inner cordoned zone and the outer cordoned zone, both of which will be established by HKPF. HKPF will consult FSD as necessary on the establishment of the inner cordoned zone.

3.2.4 The Senior Fire Officer attending a disaster site will be the Rescue Commander and he will direct all rescue activities within the inner cordoned zone.

3.2.5 The Senior Police Officer attending a disaster site will be designated as the Police Field Commander. Each agency will command their own staff in the discharge of their duties, but the Police, in liaison with the Rescue Commander and the relevant District Officer (DO), will be the overall coordinator of the activities of all agencies at the scene.

3.2.6 The Rescue Commander will establish a Fire Services Command Post, which will normally be a Mobile Command Unit with green strobe light. He will inform Fire Services Communications Centre (FSCC) immediately of the time of the setting up and the location of this post. FSCC will then inform the Security Bureau Duty Officer (SBDO) or EMSC accordingly.

3.2.7 Representatives of other emergency services wishing to enter the inner cordoned zone of the disaster site will require the permission from FSD. If situation so warrants, FSD will issue Personal Protective Equipment to essential personnel for working within the inner cordoned zone.

3.2.8 HKPF will secure the outer cordoned zone surrounding the disaster site, and representatives of other departments wishing to enter it will require Police permission. Each department shall consider providing conspicuous vests for respective essential personnel in plainclothes to facilitate identification within the outer cordoned zone. If need be, Police will issue armbands to those essential personnel for working within the outer cordoned zone.

3.2.9 HKPF will establish a Forward Control Point (FCP) at the scene. All police action at the scene shall be directed from the FCP. Likewise, the coordination of all other agencies operating at the disaster site shall be managed by Police from the FCP. SBDO or EMSC will be notified of the establishment and location of the FCP.

3.2.10 Close liaison between the Police Field Commander, the Fire Services Rescue Commander and the relevant DO will be necessary for the coordination of the work of other agencies and handling of media & public enquiries. If the demand for emergency medical services exceeds the normal capacity of the single nearest receiving hospital, Hospital Authority (HA) will activate contingency plan and dispatch Medical Team and Medical Control Officer (MCO) to the site if situation warrants. The MCO of HA will command and coordinate on-site medical services.

3.2.11 In order to heighten public awareness during disasters, rescue departments such as HKPF, FSD, Civil Aid Service (CAS) or other non-rescue departments, when the situation so permits, could consider capturing their work on the ground for sharing with the public via their respective social media platforms.

3.2.12 More often than not, the recovery phase will also start concurrently when the response phase is still underway. The “lead coordinator” (or relevant B/Ds having role(s) in recovery work) will ensure that the recovery phase has been properly initiated and that the disaster relief departments and agencies have the necessary resources and support.

3.2.13 In situations where the formation of Steering Committee is warranted, the Steering Committee will steer and give directions on the priorities and address issues of major concern. The Steering Committee may or may not be able to meet physically during the super typhoon, as traffic and/or safety reasons may prevent physical meetings. A new and secure mobile application enabling call conferencing regardless of location was developed. The application can provide support for multiple-parties call conferencing, and greatly facilitate the communication without the need for Steering Committee members to physically meet. The Steering Committee will decide on participation of relevant B/Ds, with SB's support and coordination. When the Tropical Cyclone Signal No.8 is expected to be replaced by Tropical Cyclone Signal No.3, the Steering Committee should quickly decide (e.g. shortly before the replacement of Tropical Cyclone Signal No.8 by Tropical Cyclone Signal No. 3) whether enhanced arrangements would need to be made at the recovery phase to ensure that recovery work is coordinated and implemented effectively. The need for enhanced arrangements, and hence continued operation of the Steering Committee, at the recovery stage should not be a routine protocol but to be decided on a case-by-case basis nearing the end of the response stage (and in good time prior to the commencement of the recovery stage) of the handling of a super typhoon (or other natural disasters of substantial scale). Factors to be taken into account should include the damage and disruption it causes to Hong Kong, in addition to the anticipated time needed for recovery work.

3.3 *Phase III: Recovery*

3.3.1 The objectives of this phase are two-fold: the first and foremost is to return the community to a condition considered acceptable by the community in the early stage of recovery phase. The arrangements are intended to satisfy the physical, psychological and social needs of the community. Essentially, recovery management will concentrate on the resumption of traffic and public transport services, taking care of the basic needs of the affected, handling enquiries from the public and registration of the victims. In the subsequent stage of recovery phase, the ultimate objective is to restore the community to a state prior to the disaster. It may involve permanent repairs that would take some time to complete. The recovery phase often begins while the response phase is on-going.

3.3.2 HKPF will assume overall responsibility for the disaster site, subject to HAD's role as Government spokesman and relief coordinator, and also subject to the discharge of any duties or responsibilities vested in any Government Department or agency by law or agreement. They will then take follow up action including the collection of human bodies and remains, the identification of fatalities and the recovery and safe custody of unattended properties.

3.3.3 There will normally be an investigative commitment concerning death, injury or damage to property. This responsibility calls for the preservation of evidence and the location of witnesses.

3.3.4 Working in unison with its network of DOs, HAD will be responsible for coordinating relief measures at the district level. The relevant DO will establish help desk(s) and maintain close liaison with the Social Welfare Department (SWD), Housing Department (HD), Lands Department (LandsD) and other bodies if necessary, at the scene with the support of his/her District Emergency Coordination Centre (DECC), to help victims of disasters to liaise with relevant Government Departments for assistance

if necessary.

3.3.5 ISD and HAD officers should liaise closely and discuss with other relevant departments on the handling of media & public enquiries.

3.3.6 The disaster site should be released as soon as possible but this cannot be done until investigation and other on-site activities have been completed. The Police will not vacate the site until it has been properly handed over to the owner, occupier or a responsible Government Department. This Phase may take some time also because of the need to establish the ownership of property, and return it to the legal claimant.

3.3.7 The departments involved in this phase usually have a heavy public works emphasis and may include agencies and departments such as HAD, Highways Department (HyD) and HD. Where permanent repair works are involved, relevant departments should have already been assigned and accepted the responsibility for each item of the works. They could manage and report on progress of the works in the way of normal works projects. The DO(s) of the affected district(s) may assist to monitor the sentiment of the public and provide information to them as appropriate.

3.3.8 In the event that the scale of an emergency incident is beyond the capability of an individual works department to handle, the Development Bureau (DEVB) may trigger the Emergency Command System (ECS) to designate a regional project manager of Civil Engineering and Development Department (CEDD) to coordinate the relief and recovery work amongst works departments. The project manager would identify the departments which will take charge of any permanent repair works in the recovery phase and inform them of the timeframe for completion.

3.4 ***Off Site - Departmental District, Regional and Headquarters Coordination Centres***

3.4.1 These centres should provide support to their on-site staff, proactively liaise and work with other centres within their own and other departments, and keep each other informed of the latest progress as necessary. If EMSC has been activated, departments should also proactively liaise and work with SBDO/EMSC through their Headquarters Coordination Centres.

3.4.2 Departments should highlight in their situation reports to EMSC an objective and sensible assessment of the impact caused by the incident or emergency. All reports from departments concerned and EMSC should also be posted onto the Bulletin Board System (BBS) for sharing among all parties. EMSC, in concert with other relevant ECCs, shall then be responsible for compiling overall situation reports, normally in a two-hour-interval or other appropriate interval, to the Chief Executive's Office, the CS and the POs for situation appreciation and decision making.

3.5 ***Establishment of Bureau/Departmental Coordination Officers (B/DCOs)***

3.5.1 In order to strengthen the professionalism and enhance effective interdepartmental communication before, during and after a disaster, a system of Bureau/Departmental Coordination Officers (B/DCOs) and Deputy B/DCOs will be formally established. B/DCOs from relevant B/Ds shall be fully conversant with the principles of the Government's Emergency Response System, the procedures of the Contingency Plan for Natural Disasters as well as its departmental operational instructions in response to handling emergencies and natural disasters. B/DCOs shall

also be responsible for the supervision of the departmental training, such as enhancing frontline officers' departmental knowledge on this Plan, strengthening departmental training, conducting interdepartmental exercises before the commencement of typhoon season as and when necessary, as well as facilitating professional communications between B/Ds and EMSC when the latter is activated. B/Ds shall submit to SB (ESU) a list of B/DCOs and Deputy B/DCOs for house-keeping purpose. Any change of the designated B/DCOs and Deputy B/DCOs shall be made known to SB (ESU) as soon as practicable.

3.5.2 B/DCOs are also responsible for establishing and maintaining a robust system of Departmental Liaison Officers (DLOs) in their respective B/Ds, where the DLO in the relevant B/Ds shall be properly selected, regularly trained and capable of competently discharging his/her functions when being deployed at EMSC.

3.6 **EMSC**

3.6.1 EMSC will be normally activated if a ***Tropical Cyclone Warning Signal No. 8 or higher***, a ***Black Rainstorm Warning Signal***, or a ***Tsunami Warning*** is issued.

3.6.2 EMSC may also be activated if a major natural disaster has taken place or other potentially dangerous or disruptive severe weather condition is likely. In such events, HKO will inform SB through the SBDO. A decision as to whether to open EMSC will be made by the S for S, the Permanent Secretary for Security (PS for S) or the Deputy Secretary for Security(2) (DS(S)2). In situations where the formation of Steering Committee is warranted, secretariat support would be provided by the EMSC during the preparedness and response phases, as well as the early part of the recovery phase. (The Steering Committee will decide on the exact B/Ds to provide support at the middle and latter parts of the recovery phase, which will depend on the nature and degree of gravity of the issues to be addressed, operational needs, problems encountered and circumstances involved.)

3.6.3 Following a decision to activate EMSC, the SBDO will inform the ESU of the decision and contact the first rostered EMSC team members who will immediately return to the Government Secretariat to man the centre. The Controller of EMSC will inform relevant B/Ds when the centre is activated. The EMSC has two levels of manning. Partial manning will permit EMSC to operate in response to a less serious threat, and will normally be sufficient in response to incidents such as the issuing of a ***Tropical Cyclone Warning Signal No. 8*** or a ***Black Rainstorm Warning***. Full manning will be activated for more serious or prolonged incidents. The functions of DLOs in EMSC are to facilitate efficient and effective communication between EMSC and their respective B/Ds. They will assist in interpreting the situation and assessment reports of their B/Ds and provide relevant assistance to EMSC as appropriate. The roles of the DLOs are essential to the functions of EMSC in monitoring and supporting the Government responses in an emergency. In most of the disaster incidents which warrant the activation of EMSC in either partial manning or full manning, five DLOs from ISD, HKPF, FSD, HyD and TD will normally be necessary for deployment at EMSC upon its activation. An officer from Works Branch of DEVB will also attend EMSC as the Works Branch Liaison Officer (WBLO) when called upon to do so by the EMSC Controller. The Controller of EMSC may, depending on the nature and gravity of the emergency incidents and/or natural disasters, also request other B/Ds to provide their liaison officers to station at EMSC.

3.6.4 The five DLOs and the WBLO will normally perform the following functions at EMSC:-

3.6.4.1 The ISD Liaison Officer will report to EMSC to establish a two-way link with ISD's Combined Information Centre to feed information on the disaster situation and media and public concerns to EMSC; and to facilitate the issue of press releases, warnings and advice to the public by EMSC via the media. ISD will also relay to EMSC any information on restrictions on transport and other important public messages, as well as assisting SB/EMSC to relay to the public any urgent and important government messages for serious or extreme situation via the mobile application "MyObservatory" of the HKO and "HKeMobility" of TD.

3.6.4.2 The HKPF and FSD Liaison Officers will report to EMSC to establish links with Police Headquarters Command and Control Centre (PHQCCC) and FSCC respectively, and keep EMSC informed of the incidents. The Police Liaison Officer will man the Third Generation Computer Aided Command and Control System (CACCS 3) terminal and draw important information to the EMSC Controller's attention.

3.6.4.3 The HyD and TD Liaison Officers will report to EMSC to establish links with HyD's ECC and TD's ETCC respectively and keep EMSC informed of the overall situation on road blockage, traffic and provision/resumption of public transports services. Where necessary, they will also be responsible for ensuring the HyD's ECC Patrol Team Monitoring System be fully accessible at EMSC, and providing departmental professional advice to EMSC as appropriate.

3.6.4.4 WBLO at EMSC is responsible for liaising with CEDD, Drainage Services Department (DSD), Water Supplies Department (WSD) and other works departments of DEVB to interpret reports sent to EMSC, advise both EMSC and the departments of relevant important developments, and monitor the departments' implementation of remedial measures for major emergency incidents if the situation warrants.

3.6.5 HKO will be in close contact with the SBDO, or EMSC if activated, to advise on the weather conditions, including for example the progress of a tropical cyclone and an indication of the likelihood that a **No. 8 Signal** will be issued imminently.

3.6.6 On activation, EMSC will immediately establish links with HKO, ISD, HAD HQ, PHQCCC, FSCC, Government Flying Service (GFS), ArchSD, CEDD, DSD, HyD, WSD, DEVB, TD, LandsD, Buildings Department (BD), Marine Department (MD), Hospital Authority (HA), Education Bureau (EDB), SWD and other relevant parties via Bulletin Board System (BBS). (Coordination or liaison between Airport Emergency Centre (AEC) and EMSC is done via Airport Police's representative who stations at the AEC.)

3.6.7 The EMSC Controller on duty will be responsible for:-

3.6.7.1 liaising generally with departments mentioned in para. 3.1.2

above (and other departments and public organisations if necessary) through their coordination centres/ECCs in order to obtain and collate information on the overall situation as it develops. (Note: Departments which need to liaise and work directly with others should do so directly as far as possible, only involving EMSC in this process when necessary. Nevertheless, departments should be proactive in keeping EMSC and other departments fully informed in a timely and coordinated manner of the relevant information of any major incidents and what action is being taken. This should be done through regular situation and assessment reports distributed by appropriate means of communication, e.g. BBS of EMSC, hourly, or at appropriate intervals as directed by the Controller, EMSC. These regular situation and assessment reports should be supplemented by DLOs stationed at EMSC or by ECCs' special telephone reports of important or urgent incidents and information);

3.6.7.2 providing a permanent link with the S for S through which urgent decisions on policy matters, difficult problems and emergency powers can be readily obtained by the departments concerned, together with clarification and guidance on the content or implementation of directives;

3.6.7.3 briefing senior Government officers or the Steering Committee on the situation;

3.6.7.4 acting as a link through which urgent and important public messages or announcements could be disseminated from the Government Secretariat via ISD for publication or broadcast (such as through the mobile application "GovHK Notifications"), or via "MyObservatory" of HKO and "HKeMobility" of TD;

3.6.7.5 obtaining and issuing policy directives on behalf of the Chief Executive's Security Committee (CESC), the CS and the S for S;

3.6.7.6 coordinating the acquisition and mobilisation of civil resources and those of outside bodies if necessary (fire services and police resources will be acquired and mobilised by their respective Commanders in liaison with FSCC and PHQCCC; this will also be the case for other departments);

3.6.7.7 coordinating disciplined services, civil and military operations and resolving problems as necessary in situations which exceed the resources available to individual departments;

3.6.7.8 providing secretariat support to the Steering Committee (if activated) during the preparedness and response phases, as well as the early part of the recovery phase; and

3.6.7.9 performing any other duties set out in the EMSC Operational Instructions, contingency plans or as may be required by CESC, CS and/or S for S.

3.6.8. Departments including HyD, Food and Environmental Hygiene Department (FEHD), Leisure and Culture Services Department (LCSD), LandsD and BD will coordinate and carry out the clearance of road blockages within their respective purview to enable early resumption of normal traffic after typhoon or tsunami. When there are very significant damages brought to roadside trees and structures, and hence causing a large number of road blockages, departments may refer to the priority list of important public roads prepared by TD in setting priority on clearance of fallen trees from different sources. All relevant departments will each set up its focal point(s) of contact for direct and regular liaison with the EMSC, ETCC of TD or with relevant departments, as appropriate. Nevertheless, it should be noted that EMSC is not the command or coordination centre for the departments' work and its role is primarily to monitor and provide necessary support to the Steering Committee (if formed) and departments' operation if necessary. In most cases, the operation of EMSC shall stand down upon the conclusion of response phase, unless where the Steering Committee is formed and remains in operation during the recovery stage, in which case it will also remain in operation during the early part of the recovery phase. (The Steering Committee will decide on the exact B/Ds to provide support at the middle and latter parts of the recovery phase, which will depend on the nature and degree of gravity of the issues to be addressed, operational needs, problems encountered and circumstances involved.)

3.6.9. The responsibility for clearing road blockages in the recovery phase continues to rest with HyD, FEHD, LCSD, LandsD and BD, or continues to be coordinated by the Steering Committee (as assisted by the EMSC and/or ECC of the relevant B/Ds) if necessary. In respect of coordinating the resumption of the public transport services, the responsibility continues to rest with TD. Hence, in normal circumstances, the departments will continue to establish the necessary coordination amongst themselves. Priority lists of important public roads maintained by TD will be kept at coordination centres of relevant departments to facilitate the clearance of road blockage. Subject to the prevailing circumstances, the Steering Committee may also steer the priority of public road clearance for the purposes of resuming traffic and public transport services and re-opening access to critical facilities as soon as reasonably practicable. If so decided by the Steering Committee, the ECS will be deployed for the initial phase of the clearance works under extreme scenarios to facilitate the clearance of major thoroughfares, which may also be suitably extended to cover the clearance of secondary roads on a need basis. The time for the ECS to stand down for transition into the next phase of the recovery work will also be decided by the Steering Committee. After the critical phase of the recovery work, relevant departments would continue to handle the work under their respective responsibility according to the established mechanism, which will be speeded up through more flexible and effective use contractor resources from works departments, LCSD and FEHD. DO will monitor the district reaction and comments of District Councils (DCs) on outstanding clearance works within their respective district, refer cases reported to them to relevant departments in the first instance, and the relevant departments will keep track of the clearance works required for reporting to the DCs and the Steering Committee.

4. RESPONSIBILITIES OF BUREAUX/DEPARTMENTS AND OTHER UTILITIES COMPANIES

4.1 During an emergency, Government Departments have a general responsibility for carrying out their normal functions as far as possible. Some departments have specific operational and reporting duties in an emergency. In this regard, detailed departmental operational orders/instructions are issued by those departments to the staff concerned.

4.2 It is important that departments concerned should keep SBDO/EMSC and ISD informed in a timely and coordinated manner of the development of all response/emergency operations and other important events and information so that the latter can fully discharge their respective responsibilities. Likewise, in the recovery phase, it is incumbent upon departments concerned to keep the Steering Committee, if established, updated on all the related recovery work so that the latter can coordinate and monitor the recovery work at the government level.

4.3 Staff who are not specifically required for duty may, at the discretion of Heads of Department, be allowed to return home before or upon the issuance of a ***Tropical Cyclone Warning Signal No. 8*** and possibly also under certain other severe weather conditions, depending on the journey to be undertaken and the likelihood of certain transport services being suspended. General guidelines for the release of Government staff in the event of severe weather conditions have been issued by Civil Service Bureau.

4.4 The responsibilities of the relevant departments are summarised in the following paragraphs.

4.4.1 ***Agriculture, Fisheries and Conservation Department (AFCD)*** - The Director of Agriculture, Fisheries and Conservation will be responsible for the operation of the AFCD departmental Emergency Headquarters once a ***Tropical Cyclone Warning Signal No. 8 or higher or a Tsunami Warning*** is issued in order to collate reports of loss and damage and to direct emergency measures. When a ***Red or Black Rainstorm Warning Signal*** or a ***Landslip Warning*** is issued, this Emergency Headquarters may be activated as directed by the Director of Agriculture, Fisheries and Conservation. The Department is responsible for the clearance of dangerous or fallen trees within venues managed by AFCD and will provide assistance to clear trees (except those under the responsibilities of FEHD and LCSD as mentioned in paras. 4.4.15 and 4.4.27 respectively) which block roads or become dangerous during natural disasters. The Department is also responsible for assessing the extent of loss or damage to agriculture and fishery undertakings, reporting this to the ISD Duty Officer and the EMSC, and taking necessary relief measures.

4.4.2 ***Architectural Services Department (ArchSD)*** - The Director of Architectural Services will be responsible for advising on the stability of damaged government buildings and facilities and for carrying out the necessary emergency repairs.

4.4.3 ***Auxiliary Medical Service (AMS)*** - The Chief Staff Officer, AMS, will be responsible for providing volunteers to give medical assistance to augment the services of the HA, DH and FSD's ambulance services in a natural disaster. When a ***Tropical Cyclone Warning Signal No. 8 or higher or a Tsunami Warning*** is issued, contingents of AMS personnel will be deployed to ambulance depots to reinforce

regular ambulance personnel as appropriate. When a ***Red/Black Rainstorm Warning Signal***, a ***Special Announcement on Flooding in the northern New Territories*** or a ***Landslip Warning*** is issued, the AMS Emergency Duty Team will also be alerted for deployment as and when requested by FSD.

4.4.4 ***Buildings Department (BD)*** - The Director of Buildings will be responsible for the setting-up and operation of an emergency organisation to deal with reports concerning damaged private buildings, building works, landslides and slopes which threaten these buildings. BD shall also be responsible for inputting the incident information under their purviews into the Common Operational Picture (COP) for real-time information sharing amongst the relevant B/Ds and EMSC.

4.4.5 ***Chief Executive's Office (CE's Office)*** - See para. 4.4.30 below on Security Bureau.

4.4.6 ***Chief Secretary for Administration (CS)*** - See para. 4.4.30 below on Security Bureau.

4.4.7 ***Civil Aid Service (CAS)*** - The Chief Staff Officer, CAS, will be responsible for deploying trained and disciplined volunteers to assist in operations such as search and rescue, vegetation fire fighting, crowd control, flood rescue, registration of victims, casualty handling, evacuation and feeding of disaster victims, clearance of roadways blocked by fallen trees or landslides. During an emergency, CAS personnel may be called in and deployed as required in all parts of the territory. See also paras. 5.8 and 5.29.

4.4.8 ***Civil Aviation Department (CAD)*** - The Director-General of Civil Aviation will be responsible for broadcasting the latest meteorological information to all aircraft operating in the Hong Kong Flight Information Region. In close consultation with HKO, he will consider restricting air traffic movements.

On the actual operation of the Hong Kong International Airport (HKIA), ***Airport Authority Hong Kong (AAHK)*** will be responsible for managing airport operations, and when situation warrants activate AEC to coordinate and communicate airport response, contingency and recovery measures. AAHK will inform relevant airport operators and business partners including all airline companies, all cargo operators, apron operators, passenger handling operators, franchised public bus operators, the cross-border ferry handling agent and Mass Transit Railway Corporation, etc. of the issuance of severe weather warnings/signals and keeping ISD, SBDO/EMSC and the Police representative stationed at the AEC informed of the running of and any disruption to airline and airport services, including cross boundary ferry services at SkyPier. The ***aviation sector's stakeholders***, especially airline companies, will be responsible for advising the AAHK and CAD of any likely disruptions to the provision of their services due to severe weather conditions.

4.4.9 ***Civil Engineering and Development Department (CEDD)*** - Geotechnical Engineering Office (GEO), CEDD will be responsible for deciding in consultation with HKO when a ***Landslip Warning*** should be issued or cancelled; for advising Government Departments on immediate or potential dangers due to landslides and on measures to deal with them; and for answering requests for assistance in the saving of life, protection of property, and miscellaneous calls for action or assistance within the resources of his Department. GEO, CEDD has developed the

COP which is an electronic, map-based platform for real-time sharing of incident information amongst Government Departments during extreme weathers. ECCs of the relevant B/Ds can access the COP through web-link and mobile application with prior arrangement with CEDD for granting and creating accounts with unique usernames and password. GEO, CEDD shall be responsible for inputting the landslide incidents reported to them into the COP for real-time information sharing amongst the relevant B/Ds and EMSC. The Head of the Civil Engineering Office (CEO), CEDD will be responsible for advising on the stability of damaged marine facilities and carrying out emergency repairs to marine facilities maintained by CEO, and will provide advice and assistance to the relevant authorities/owners in carrying out emergency repairs to marine facilities not maintained by CEO within the resources of his Department. See also operation of ECS, as set out in para. 3.3.8 and 3.6.9.

4.4.10 **Development Bureau (DEVB)** – An officer from Works Branch of DEVB will attend EMSC as the WBLO when called upon to do so by the EMSC Controller (see para. 3.6.3). Moreover, for exceptional incidents, DEVB may trigger the ECS to coordinate the relief and recovery work amongst works department (see paras. 3.3.8 and 3.6.9).

4.4.11 **Drainage Services Department (DSD)** - The Director of Drainage Services is responsible for clearing and repairing blocked or damaged sewers and storm-drains, including engineered sections of open channels, major stream courses and for ensuring the satisfactory operation of sewage treatment works and floodwater pumping stations. The Department's Emergency and Storm Damage Organization (ESDO) operates around the clock to deal with these problems. Under the ESDO, an ECC will be set up upon the issue of a **Red/Black Rainstorm Warning Signal**, a **Pre-8 Tropical Cyclone Special Announcement**, a **Tropical Cyclone Warning Signal No. 8** or higher, or a **Tsunami Warning** or when circumstances so warrant. In addition, the ECC will also be set up for the Mainland North Region upon the issue of **Special Announcement on Flooding in the Northern New Territories** or upon receipt of notification of water discharge from Shenzhen Reservoir. (See also paras. 5.26 to 5.32 below.) The ECC acts as DSD's channel of communication with DEVB and other departments and also as a link with EMSC. For the nine low-lying areas prone to flooding as mentioned in para. 5.54 below, HKO will issue storm surge alert message to DSD, HAD and other relevant Government Departments. When the water level at the low-lying area is expected to reach the alert level, DSD will arrange mitigation measures, if any, based on the local need to alleviate the impact of flooding on the local residents. DSD shall also be responsible for inputting the incident information under its purview into the COP for real-time information sharing amongst the relevant B/Ds and EMSC.

4.4.12 **Education Bureau (EDB)** - The Secretary for Education will decide whether, and if so at what time, schools (including kindergartens) will be closed, in consultation with HKO, DSD and Regional Command & Control Centres of HKPF on the weather, road and traffic situations. (See also paras. 5.7, 5.14 and 5.29 below.) EDB will disseminate the special announcements of class suspensions via radio, television, EDB's website and mobile application "GovHK Notifications".

4.4.13 **Electrical and Mechanical Services Department (EMSD)** - In close liaison with the utilities companies, the Director of Electrical and Mechanical Services will

be responsible for ensuring that, in the event of electricity and town gas supplies being interrupted during severe weather conditions, these companies will, as quickly as practicable, carry out repair works to resume supply. Upon request, the Department will also provide special equipment to assist with search and rescue operations.

On the other hand, the following companies will be responsible for informing EMSD, as well as FSD and ISD, of any disruption to services and for making safe and effecting prompt repairs to their supply lines and stations:-

CLP Power Hong Kong Limited
The Hong Kong and China Gas Co Ltd
The Hong Kong Electric Company, Limited

4.4.14 ***Fire Services Department (FSD)*** - The Director of Fire Services will be responsible for extinguishing fires, protecting life and property in case of fire or other calamity and emergency rescue work, which includes rendering assistance to people who appear in need of immediate medical attention and conveying them to hospital. The Department will report incidents in which it is involved to the ISD Duty Officer and EMSC for information and pass on necessary information on natural disasters to the AMS and CAS. (See also paras. 3.2.1 to 3.2.13, 3.6.4 and 5.29.)

4.4.15 ***Food and Environmental Hygiene Department (FEHD)*** - The Director of Food and Environmental Hygiene will be responsible for carrying out the following duties: -

- (a) under the direction of Police, the removal of dead bodies, and to assist the Director of Health to arrange for temporary mortuary facilities when required;
- (b) supply of temporary toilets and dustbins, collection of refuse and maintenance of hygiene in temporary and relief centres;
- (c) clearance of dangerous or fallen trees after cutting up by LCSD from public roads in the urban area not within recreation sites maintained by AFCD or LCSD and the access to them is not restricted by drop gates (also see para. 3.6.8); and
- (d) clearance of refuse from open/surface drains and choked gullies.

4.4.16 ***Government Flying Service (GFS)*** - The Controller, GFS, will be responsible for providing whatever flying services may be required for life-saving, transportation of relief supplies, aerial photography, surveillance, casualty evacuation and reconnaissance. All requests for helicopters should be made to the PHQCCC or FSCC. (See also para. 5.27.)

4.4.17 ***Government Logistics Department (GLD)*** - The Director of Government Logistics will be responsible for supplying emergency items (see emergency stores list attached at **Annex F**) from its central warehouse at the Government Logistics Centre, and for arranging the urgent purchase of non-standard items. The Land Transport Division of GLD will be responsible for the provision of emergency transport support to deliver these items to user departments if departmental transport is unavailable. A control centre will be set up in the Hong Kong Transport Pool, within one hour from being notified, to coordinate the deployment of pool vehicles.

4.4.18 **Department of Health (DH)** - The Director of Health will provide a physicist at a disaster site, if radioactive substances are involved. If required, the Director of Health, with assistance from Director of Food and Environmental Hygiene when necessary, will arrange for temporary mortuary facilities, and for the carrying out of autopsies.

4.4.19 **Highways Department (HyD)** - The Director of Highways will be responsible for clearing and repairing blocked or damaged public roads, removing dangerous and fallen boulders and dealing with landslides on roadside slopes maintained by HyD. For emergency works to natural terrain landslides (NTLs) in unallocated Government land, the 'beneficiary-responds' principle will be followed. In essence, the maintenance party of the facilities affected by an NTL would take on the emergency works (including clearance of debris). According to the principle, HyD will deal with NTLs that affect public roads. As for the NTLs not covered by the 'beneficiary-responds' principle, such as those affecting railways, private buildings, public housing and squatter, HyD will carry out the emergency works including the initial repair and the subsequent emergency works. Besides, HyD will be responsible for answering requests for assistance in the saving of life, protection of property and miscellaneous calls for action or assistance within the resources of his Department, and for coordinating repairs to utilities during emergencies. The Department is also responsible for keeping TD informed of the progress in their road repair and clearing work at regular intervals to enable TD to coordinate and develop transport arrangements as necessary. HyD shall also be responsible for inputting the incident information under its purview into the COP for real-time information sharing amongst the relevant B/Ds and EMSC. See also operation of the ECS, as set out in paras. 3.3.8 and 3.6.9.

4.4.20 **Home Affairs Department (HAD)** - The Director of Home Affairs will be the 'Disaster Relief Coordinator' to coordinate relief efforts at the district level, working through the Headquarters Emergency Coordination Centre and the DO. The DO will coordinate disaster relief efforts at the local level, in co-operation with SWD, HD, LandsD and others as necessary, and act as the local spokesman for the Government. DO will be responsible for coordinating emergency relief work in their districts and for reporting to their headquarters on the local situation. Each District Office will set up a DECC to be manned round the clock when a **Tropical Cyclone Warning Signal No. 8 or higher**, a **Red or Black Rainstorm Warning Signal** or **Tsunami Warning** is issued. When only **Landslip Warning** is in force, District Offices should, having regard to local situation and relevant considerations, decide whether or not to activate their DECCs. When a **Special Announcement on Flooding in the Northern New Territories** is issued, the DO of North and Yuen Long Districts will activate their DECCs. When **Tropical Cyclone Warning Signal No. 3** is issued, the Emergency Hotline of HAD Headquarters will be manned round the clock to answer public enquiries of a non-technical nature. When a **Tropical Cyclone No. 8 Signal or higher**, a **Red or Black Rainstorm Warning Signal**, a **Landslip Warning** or a **Tsunami Warning** is issued, staff of HAD Headquarters will open an ECC which will act as a channel of communication with DECCs in District Offices and also as a link with EMSC. This Centre is responsible for supplying ISD and EMSC with regular situation reports on conditions in the districts. HAD will ensure community halls/suitable venues are available for use as temporary shelters for displaced persons. HAD will also provide advice on matters affecting the residents of the district and coordinate the strategy for

dealing with public enquiries on site. In the event of a major incident, the relevant District Office will make decision on the opening of a help desk which will be manned by HAD, HKPF, FSD, SWD and other organisations where appropriate. For the nine low-lying areas prone to flooding as mentioned in para. 5.5 below, HKO will issue storm surge alert message to HAD, DSD, and other relevant Government Departments. When the water level at the low-lying area is expected to reach the alert level, the relevant DO will alert the local residents who may be affected by flooding, and will advise them to take early precautions. If necessary, the local residents will be arranged to move into temporary shelters. (See also paras. 5.27 to 5.30 below.) HAD would deploy a DLO to EMSC upon the request of the EMSC Controller when the damage and injuries in a district are extensive and require exceptional coordination during the response phase, or the implication of specific incident(s) causes grave concern as to the overall coordination of efforts in a number of districts. In situation where volunteers are mobilised on a community initiated basis at district level to help-out for non first-line clearance / recovery work, HAD would provide liaison assistance and facilitation such as lining up the volunteer groups with the relevant government bureaux / departments.

4.4.21 ***Hong Kong Observatory (HKO)*** - Director of the Hong Kong Observatory will be responsible for originating all weather-related warnings, Tsunami Warnings, and general precautionary announcements to the public and for providing meteorological or tsunami-related advice to other departments/agencies. (See also paras. 5.1 to 5.34.) Where necessary, HKO will discuss with SB the potential impact of the super typhoon on Hong Kong for SB's reporting to CS as necessary, and provide weather-related assessments to the Steering Committee (if one is formed) to facilitate its decision making at various stages of the disaster handling exercise. The mobile application of HKO "MyObservatory" will also be used as a platform to alert the public about important messages from the Government. (See also para. 5.12.)

4.4.22 ***Hong Kong Police Force (HKPF)*** - The Commissioner of Police will be responsible for the coordination of all agencies operating at the scene of the disaster during response and recovery phases until the site is handed over to its lawful owner(s) or other controlling authority. He will also be responsible for the preservation and security of the site during this time. He will control and direct traffic so as to restrict general access and facilitate emergency services' access to the site, and to facilitate unimpeded casualty evacuation. He will also collate and disseminate data on casualties arising from the disaster. If necessary in a major disaster, he will mobilise the Casualty Enquiry Unit (CEU) at PHQCCC to facilitate this work and notify ISD and SBDO/EMSC of the contact telephone number. The CEU will be supported by the Disaster Victim Identification Unit and Casualty Documentation Teams. Where there is evidence of a criminal offence or criminal negligence, or where directed by the Coroner or other competent authority, he will be responsible for conducting investigations into the facts. Within HKPF, PHQCCC is responsible for coordinating the overall Police response to any emergency and for liaison with other Government Departments (including SBDO/EMSC, HAD, ISD and TD), keeping them informed of traffic accidents and road conditions and other matters and handling their enquiries. HKPF will also keep SBDO/EMSC, and where appropriate ISD, informed of casualties, missing persons and other relevant information. Meanwhile, Police Public Relations Branch (PPRB) is responsible for informing the media of traffic accidents and road conditions and other matters and handling their enquiries. (See also paras. 2.1 to 2.9, 3.6.4 and 5.27.) In case of water discharge from Shenzhen Reservoir by the Shenzhen Authority, upon being notified by the Shenzhen Authority,

the Border Liaison Officer of HKPF shall immediately pass the relevant message to the North and Yuen Long District Offices and the PHQCCC, which will then immediately inform the emergency units of DSD, FSD, WSD, HKO, SBDO/EMSC and ISD [by phone and fax].

4.4.23 **Hospital Authority (HA)** - The Chief Executive of the Hospital Authority will be responsible for providing emergency medical services during a natural disaster. HA Head Office Major Incident Control Centre will keep monitoring the situation and provide situation report at appropriate intervals to EMSC upon the issuance of a **Black Rainstorm Warning Signal**, a **Tropical Cyclone Warning Signal No. 8** or higher, a **Tsunami Warning** or at the outbreak of a major disaster. For mass casualties incident and if situation warrants, the HA will send a medical team and a MCO to the site of incident involving a large number of victims at the request of FSD. The HA News Duty Officer will communicate with ISD at the Combined Information Centre regarding timely and important public announcement of information.

4.4.24 **Housing Department (HD)** - The Director of Housing, in conjunction with the relevant DO and the Director of Social Welfare, will be responsible for providing emergency accommodation for victims made homeless by natural disasters. HD Departmental Communication Centre, which is a focal point of contact for the public and Government Departments during emergencies, is manned by Duty Officers outside working hours. The Department is also responsible for advising the ISD Duty Officer and EMSC of damage to public housing, and of the number of people provided with emergency accommodation. HD shall also be responsible for inputting emergency incidents of geotechnical features under its purviews into the COP for real-time information sharing amongst the relevant B/Ds and EMSC.

Furthermore, the Independent Checking Unit (ICU) working directly under the Office of the Permanent Secretary for Transport and Housing (Housing) will also be responsible for the setting-up and operation of an ECC to deal with reports concerning damaged buildings which have been sold/divested by the Hong Kong Housing Authority and building works which threaten these buildings.

4.4.25 **Information Services Department (ISD)** - ISD will liaise, through its Combined Information Centre, with departments having key front-line roles in natural disasters to handle media enquiries and issue special announcements and regular round-ups on disaster conditions to the public via the media. (See also para. 3.6.4 above.) ISD will also be responsible for assisting SB/EMSC to relay to the public any urgent and important government messages for serious or extreme situation via the mobile application “MyObservatory” of HKO and “HKeMobility” of TD.

4.4.26 **Lands Department (LandsD)** - The Slope Maintenance Section is responsible for emergency and urgent repair works to landslides occurring on registered man-made slopes maintained by LandsD and to landslides that occur on man-made slopes on unleased and unallocated Government land not maintained by other departments and affecting life and property. Officers in the Squatter Control Unit report to the DECCs of District Offices in recording particulars of victims affected by natural disasters or fire etc., in arranging temporary accommodation and transit to such centres if required by the victims. Officers in the District Lands Offices in the New Territories respond to the DECCs of District Offices in the New

Territories and assist by identifying locations of the disaster, areas affected by typhoon or rainstorm and making ground situation reports to the DECCs set up at the District Offices, if required. The Systematic Identification of Maintenance Responsibility of Slopes in the Territories (SIMAR) Unit works in conjunction with CEDD in determining maintenance responsibilities of registered man-made slopes. The maintenance responsibilities of slopes having been determined are contained in the Slope Maintenance Responsibility Information System (SMRIS) and publicized on the LandsD's website (<http://www.slope.landsd.gov.hk/smrisc/>) and on CEDD's Slope Information System (SIS) (accessible from <http://hkss.cedd.gov.hk>). The SIMAR Unit will assist as necessary in emergency situations. The Survey and Mapping Office is responsible for providing existing maps, plans and aerial photos of the scene in conjunction with GFS in an emergency situation. The Office will also conduct topographical surveys after the disaster if necessary. LandsD shall also be responsible for inputting the landslide incident and hazard information under its purview into the COP for real-time information sharing amongst the relevant B/Ds and EMSC.

4.4.27 ***Leisure and Cultural Services Department (LCSD)*** - The Director of Leisure and Cultural Services will be responsible for providing staff, when required during an emergency, for the cutting up within the urban areas, and the cutting up and clearance within the New Territories, of dangerous or fallen trees within their venue and from roadsides which are under LCSD's maintenance. (Also see paras. 3.6.8 and 3.6.9.) When a Tsunami Warning is issued, LCSD will advise ISD whether to issue an announcement on the temporary closures of public beaches, water sports centres and other venues near the waterfront managed by LCSD.

4.4.28 ***Marine Department (MD)*** - The Director of Marine will be responsible for liaising closely with shipping companies and freight terminal operators during severe weather conditions or a Tsunami Warning with a view to controlling and deciding whether to close the Port, and for coordinating assistance to any vessels found in distress through his Maritime Rescue Coordination Centre. The Department will keep the public, ISD and SBDO/EMSC informed of the running of and any disruption to ferry and other vessel services plying Hong Kong/Macao and Hong Kong/Mainland operated by respective companies. The Director will also take the leading role in dealing with any incidents in the harbour or out at sea, as detailed in the relevant Security Bureau Circulars/Contingency Plans.

On the other hand, the following organisations will be responsible for keeping the MD fully informed of any disruption to their operations during severe weather conditions or a tsunami:-

Asia Container Terminals Ltd
COSCO - HIT Terminals (HK) Ltd
CSX World Terminals Hong Kong Ltd
Hongkong International Terminals Ltd
Hong Kong Pilots Association Ltd
Hongkong United Dockyards Ltd
Kai Tak Cruise Terminal
Modern Terminals Ltd
Ocean Terminal
River Trade Terminal Co Ltd
Yiu Lian Dockyards Ltd

The following organisations will be responsible for advising MD, as well as keeping ISD informed, of any likely disruption to the provision of their services due to severe weather conditions or a tsunami:-

Companies operating cross-boundary ferry services in ferry terminals under the management of MD or AAHK

4.4.29 ***Office of the Communications Authority (OFCA)*** - The Director-General of Communications will be responsible for promptly relaying the possible Telecommunications Network Congestion Warning message to the telecommunications network operators, if necessary, upon receipt of a notification or an advance notification of a ***Tropical Cyclone Warning Signal No. 8 or above***, a ***Red or Black Rainstorm Warning Signal***, or a ***Tsunami Warning*** from HKO, and will monitor any disruption to any of their services and restoration works.

The following organisations will be responsible for transmitting or broadcasting information about weather conditions, precautionary measures and so on to their customers, clients and members of the public on the advice of HKO. They should also inform OFCA of any disruption to any of their services and effect quick repairs:-

TV services

Hong Kong Cable Television Limited (Cable TV)

Fantastic Television Limited (Fantastic TV)

HK Television Entertainment Company Limited (Viu TV)

PCCW Media Limited (Now TV)

Television Broadcasts Limited (TVB)

Radio Television Hong Kong (RTHK)

Radio services

Hong Kong Commercial Broadcasting Company Limited (Commercial Radio)

Metro Broadcast Corporation Limited (Metro Radio)

RTHK

4.4.30 ***Security Bureau /Emergency Monitoring and Support Centre*** - SB monitors and supports Government's overall response to major emergencies including those arising from severe weather conditions and tsunamis. SB also provides the link and first point of contact between the rest of Government, and CE's Office and the CS, through the SBDO/EMSC, S for S, PS for S or DS(S)2, depending on the circumstances. S for S, PS for S or DS(S)2 will decide when CE's Office and CS need to be informed and will advise on how they may need to be involved in the preparedness and response phase. Communication with CE's Office or the CS on emergencies should be channelled through SBDO/EMSC. If the Steering Committee is set up, the EMSC will remain in operation during the early part of the recovery stage. (The Steering Committee will decide on the exact B/Ds to provide support at the middle and latter parts of the recovery phase, which will depend on the nature and degree of gravity of the issues to be addressed, operational needs, problems encountered and circumstances involved.) The EMSC will be activated and manned by staff of the Government Secretariat on instructions from the S for S, PS for S or DS(S)2 and whenever a ***Tropical Cyclone No. 8 Signal or higher***, a ***Black Rainstorm Warning Signal***, or a ***Tsunami Warning*** comes into effect. It may also be activated as a result of other severe weather conditions and/or emergency

situations. Communications between EMSC and departments will normally be through the telephone system and BBS. The EMSC fallback telephone network will be used if there are problems with the telephone system. (Also see para. 3.6.) When situations warrant, SB would assume the role of “lead coordinator” for the Response Phase.

4.4.31 **Social Welfare Department (SWD)** - The Director of Social Welfare (DSW), in conjunction with the relevant DO(s), Director of Lands and the Director of Housing, will be responsible for providing food, blankets and other emergency items when victims of a disaster are in need and when temporary shelters are open following the issue of a **Tropical Cyclone Warning Signal No. 8 or higher**, a **Red or Black Rainstorm Warning Signal**, a **Landslip Warning**, or a **Tsunami Warning**. During office hours, District Social Welfare Officers are the district commanders for their respective districts, responsible for mobilising staff to provide emergency relief services for those affected by a disaster. Outside office hours, SWD has five emergency relief teams (including one on Hong Kong Island, one in Kowloon and three in the New Territories), which can be deployed in an emergency. Each of these teams is headed by a Duty Officer (Emergency Relief) who can be contacted through PHQCCC, and should comply with the Police’s requests as far as possible. SWD is also responsible for advising SBDO/EMSC and the ISD Duty Officer of the relief measures which have been taken. DSW will decide whether, and if so, at what time child care centres, centres providing after school care programmes, elderly services centres or day rehabilitation units, including sheltered workshops, integrated vocational rehabilitation services centres and day activity centres, will be closed. Based on the information provided by HKO and PPRB on the weather and traffic situations, DSW will also advise parents and those taking care of persons with disabilities and the elderly not to take children, persons with disabilities and elderly persons to the centres in view of the severe weather conditions (though the centres will remain open as usual).

4.4.32 **Transport Department (TD)** - The Commissioner for Transport will be responsible for keeping in contact with HKO, HKPF and HyD to get updates on the weather and road conditions to better coordinate public transport through close liaison with the respective public transport operators, and to develop traffic and transport contingency plans. If need be, ETCC will escalate its operation to Tier 2 (Fixed Mode) or Tier 3 (Joint Steering Mode). The Department will keep SBDO/EMSC, HKPF, ISD and HyD fully informed of the details of public transport operations. The Department will also be responsible for alerting and liaising with public transport operators, as well as tunnel and bridges operators, and mitigating the effects of traffic and transport problems. Moreover, to facilitate the timely restoration of the public transport system after typhoon, the Department has classified routes of particular significance of road networks and issued “a list on important routes in the road network system” to departments concerned for reference when undertaking road clearance work after emergencies. (Also see paras. 3.6.8, 3.6.9 and 5.12.) TD will also be responsible for assisting SB/EMSC to relay to the public any urgent and important messages for serious or extreme situation on traffic and public transport services via the mobile application “HKeMobility” of TD.

On the other hand, the following organisations / management agent of the infrastructures will be responsible for advising the TD Duty Officer (through its ETCC), as well as keeping ISD informed, of any likely disruptions to the provision

of their public transport services due to severe weather conditions or a tsunami:-

Discovery Bay Transportation Services Ltd
Hong Kong & Kowloon Ferry Ltd
New World First Ferry Services Ltd
Park Island Transport Co Ltd
The “Star” Ferry Co Ltd

Citybus Ltd
Discovery Bay Transit Service Ltd
Long Win Bus Co Ltd
New HK Bus Co Ltd
New Lantao Bus Co (1973) Ltd
New World First Bus Services Ltd
The Kowloon Motor Bus Co (1933) Ltd
廣東港珠澳大橋穿梭巴士有限公司

Hong Kong Tramways Co Ltd
MTR Corporation Ltd
Peak Tramways Co Ltd

Aberdeen Tunnel
Kai Tak Tunnel
Central-Wanchai Bypass
Cross Harbour Tunnel
Discovery Bay Tunnel
Eastern Harbour Crossing
Heung Yuen Wai Highway
Hong Kong-Zhuhai-Macao Bridge
Lion Rock Tunnel
Shing Mun Tunnels
Tai Lam Tunnel
Tate’s Cairn Tunnel
Tseung Kwan O Tunnel
Tsing Ma Control Area (Cheung Tsing Tunnel, Lantau Link and Ting Kau Bridge)
Tsing Sha Control Area – Route 8
Western Harbour Crossing

4.4.33 *Water Supplies Department (WSD)* - The Director of Water Supplies will be responsible for isolating and repairing water mains damaged by the incident; for supporting FSD by providing fire fighting water in case of fire; and for providing emergency temporary fresh water supply for use by victims if required. The Department will operate an emergency organisation during periods of emergency to deal with requests for the above services and to ensure satisfactory operation of waterworks installations for maintaining continuous water supplies.

5. ALERTING SYSTEM, COORDINATION AND COMMON SCENARIOS IN HONG KONG

ALERTING SYSTEM AND COORDINATION

5.1 The HKO monitors weather conditions closely and initiates issue of all warnings of severe weather conditions, indicating where and when the event will occur, how long it will last and what consequences are expected. Messages will also be issued giving general advice on precautions to be taken to minimise the loss of life and damage to property, followed by supplementary information and advice as the situation develops. **HKO** will:-

5.1.1 issue to the media through ISD's Government News and Media Information System (GNMIS) hourly summaries of the weather warnings whenever *Tropical Cyclone Warning Signals*, *Rainstorm Warning Signals* or *Landslide Warnings* are in force. All information issued via GNMIS will also be uploaded simultaneously to the government website (gov.hk);

5.1.2 send information on weather warnings by various channels (such as email, the internal Government Weather Information Server (GOWISE), etc.) whenever there are updates to relevant Government Departments and their emergency response centres, including EMSC, PHQCCC, FSCC and ISD;

5.1.3 inform AAHK via HKO Airport Meteorological Office of the latest *Tropical Cyclone Warning Signals*, *Strong Monsoon Signal* and *Rainstorm Signals*. These warnings will then be disseminated to all internal and external stakeholders according to the **Full Alerting System** set out in **Annex E**;

5.1.4 monitor the occurrence of earthquake-generated tsunamis, and issue Tsunami Warnings indicating the estimated time of arrival of the tsunami at Hong Kong. As communities vulnerable to storm surges due to approaching tropical cyclones are also vulnerable to tsunamis, the alerting system for tsunamis is similar to that for storm surge brought by tropical cyclones (i.e. **Annex D**); and

5.1.5 provide a platform of mobile application "MyObservatory" for timely dissemination of urgent and important government messages from EDB, ISD and TD to the public during serious or extreme situation (see also para. 4.4.25 above).

5.2 Upon receipt of these weather warnings or Tsunami Warnings, and any other messages received, the listed organisations will take effect any necessary action specified in this contingency plan and in their own detailed operational instructions. A full list of emergency contacts is provided in the "Hong Kong Emergency Telephone Directory". This Directory is a restricted document and will be updated by SB bi-annually.

5.3 Home Affairs Department (HAD) will handle public enquiries. ISD will deal with the media generally, although PPRB will handle operational matters such as traffic accidents, traffic congestion, road diversions and road closures. The media, public and other outside parties should not contact, or be referred to, SBDO/EMSC or HKO. Depending on the weather situation, HKO will arrange press announcements or conferences to release the latest information on weather warnings to the public.

5.4 HKO will maintain close regular contact on the weather or tsunami situation with SBDO, or with EMSC if it has been activated. As regards the latest effects of inclement weather

or a tsunami, AAHK, CAD, ISD, HAD HQ, PHQCCC, FSOC, CEDD, DSD, HyD, DEVB, TD, MD, LandsD, HA, EDB and SWD should all keep SBDO/EMSC and each other fully and proactively informed. This will enable all parties to respond quickly and effectively in a coordinated manner. It will also enable SBDO/EMSC to collate all available information; monitor the situation as it develops; identify problems; and ensure that departments receive any support necessary. See also para. 3.6.7.

COMMON SCENARIOS IN HONG KONG

(I) Tropical Cyclones – Warnings and Action to be Taken

5.5 **Tropical Cyclone Warnings** - Tropical cyclone advisories and/or warnings are issued by HKO, via ISD, whenever a tropical cyclone is within about 800 km of Hong Kong and may affect Hong Kong. Such advisories and/or warnings include the name of the tropical cyclone (if available), the number of the tropical cyclone signal issued and advice on the precautionary measures that the public should take, including, when appropriate, advice on the timing of possible flooding due to storm surges. For the nine low-lying areas vulnerable to flooding or seawater inundation during typhoons (i.e. Tai O, Luen On San Tsuen, Ka Wo Lei, Sham Tseng San Tsuen, Lei Yue Mun, Nam Wai, Yuen Long North West low-lying coastal area, Sam Mun Tsai and Shing Mun River) and some locations prone to wave impacts such as Heng Fa Chuen, South Horizons and Tseung Kwan O South. DSD, HKO, HAD and other relevant Government Departments have established a mechanism to alleviate the impact of flooding due to storm surge on the local residents. An early alert system for serious flooding in Tai O due to storm surge has also been established to alert Tai O residents and relevant departments to mobilise their resources for the evacuation and relief efforts. **Annex A** describes in full Hong Kong's **Tropical Cyclone Warning Signals System**, and the respective meanings of the various signals, and gives some advice on precautionary measures. It also includes some sample warning messages.

Broadcast of Special Advisory and Warning Messages

5.6 When **No. 3 or higher Signal** is issued, **SWD** must decide whether and when to close respective social welfare facilities and to issue press releases via ISD. These facilities include child care centres, centres providing after school care programme, elderly services centres or day rehabilitation unit including sheltered workshops, integrated vocational rehabilitation services centres and day activity centres. Similarly, **EDB** will decide whether the schools concerned will open or should be closed and will issue an appropriate public announcement via ISD.

5.7 **HKO** will issue via ISD two **Advisory Messages** before the issuance of the **No. 8 Signal** and once the **No. 8 Signal** has been issued for explaining to the public what action should be taken.

5.8 The **first Advisory Message** (sample at **Appendix A to Annex A**) will be issued once **No. 8 Signal** is expected within two hours. The following actions will be taken by EDB, SWD, HAD, AMS and CAS upon receipt of such notification by ISD and FSOC:-

5.8.1 **EDB** should monitor the situation and issue press releases via ISD on school arrangements as appropriate.

5.8.2 **SWD** should activate the emergency relief coordination centre, and decide whether and when child care centres, centres providing after school care programmes, elderly services centres or day rehabilitation units, including sheltered workshops, integrated vocational rehabilitation services centres and day activity centres are to be closed, and should issue press releases via ISD accordingly.

5.8.3 **HAD** will activate its Emergency Coordination Centre and liaise with the HKPF and GLD Land Transport Division to prepare for any large-scale evacuation of people affected to temporary shelters if situation warrants.

5.8.4 **AMS** will activate the AMS Headquarter Control and make manpower and resources readily available to assist the emergency services.

5.8.5 **CAS** will activate the CAS Central Command Centre and make manpower and resources readily available to assist the emergency services.

5.8.6 **HKO** will inform SBDO of the weather warnings expected to be issued. HKO will advise SBDO the weather warnings that are in force, and of any other relevant information.

5.9 The *second Advisory Message* (sample at **Appendix B to Annex A**) will be issued once a *No. 8 Signal* has been issued. This message will be suitably modified if the *Black Rainstorm Warning Signal* is in force at the same time.

5.10 All subsequent messages relating to the tropical cyclone will also be disseminated by **ISD** and other parties on the advice of **HKO**.

5.11 When any of the *No. 8, No. 9 or No. 10 Signals* is issued, *Tropical Cyclone Warning Bulletins* will be disseminated to the public through the mass media at appropriate intervals. Relevant *Precautionary Announcements* will accompany these bulletins (samples at **Appendices C and D to Annex A**). The latter message will be suitably modified if the *Black Rainstorm Warning Signal* is in force at the same time.

(II) Extreme Conditions

5.12 Under certain “extreme conditions” such as large-scale power outage, extensive flooding, major landslides and serious obstruction of public transport services, employees should be advised to stay in their places for another 2 hours, instead of heading for work (or going out) immediately, after cancellation of No. 8 Signal¹. The Steering Committee will assess the latest information available, review the situation (including the public transportation and other aspects) and announce to the public before **HKO** replaces No. 8 Signal with No. 3 Signal whether the “extreme conditions” apply and warrant extended hours for resumption of work. Factors that the Steering Committee will consider include the strength and impact of the super typhoon, multi-hazard situations arising from the super typhoon (e.g. storm surge, heavy rain), and other

1 Labour Department’s “Code of Practice in Times of Typhoons and Rainstorms” provides sample work arrangements proposed for employers/employees. The sample work arrangements are provided as an example under specific conditions for employers and employees to consider following, e.g. when No. 8 Signal or above is issued before the commencement of working hours and is cancelled 3 hours or more before the end of working hours, an employer may consider requiring all his employees to return to work within 2 hours after cancellation of the warning. In tandem with this, employees are also advised to inform their supervisors as soon as practicable if they have difficulties in reporting to duty. The above is provided as an example and is up to the two parties to agree on the exact arrangement.

scenarios that, depending on the degree of disruption and the scale of it, should seriously, and for a prolonged period, affect the working public to resume work effectively². Moreover, during the first two-hour period after No. 8 Signal is cancelled, the Government will review the situation, and advise the public again, by the end of this two-hour period, whether any further extension of time for resumption of work would be required.

5.13 To facilitate the Steering Committee to decide on whether such “extreme conditions” exist after a super typhoon, or whether such conditions continue to exist thereafter, relevant bureaux and departments (including but not limited to HKO, TD and HyD) should make their best endeavors to provide professional assessments, based on the best available information and data and their respective internal guidelines and assessment criteria, and advise the Steering Committee accordingly.

(III) Rainstorms – Warnings and Action to be Taken

5.14 The Amber-Red-Black colour coded warning system is operated by HKO to give warnings of heavy rainstorms which may affect or are affecting Hong Kong. This **Rainstorm Warning System** may be issued, if necessary, alongside other severe weather warnings, including **Tropical Cyclone Warning Signals**. A description of the **Rainstorm Warning System** and samples of warning signal messages are at **Annex B**.

5.15 During a potentially rainy day, HKO will continuously assess the likelihood of significant rain so as to decide on the need to raise a rainstorm warning signal.

5.16 The actions to be taken in response to each signal are as follows:-

Status	Condition	Purpose	Action required
Amber	Heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 30 millimetres in an hour, and is likely to continue.	Alert public to potential heavy rain that may develop into Red or Black signal situations; trigger for Departments to be on the alert.	(i) HKO will issue a Rainstorm Warning Signal Message and Amber Rainstorm Warning Signal Special Announcement via ISD to the media (samples at Appendices A and B to Annex B). (ii) Key liaison and emergency personnel in Departments should be on the alert and be geared up.
Red	Heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 50 millimetres in an hour, and is likely to continue.	Initiate pre-assigned sequence of action to combat rainstorms; warn the public of heavy rain and those who have to travel should carefully	HKO will issue a Rainstorm Warning Signal Message and Red Rainstorm Warning Signal Special Announcement via ISD to the media (samples at Appendices A and B to Annex B). (i) Emergency units of non-government organisations and Government Departments should take the necessary action stated under

2 Examples of scenarios that may seriously affect the working public to resume work effectively or bring safety concern for a prolonged period include: large-scale power outage, extensive fallen windows from high-rises leading to dangerous streetscape, major landslides, extensive flooding, widespread serious obstruction of public transport services etc.

<u>Status</u>	<u>Condition</u>	<u>Purpose</u>	<u>Action required</u>
		consider weather and road conditions.	section 4. (ii) SBDO/ESU will closely observe the development and seek a direction on the need to activate EMSC.
Black	Heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 70 millimetres in an hour, and is likely to continue.	Advise the public to stay indoors, seek shelter or take other precautionary measures.	(i) HKO will issue a Rainstorm Warning Signal Message and Black Rainstorm Warning Signal Special Announcement via ISD to the media (samples at Appendices A and B to Annex B). (ii) Emergency units of non-government organisations and Government Departments should take the necessary action stated under section 4. (iii) EMSC will be activated if it is not already operating.

5.17 **HKO** will inform EDB, SWD, ISD, PHQCCC, FSCC, SBDO/EMSC, TD, MD, CEDD, DSD, GFS, WSD and HKT of the **Rainstorm Warning** to be issued. These organisations will immediately alert all other organisations in the manner set out at **Annex E**. **EDB** will decide whether schools will open or should be closed and will inform ISD to issue an appropriate public announcement. **SWD** will advise ISD whether or not to issue an announcement on the closure of child care centres, centres providing after school care programmes, elderly services centres or day rehabilitation units, including sheltered workshops, integrated vocational rehabilitation services centres and day activity centres.

5.18 From time to time, special announcements on precautionary measures, weather situation and rainstorm status will be issued by **HKO** via ISD to the media (samples at **Appendix B to Annex B**).

5.19 The **Red Rainstorm Warning Signal / Black Rainstorm Warning Signal** will be in force until the weather situation improves significantly. When **HKO** considers it appropriate to cancel or change the warning signal, **HKO** will disseminate via ISD to the media an appropriate Rainstorm Warning Signal Message (samples at **Appendix A to Annex B**).

5.20 **HKO** will endeavour to give prior indications of the downgrading of **Black or Red Rainstorm Warning Signal**. The message will be included in the relevant special announcement (sample at **Appendix B to Annex B**).

5.21 The dissemination of warning messages will be made by telephone calls, which will be followed by messages via telecommunications links, multi-fax services, GOWISE, etc.

5.22 The prescribed rainfall levels for the issuance of the Rainstorm Warning Signals are for guidance only. When prolonged rain occurs, the Rainstorm Warning Signals may be issued even if these hourly rainfall levels are not reached.

5.23 **HKO** will try its best to issue the Amber Rainstorm Warning Signal a couple of hours ahead of anticipated heavy rain. However, this lead time may be considerably shorter in case

heavy rain develops rapidly. Not all Amber Rainstorm Warning Signals will be followed by Red Rainstorm Warning Signals. For the Red and Black Rainstorm Warning Signals, HKO will endeavour to issue them before the prescribed rainfall levels are reached. However, as local severe rainstorms are extremely difficult to forecast and may develop very quickly, the lead time will generally be very short. There will even be situations in which a Red Rainstorm Warning Signal is issued without a preceding Amber Rainstorm Warning Signal. Similarly, a Black Rainstorm Warning Signal may be issued without a preceding Red Rainstorm Warning Signal.

5.24 As with any warning system containing a forecast element, the issuance of Rainstorm Warning Signals will inevitably involve ‘false alarms’ and ‘misses’. ‘False alarms’ mean that, after the issuance of Rainstorm Warning Signals, the actual rainfall fails to reach the specified levels. In the case of ‘misses’, Rainstorm Warning Signals are issued after the specified levels have been reached, due to rapid development of heavy rain. Departmental operational procedures should therefore contain prescribed arrangements to cover such contingencies.

5.25 When both the *Rainstorm Warning Signals* and *Tropical cyclone warning signals No. 8, 9 or 10* are in force at the same time, paras. 5.8 to 5.11 above and **Appendices B to D of Annex A** regarding the announcements to be made should also apply.

(IV) Flooding – Warning and Action to be taken

5.26 It should be aware that when the Amber Rainstorm Warning Signal is issued, it implies that there will be flooding in some low-lying and poorly drained areas. The Red and Black Rainstorm Warning Signals indicate more serious flooding which could cause major disruption.

5.27 In the event that severe flooding is likely or is occurring in a particular district, the relevant HAD DECC should be activated and SBDO should be notified of the situation. As flooding is more likely after a prolonged period of heavy rainfall, DO concerned should take into account local situations and weather conditions before deciding to step down any emergency response, even after the cancellation of Tropical Cyclone warning signals, Red/Black Rainstorm Warning or Special Announcement on Flooding in the Northern New Territories.

5.28 A *Special Announcement on Flooding in the Northern New Territories* will be issued by HKO whenever heavy rain affects the area and flooding is expected to occur or is occurring in the low-lying plains of northern New Territories which covers the North and Yuen Long Districts. It will be cancelled when the rainfall is no longer expected to cause further flooding. However, in areas where drainage is poor, flooding may persist for a long time after the end of a period of heavy rain and the cancellation of the announcement. Once issued, the announcement will be sent to Government Bureaux/Departments/Offices listed in Annex E1 and E2, the local radio and television stations for broadcast to the public. The announcement will be updated at appropriate intervals until heavy rain is no longer expected to cause any additional significant local effects (sample at **Appendix B to Annex C**).

5.29 When the Special Announcement on Flooding in the Northern New Territories is issued, the DSD Mainland North Region ECC will be activated. DSD and contractor staff will stand ready to clear blocked drains and watercourses in northern and north-western New Territories. FSD, HKPF, GFS and CAS will make available rescue and ambulance resources for providing evacuation and rescue services for flood victims, emergency treatment to casualties and their conveyance to hospitals. These resources will be strategically deployed in the flood prone areas having regard to the DSD flood information issued to relevant Government

Departments. The Emergency Duty Officers of North and Yuen Long District Offices should liaise closely with FSD and DSD.

5.30 DSD has installed river gauging stations covering flood prone areas in northern and north-western New Territories. When any river level exceeds its alert level, **DSD** will notify FSD, HAD, the relevant DO and SBDO/EMSC by fax. Upon receipt of a notice of DSD's information or a report of flooding, staff of the District Office concerned will attend the site for obtaining a better understanding of the situation and contacting village representatives of low-lying areas to give warning. The village representatives will in turn alert their villagers who will also inform the District Offices concerned in case of flooding.

5.31 The issuance of the announcement does not necessarily mean that the whole northern New Territories will generally be affected by heavy rain thus causing flooding in all low-lying plains. Heavy rain may be localised and lead to flooding in certain areas only. It is therefore inappropriate for closures of all schools in the northern New Territories to be declared automatically upon issuance of the announcement. In view of this unique circumstance, **EDB** is responsible for reminding individual schools in the northern New Territories that schools should assess their own vulnerability to flooding based on past experience and decide whether class suspension is required in consultation with EDB and DSD.

5.32 The Shenzhen Authority has agreed to give pre-warning to Hong Kong when water discharge from Shenzhen Reservoir is being considered. As far as possible, the decision on water discharge will be passed to Hong Kong 3 hours before the discharge. In the event of unforeseen circumstances where the 3-hour prior notice is not feasible, the Shenzhen Authority will notify Hong Kong as soon as possible. The Shenzhen Authority will pass the information to the Border Liaison Officer (BLO) of HKPF. Upon receipt of such notification, the BLO will immediately pass the message to the RCCC NTN, who will immediately inform the North and Yuen Long District Offices, PHQCCC and PPRB as well as the emergency units of DSD, FSD, WSD, HKO and SBDO/EMSC as well as ISD by phone and fax. A standard and factual press release will then be issued by ISD (sample at **Appendix D to Annex C**). Once the official communication between BLOs of the two sides has been established, subsequent exchange of information between technical departments can be made. Hong Kong will also be informed when the water discharge ceases.

(V) Localised Heavy Rain

5.33 The development and movement of heavy rain that affects Hong Kong can be vastly different from one case to another. Sometimes the heavy rain may be widespread, while on other occasions it may be localised and cause serious flooding only in certain districts but not others.

5.34 The issuance of the **Announcement on Localised Heavy Rain** is based on the recorded regional rainfall amount. If heavy rain at that time does not extend generally over Hong Kong and reach the criteria for a Red or Black Rainstorm Warning Signal, HKO will issue the Announcement on Localised Heavy Rain (sample at **Appendix E to Annex C**), indicating the affected districts and the respective rainfall recorded, to alert the public of potential flooding due to heavy rain in the districts, so as to take precautionary measures.

5.35 When localized heavy rain persists or there is a change in the affected districts, HKO will update the announcement appropriately. If heavy rain is forecast to extend to affect widespread areas and reach the criteria of Red or Black Rainstorm Warning Signal, HKO will issue the corresponding rainstorm warning signal. The announcement also reminds relevant Government Departments to take appropriate responsive actions, such as emergency measures to alleviate the impact of flooding in concerned districts.

5.36 Members of the public can get the latest situation of heavy rain via radio, television and from the website or mobile application “MyObservatory” of HKO. Those in the districts affected by localized heavy rain should take appropriate measures to prevent possible loss caused by flooding.

(VI) Other Natural Hazards – Warnings and Action to be Taken

5.37 Given the hazards posed by Hong Kong’s tropical weather, it is necessary to provide separate warnings for *Landslides, Thunderstorms and Tsunami*, in addition to those for Tropical Cyclones, Rainstorms and Floods. Detailed background information on Landslides, Floods and Thunderstorms is given in *Annex C*. As for tsunami, which is a geophysical hazard, detailed background information is given in *Annex D*.

5.38 **Landslip Warning** - Heavy rain can cause landslides. A Landslip Warning will be issued by HKO in conjunction with GEO when there is a high risk of many landslides as a result of persistent heavy rainfall. When a warning is issued, a **Landslip Special Announcement** on precautionary measures will be sent to the local radio and television stations for broadcast to the public. The announcement will be updated at appropriate intervals until the likelihood of landslides has diminished (sample at **Appendix A to Annex C**). When the Landslip Warning criteria is no longer met, HKO will cancel the Landslip Warning in conjunction with GEO.

5.39 **Thunderstorm Warning** - Whenever thunderstorms are expected to affect Hong Kong in the short term (within one to a few hours), a brief **Thunderstorm Warning Announcement** will be issued (sample at **Appendix C to Annex C**). Thunderstorm warnings are issued irrespective of whether thunderstorms are widespread or isolated. If thunderstorms will affect isolated areas within a short period of time, the thunderstorm warning issued by HKO will indicate the areas being affected, to alert members of the public to take appropriate precautions. When thunderstorms are widespread or the areas being affected vary, it will be mentioned in the thunderstorm warning that Hong Kong will be affected by thunderstorms without specific reference to individual areas. Reports of high gust, hail, tornado and waterspout as well as special precautionary announcements will be included in the Thunderstorm Warning when situation warrants. Thunderstorm Warnings are primarily targeted at departments and organisations (including the construction, electric power and other industries; those involved in outdoor activities and activities at swimming pools and beaches and at sea) which have specific action to take to minimise loss or damage caused by lightning. The warning is also broadcast to alert the public to the potential threat of lightning. Advice on precautionary actions to be taken by individuals is given in publicity leaflets distributed by HKO.

5.40 **Tsunami Warning** - If an earthquake in the South China Sea or the Pacific Ocean is expected to generate a significant tsunami in Hong Kong (i.e. a tsunami with a height of 0.5 metre or more above the normal tide level) and the estimated time of arrival (ETA) of the tsunami at Hong Kong is within 3 hours, HKO will issue a **Tsunami Warning** (more details in **Appendix A to Annex D**) to alert members of the public to take precautions (sample precautionary announcements at **Appendix B to Annex D**). If a tsunami may reach Hong Kong but the tsunami height at Hong Kong is not likely to be significant, or a significant tsunami is expected to arrive at Hong Kong but the ETA of the tsunami is more than 3 hours away, then HKO will issue a **Tsunami Information Bulletin** (more details in **Appendix C to Annex D**) to notify members of the public. **Tsunami Warnings** are updated at hourly intervals until cancellation, which indicates that the tsunami would not reach Hong Kong or has passed Hong Kong and subsided. **Tsunami Information Bulletins** are updated once every 6 hours when the time is more than 3 hours before ETA, and once every hour when the time is 3 hours or less before ETA, until the **Tsunami Information Bulletin** is replaced by a **Tsunami Warning** or

a final bulletin. HKO will inform EDB, FSD, ISD, OFCA, SBDO/EMSC, TD, CEDD, DSD, GFS, MD, PHQCCC, AAHK, WSD, HAD, LCSD and HKT of the issuance of the ***Tsunami Warning*** or the ***Tsunami Information Bulletin***. These organisations will immediately alert all other parties according to the alerting system set out in **Annex E**.

(VII) Other General Warnings

5.41 ***Public and Media*** - Most of the heavier rain in Hong Kong occurs from around April through to about September. Hence, at around mid- to late-March each year, HKO will release in a press conference the forecast of the number of tropical cyclones that may affect Hong Kong as well as the forecast rainfall in the year. HKO will also advise the public and organizations whose operation would likely be affected by heavy rain and high winds, to take necessary precautions.

5.42 ***Shipping Industry*** - Prior to the start of the typhoon season (around May to November), a notice will be issued by MD to all local ship owners and agents.

5.43 ***Squatter Areas and Floating Population*** - Before the rainy season each year, after which time heavy rains and landslide can be expected, District Office staff will explain the dangers of heavy and prolonged rainfall during routine visits to squatter areas and typhoon shelters and will distribute leaflets containing the names and addresses of local temporary shelters.

6. REVISION OF THE PLAN

6.1 In line with the strategy of this Plan and to reflect the enhancements adopted, where necessary, SB will coordinate updating of the contingency plan in consultation with all addressees as and when required. Revisions of the plan should also incorporate recommendations made as a result of reports on exercises for improvements in training, equipment, procedures and so on.

6.2 All bureaux, departments and other agencies are responsible for promptly notifying SB of any changes to this contingency plan that may be necessary as a result of reorganisations, changes in capabilities and available resources and other circumstances, as and when they occur. SB will then issue suitable amendments to all addressees.

6.3 Suggested amendments to this contingency plan should be addressed to the Assistant Secretary (ESU)2, SB at telephone 2810 2870 or by fax 2501 4755.

Hong Kong's Tropical Cyclone Warning Signals System

Please log on to the following webpage of the HKO for details of the Tropical Cyclone Warning Signals:-

http://www.weather.gov.hk/publica/gen_pub/tcws.pdf

Annex A
Appendix A

Pre - No. 8 Special Announcement

No. 8 Signal likely within 2 hours

1. The following message will be released by HKO via ISD once it has been decided that the issuance of a **No. 8 Signal** is expected within 2 hours -

(a) The Hong Kong Observatory announces that the Tropical Cyclone Warning Signal Number 8 is expected to be issued at or before noon/midnight/_____a.m./p.m./today (). Winds locally will strengthen further.

(b) The Government advises members of the public with long or difficult home journeys or having to return to outlying islands to begin their journeys now. The Government is now making arrangements to release its employees accordingly.
[To be issued between 6:00 a.m. and 10:00 p.m. only]

(c) Announcement by the Education Bureau: The EDB announces that classes of all schools are suspended today.

or

Announcement by the Education Bureau: The EDB announces that classes of all day schools are suspended today. If classes of evening schools are required to be suspended, the bureau will make the announcement in due course.

[To be issued at an appropriate time subject to the communication between HKO and EDB.]

(d) Announcement by the Education Bureau: The EDB announces that classes of all schools are suspended today. Schools should implement contingency measures to ensure the safety of students. They should ensure that conditions are safe before allowing student to return home.

[To be issued at an appropriate time subject to the communication between HKO and EDB.]

2. The above message(s) will only be issued when it is reasonably believed No. 8 Signal will be issued within 2 hours. The media will be asked to broadcast this message at appropriate intervals.

3. If the broadcast time is expected to be outside normal office hours (i.e. before 9:00 a.m. and after 5:00 p.m.) when the majority of the population are unlikely to be at their places of work, HKO will suitably rephrase para. 1(b) in the above message to reflect the situation at that point in time.

WARNING MESSAGE

No. 8 Signal issued

1. The following message will be released by HKO via ISD once the No. 8 Signal has been issued:-

(a) “Tropical Cyclone Warning Signal No. 8 was issued at _____(Time) on _____(Date).

(b) Members of the public are advised to return home at once.
[This sentence is to be deleted if Black Rainstorm Warning is in force]

(c) The major land-based public transport systems will continue to operate with some additional services being provided until further notice.

or

Certain public transport services will continue to be available for some time. However, ferry services may cease at short notice. For details of public transport services, please refer to radio or television broadcast.

(d) Announcement by the Education Bureau: The EDB announces that classes of all schools are suspended today.

or

Announcement by the Education Bureau: The EDB announces that classes of all day schools are suspended today. If classes of evening schools are required to be suspended, the bureau will make the announcement in due course.

[To be issued at an appropriate time subject to the communication between HKO and EDB.]

(e) Announcement by the Education Bureau: The EDB announces that classes of all schools are suspended today. Schools should implement contingency measures to ensure the safety of students. They should ensure that conditions are safe before allowing student to return home.

[To be issued at an appropriate time subject to the communication between HKO and EDB.]

2. The media will be asked to broadcast this message at appropriate intervals after the issuance of the *No. 8 Signal*.

3. If the broadcast time is expected to be outside normal office hours (i.e. before 9:00 a.m. and after 5:00 p.m.) when the majority of the population are unlikely to be at their places of work, HKO will suitably rephrase para. 1(b) and 1(c) in the above message to reflect the situation at that point in time.

WARNING MESSAGE

Precautionary Announcements with No. 8 Signal (Sample)

1. Complete all precautions in your home. Lock all windows and doors, insert reinforced shutters and gates if they are available. / Adhesive tape fixed to large window-panes in exposed positions will reduce damage and injury by broken glass. Drains should be cleared of leaves and rubbish as soon as possible.
- 2.# Park your car where it is safe.
3. Do not stand near windows on the exposed side of your home. Make sure you have a safe place to shelter, should windows be broken.
- 4.* Owing to storm surge, some / low-lying areas / may have / already had / serious flooding or backflow of seawater. You should avoid going to likely affected low-lying areas and stay away from dangerous places.
- 5.* Seas are very rough / high / and / there are swells, / the current is strong with changing direction, you are advised to stay away from the shoreline and / low-lying areas, and / not to engage in water sports.
6. Flights at Hong Kong International Airport may be affected by the weather. Please contact your airline for the latest flight information before departing for the airport.
- 7.* Owners of neon signs should switch off the electricity supply to the signs.
8. Please listen to radio or watch TV for the latest weather information broadcast. You can also browse the Hong Kong Observatory's website and mobile application for the information.

(With a departing tropical cyclone:)

- 9.* Although the tropical cyclone is moving away from Hong Kong, gales are expected to persist for some time. Please continue to stay indoors until winds moderate. Do not touch electric cables that have been blown loose.
- 10.* As gales and violent squalls are still occurring in places, precautions should not yet be relaxed.
- 11.* Tropical cyclone brought different degrees of damages to Hong Kong. There may be hidden danger. Members of the public should remain on the alert for assurance of personal safety.

Should not be broadcast at night.

* Delete as appropriate

WARNING MESSAGE

Precautionary Announcements with No. 9 or No. 10 Signal (Sample)

1. Do not go outside. If you are reasonably protected, stay where you are. Do not touch electric cables that have been blown down.
2. Stay away from exposed windows and doors because glass, already under strain from wind pressure, will shatter easily if hit by an object. Make sure you have a safe place to shelter. You should only fix broken windows and doors when there is no danger in doing so.
3. If the eye of the tropical cyclone passes directly over Hong Kong, there may be a temporary lull lasting from a few minutes to several hours. This will be followed by a sudden resumption of violent winds from a different direction. Remain where you are if protected and be prepared for destructive winds and the change in wind directions. Listen to broadcast warnings.
- 4.* Owing to storm surge, / some / low-lying areas / may have / already had / serious flooding or backflow of seawater. You should avoid going to likely affected low-lying areas and stay away from dangerous places.
- 5.* Since seas are very rough, / high, / phenomenal, / and / there are swells, / the current is strong with changing direction, you are advised to stay away from the shoreline / low-lying areas, and / and not to engage in water sports.
- 6.* People outdoors should find a safe place now and remain there until the danger is over.
7. Flights at Hong Kong International Airport may be affected by the weather. Please contact your airline for the latest flight information before departing for the airport.
- 8.* Tropical cyclone brought different degrees of damages to Hong Kong. There may be hidden danger. Members of the public should remain on the alert for assurance of personal safety.

* Delete as appropriate.

Rainstorm Warning System

Please log on to the following webpage of the HKO for details of the Rainstorm Warning System:-

http://www.hko.gov.hk/publica/gen_pub/rain_e.htm

**RAINSTORM WARNING SYSTEM
Sample Rainstorm Warning Signal Messages**

Issuance of Amber/Red/Black Rainstorm Warning Signal Message

Amber/Red/Black Rainstorm Warning Signal has been issued at _____ a.m./p.m.

Cancellation of Amber/Red/Black Rainstorm Warning Signal Message

Amber/Red/Black Rainstorm Warning Signal was cancelled at _____ a.m./p.m.

Please continue to exercise due care. People who have to travel should carefully consider weather and road conditions and take necessary precautions.

Though rainstorm warning has been cancelled, people should stay alert to the danger that may be brought about by river flooding.

Replacement of the Black/Red Rainstorm Warning Signal by Amber Rainstorm Warning Signal Message

The Amber Rainstorm Warning Signal has been issued to replace the Red/Black Rainstorm Warning Signal at _____ a.m./p.m.

Please continue to exercise due care. People who have to travel should carefully consider weather and road conditions and take necessary precautions.

RAINSTORM WARNING SYSTEM
Sample Special Announcements

Amber Rainstorm Warning Signal Special Announcement

The Rainstorm Warning Signal is now Amber. This means that heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 30 millimetres in an hour and is likely to continue.

There will be flooding in some low-lying and poorly drained areas. People who are likely to be affected should take necessary precautions to reduce their exposure to risk posed by the heavy rain and flooding.

Heavy rain may bring about flash floods. People should stay away from watercourses. People who are likely to be affected by flooding should take necessary precautions to avoid losses.

- * Members of the public are advised to pay attention to weather changes as these might lead to Red or Black warning signal situations. Those who have definite duties during rainstorms should be prepared.
- * According to present/latest indications, the Hong Kong Observatory may issue the Red Rainstorm Warning Signal later. Those who have definite duties during rainstorms should be prepared.
- * According to present/latest indications, it is not likely that the Red Rainstorm Warning Signal will be issued.

(The following sentence should be used when the Amber Rainstorm Warning Signal is issued to replace the Red or Black signal.)

- * Please continue to exercise due care. People who have to travel should carefully consider weather and road conditions and take necessary precautions.

Please listen to radio or watch television for traffic conditions and further announcements on the rainstorm.

Red Rainstorm Warning Signal Special Announcement

The Rainstorm Warning Signal is now Red. This means that heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 50 millimetres in an hour, and is likely to continue.

Further heavy rain could cause, if not already caused, serious road flooding and traffic congestion and could disrupt normal school hours. Parents, students, school authorities and school-bus drivers should listen to radio or television announcements on schools. People who have to travel should carefully consider the weather and road conditions and take necessary precautions.

Heavy rain will bring flash floods, and flooding is occurring or is expected to occur in watercourses. People should stay away from watercourses. Residents living in close proximity to rivers should stay alert to weather conditions and should consider evacuation if their homes may become flooded.

- * Meanwhile, those with duties to perform during rainstorms should now go to their duty stations.
- * According to present / latest / indications, the Red Rainstorm Warning Signal is expected to last for at least _____ hours. / until at least _____ a.m. / p.m. / today / tomorrow.
- * According to present / latest / indications, the Hong Kong Observatory will consider cancelling the Red Rainstorm Warning Signal in _____ hours. / at _____ a.m./p.m. today / tomorrow.

(The following two sentences should be used when the Red Rainstorm Warning Signal is issued to replace the Black signal.)

- * The Observatory reminds members of the public to continue to exercise due care against the danger posed by the heavy rain.
- * People who are likely to be affected by heavy rain and flooding should take necessary precautions to avoid losses.

Please listen to radio or watch television for traffic conditions and further announcements on the rainstorm.

Black Rainstorm Warning Signal Special Announcement

The Rainstorm Warning Signal is now Black. This means that heavy rain has fallen or is expected to fall generally over Hong Kong, exceeding 70 millimetres in an hour, and is likely to continue.

Because of seriously flooded roads and inclement weather conditions, you are advised to take shelter in a safe place and stay there. Parents, students, school authorities and school-bus drivers should listen to radio or television announcements on schools. Do not attempt to travel until the Black Rainstorm Warning Signal is no longer in force and traffic conditions have improved.

Heavy rain will bring flash floods, and flooding is occurring or is expected to occur in watercourses. People should stay away from watercourses. Residents living in close proximity to rivers should stay alert to weather conditions and should consider evacuation if their homes may become flooded.

- * According to present / latest / indications, the Black Rainstorm Warning Signal is expected to last for at least _____ hours. / until at least _____ a.m. / p.m. / today / tomorrow.
- * According to present / latest / indications, the Observatory will consider issuing a lower rainstorm warning signal / the Amber / Red Rainstorm Warning Signal to replace the Black Rainstorm Warning Signal in _____ hours / at _____ a.m. / p.m. / today / tomorrow.

According to present / latest / indications, the Observatory will ***consider cancelling*** the Black Rainstorm Warning Signal in _____ hours. / at _____ a.m. / p.m. / today / tomorrow.

Please listen to radio or watch television for traffic conditions and further announcements on the rainstorm.

- * Delete as appropriate.

Thunderstorm, Rainstorm, Flood and Landslip Warning Services in Hong Kong

Please log on to the following webpage of the HKO for details of the above warning services:

<http://www.hko.gov.hk/wservice/tsheet/tsflwarn.htm>

Landslip Special Announcement (Sample)

<p><i>Issuance</i></p> <p><i>When first issuing Landslip Warning</i></p> <p><i>When updating</i></p>	<p>For all Broadcasting Stations – Attention: Duty Announcer</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Please broadcast the following special announcement as soon as possible and thereafter</p> <p>* It is desirable to broadcast at 15-minute intervals during the first hour if programme commitments allow.</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>* Please broadcast the following as soon as possible.</p> </div> <p>Landslip Special Announcement issued by the Hong Kong Observatory at _____ a.m./p.m. on _____:</p> <p>The Hong Kong Observatory has issued the Landslip Warning. Keep away from steep slopes or retaining walls.</p> <p>Motorists should avoid driving in hilly areas or on roads with landslip warning signs.</p> <p>Cancel non-essential appointments, stay at home or remain in a safe shelter.</p> <p>If you see signs of landslide danger, keep away from the area and report to the Police.</p> <p>Temporary shelters provided by District Offices are now open. If you receive a notice to evacuate because of landslide danger, or believe that your home is endangered, you should make immediate arrangements to move to a safe shelter.</p>
<p>Cancellation</p>	<p>For all Broadcasting Stations – Attention: Duty Announcer</p> <hr/> <p>* <i>Please cease all Landslip Special Announcement.</i></p>

* Delete as appropriate

Special Announcement on Flooding in the Northern New Territories (Sample)

	<p>For all Broadcasting Stations - Attention: Duty Announcer</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p>Please broadcast the following special announcement as soon as possible and thereafter. It is desirable, programme commitments allowing, to broadcast at 15-minute intervals during the first hour.</p> </div>
<p>Issuance (WFNTSA)</p>	<p>* Special Announcement on Flooding in the northern New Territories issued by the Hong Kong Observatory at _____ a.m. / p.m. on _____.</p>
<p>Update (WFNTSA)</p>	<p>* Special Announcement on Flooding in the northern New Territories updated by the Hong Kong Observatory at _____ a.m. / p.m. on _____.</p> <p>Heavy rain is affecting the northern part of the New Territories, especially in Yuen Long / Pat Heung and Kam Tin / San Tin and Ngau Tam Mei / Sheung Shui / Ta Kwu Ling /Sha Tau Kok area(s). More than _____ millimetres of rainfall have been recorded there in the past few / _____ hours. Residents in northern New Territories, who are likely to be affected, are advised to take necessary precautions to avoid possible flood damage. Heavy rain may bring about flash floods. People should stay away from watercourses. They should also pay attention to the flood sirens if they are nearby.</p>
<p>Cancellation (WFNTSAC)</p>	<p>* Special Announcement on Flooding in the northern New Territories cancelled by the Hong Kong Observatory at _____ a.m./p.m. on _____.</p>

* Delete as appropriate

Thunderstorm Warning Announcement (Sample)***ISSUANCE**

Thunderstorm Warning was issued at _____ a.m./p.m.* on _____. It will be valid until _____:00/ 15/ 30/ 45* a.m./p.m. today/tomorrow*. One or two / A few / Frequent / isolated / Scattered / Occasional/ squally * thunderstorms are expected to occur over Hong Kong / Hong Kong Island and Kowloon, / Lantau, / New Territories, / New Territories West, / New Territories East, / New Territories North, / Southern Waters and Islands of Hong Kong, / Eastern Waters of Hong Kong*.

***UPDATE**

The Thunderstorm Warning issued at _____ a.m./ p.m.* on _____ will remain in force until _____:00/ 15/ 30/ 45* a.m./p.m.* today/ tomorrow* . One or two / A few / Frequent / isolated / Scattered / Occasional/ squally * thunderstorms are expected to occur over Hong Kong / Hong Kong Island and Kowloon, / Lantau, / New Territories, / New Territories West, / New Territories East, / New Territories North, / Southern Waters and Islands of Hong Kong, / Eastern Waters of Hong Kong*.

***EXTENSION**

The Thunderstorm Warning issued at _____ a.m./ p.m.* on _____ has been extended until _____:00/ 15/ 30/ 45* a.m./pm* today/ tomorrow*. One or two / A few / Frequent / isolated / Scattered / Occasional/ squally * thunderstorms are expected to occur over Hong Kong / Hong Kong Island and Kowloon, / Lantau, / New Territories, / New Territories West, / New Territories East, / New Territories North, / Southern Waters and Islands of Hong Kong, / Eastern Waters of Hong Kong*.

Gusts exceeding _____ kilometres per hour were recorded at / in* _____ at around _____ a.m./p.m. *.

Gusts reaching _____ kilometres per hour or above may affect / may continue to affect* Hong Kong / Hong Kong Island and Kowloon, / Lantau, / New Territories, / New Territories West, / New Territories East, / New Territories North, / Southern Waters and Islands of Hong Kong, / Eastern Waters of Hong Kong*.

Hail was reported in the Pearl River Delta / near the Pearl River Estuary / over inland Guangdong / _____ * in the past few hours / _____ * Hail may affect Hong Kong shortly / in the next couple of hours / in the next few hours / _____*.

Hail was reported at / in* _____ at around ____:____ a.m. / p.m. *. Hail may continue to affect Hong Kong shortly / in the next couple of hours / in the next few hours / _____*.

Hail may affect Hong Kong shortly / in the next couple of hours / in the next few hours / _____*.

Tornado / Waterspout was reported at / in* _____ at around ____:30* a.m./p.m. *.

Members of the public are advised to take the following precautions when thunderstorms occur:

- #1. Stay indoors. Seek shelter in buildings if you are engaging in outdoor activities.
- #2. Do not stand on high grounds. Keep away from highly conductive objects, trees or masts.
- #3ⁱ. Take precautions against violent gusts. Beware of flying debris and falling objects.
- #4ⁱ. Drivers using highways and flyovers should reduce speed and be alert to violent gusts.
- #5ⁱⁱ. Evacuate from heavy rain affected low-lying areas with poor drainage to avoid flooding.

*** CANCELLATION**

Thunderstorm Warning was cancelled at _____ a.m./ p.m.* on _____.

Contingency Plan for Natural Disasters

- i. Consider to use only when gusts of more than 19.5 m/s (70 km/h) have been recorded or are expected to occur at anemometer stations on the ground (not those on high grounds).
- ii. Consider to use when localized heavy rain is affecting low-lying regions where more than 50 mm of rainfall has been recorded in an hour, heavy rain is expected to continue and no rainstorm warning is triggered.

*Delete as appropriate

#Optional, delete if not appropriate

Water Discharge from Shenzhen Reservoir Announcement (Sample)

Hong Kong has been informed by the Shenzhen Authority that water would be discharged from the Shenzhen Reservoir from about _____am/pm today ().

There may be a risk of flooding in the northern parts of the New Territories. Residents are advised to take necessary precautions to avoid possible flood damage. They should also pay attention to the flood siren if they are nearby. Various Government Departments, including District Offices (North) and (Yuen Long), Drainage Services, Police, Fire Services, Water Supplies and Hong Kong Observatory have been informed in order that they can take any necessary measures.

The District Offices (North) and (Yuen Long) are making arrangements to inform local residents of the appropriate actions to take.

End/

Announcement on Localised Heavy Rain (Sample)

Announcement on Localised Heavy Rain		
For all Broadcasting Stations – Attention: Duty Announcer		
<i>*Issuance</i>	<p>* Please broadcast the following announcement as soon as possible and thereafter. It is desirable, programme commitments allowing, to broadcast at 15-minute intervals during the first hour.</p> <p>* Announcement on Localised Heavy Rain:</p> <p>Rain was particularly heavy in _____, * _____ * and _____, with more than 70 / _____ millimetres of rainfall recorded in the past * few / _____ hour(s) * ending at _____ a.m. / p.m. and may cause serious flooding.</p> <p>Residents who are likely to be affected are advised to take necessary precautions to avoid possible flood damage. Heavy rain may bring about flash floods. People should stay away from watercourses. Drivers should beware that there are likely to be serious road flooding and traffic congestion.</p>	
<i>*Cancellation</i>	* Please cease all announcements on localised heavy rain.	
RRAIN * Delete as appropriate.	Originator	Date / Time of Dispatch _____ H / _____

TSUNAMI WARNING SERVICE IN HONG KONG

Basics of Tsunami

A tsunami is a series of water waves caused by an undersea earthquake, or much less frequently by an undersea volcanic eruption or an undersea landslide. Most tsunamis occur in the Pacific Ocean which covers more than one-third of the earth's surface and is surrounded by a series of volcanoes, deep-ocean trenches and island arcs where most earthquakes occur. This circum-Pacific seismic belt is the boundary of major tectonic plates and is also called the "ring of fire" for its high seismicity. Hong Kong is located more than 600 kilometres from this belt.

2. Since 1900, more than 1,300 tsunami events were observed or recorded worldwide. Over 45% of these events brought about casualties or damage, most of them were local or regional tsunamis that affected areas within a few hundred kilometres or up to a thousand kilometres of the source respectively. However, a great earthquake will sometimes generate a tsunami that sweeps across the entire Pacific and causes destruction at distant coasts. For example, the magnitude 9.5 Chilean earthquake in 1960 brought about significant loss of life and property in Hawaii and Japan. The magnitude 9.0 earthquake off the west coast of northern Sumatra on 26 December 2004 also caused great damage around the Indian Ocean, as far as the east African coast. The tsunami generated by the 9.0 earthquake off the east coast of north-eastern Japan on 11 March 2011 induced damage in the United States.

3. Tsunami waves are water waves with long wavelengths in the order of hundreds of kilometres. In deep waters of the open sea, a tsunami travels as fast as a commercial jet plane, has small amplitudes, and is often not felt by people on vessels. When a tsunami approaches the coast, it slows down with the decrease of water depth to speeds similar to those of a car moving on the road. The tsunami then increases in height rapidly and becomes dangerous. The height that a tsunami reaches at a specific location depends, besides the magnitude and fault mechanism of the earthquake, also on the shapes of the sea floor and the shoreline, and on the direction of propagation and other characteristics of the tsunami. The run-up height of a tsunami, i.e. the height that the sea reaches up the shore, further depends on the slope and other characteristics of the land surface. It is generally highest at beaches and shallow bays facing the approaching tsunami.

Risk of Tsunami in Hong Kong

4. The chance of Hong Kong being affected by a significant tsunami (i.e. one with a tsunami height of 0.5 metre or higher) is very small. Since automatic tide gauges were installed in Hong Kong in the early 1950s, only seven measurable tsunamis were recorded, all not significant. This is notably due to the sheltering effect of the land masses of Taiwan and the Philippines against tsunamis originated in the Pacific.

5. Similar to storm surges caused by approaching tropical cyclones, significant tsunamis may bring about inundation of low-lying coastal areas. Because of historical concern about storm surges, Hong Kong is already well prepared against tsunamis. Coastal designs of built-up areas in Hong Kong and general land use have catered for storm surges. This offers protection against tsunamis of considerable height (more than two times the highest tsunami recorded in Hong Kong since the early 1950s). For example, the land around Victoria Harbour

is at least 2.5 metres above the mean sea level, and 1 metre above the highest astronomical tides. Built-up areas around the Tolo Harbour are generally another metre higher than those around the Victoria Harbour.

Earthquake Monitoring and Information Dissemination in Hong Kong

6. As majority of tsunami is caused by earthquake, earthquake monitoring is an important part of the Tsunami Warning system. HKO has installed broadband seismographs at Po Shan Road, Mid-levels and the HKO's Headquarters, Tsim Sha Tsui to monitor earthquakes worldwide, especially those earthquakes in the South China Sea that will probably generate tsunami. The Po Shan Seismograph Station is one of the about 150 members of the Global Seismographic Network that possess broadband seismograph, its recorded seismic waves are provided via the Internet to the Incorporated Research Institutions for Seismology (IRIS) in the United States. Such real time data can then be obtained via IRIS by various earthquake and tsunami centres around the world such as the South China Sea Tsunami Advisory Centre (SCSTAC), the Pacific Tsunami Warning Centre (PTWC) and the Northwest Pacific Tsunami Advisory Centre (NWPTAC) for the determination of earthquake parameters.

7. HKO also operates seven short period seismograph stations at Cape D'Aguilar, Cheung Chau, Keung Shan, Lead Mine Pass, Luk Keng, Tsim Bei Tsui and Yuen Ng Fan respectively. This coupled with the seismograph stations at Po Shan and the HKO's Headquarters form a local earthquake monitoring network of nine stations for determining effectively the epicentre of locally felt earthquakes in Hong Kong's nearby regions. Accelerographs are also installed at some seismograph stations for recording peak ground acceleration during felt earthquake which help to determine the earthquake intensity in Hong Kong. Members of the public may log on to the following webpage of the HKO for the distribution of the earthquake monitoring stations in Hong Kong:-

https://www.weather.gov.hk/gts/quake/seismic_mon.htm.

8. HKO's earthquake data processing system collects real time seismic waveform data from global and Hong Kong seismograph networks to compute earthquake parameters such as origin time, epicentre and magnitude. HKO also collects earthquake and tsunami information issued by the Ministry of Natural Resources of China, China Earthquake Administration, Earthquake Administration of Guangdong Province, PTWC, NWPTAC, SCSTAC, U.S. National Tsunami Warning Centre and U.S. Geological Survey.

9. For locally felt earthquakes and larger earthquakes worldwide, HKO will issue quick earthquake messages via its websites / social media and RSS to the public, and also SMS and emails to news agencies, media, related government policy bureaux and departments as well as earthquake and tsunami monitoring centres overseas. In addition, HKO will issue reports on strong earthquakes and locally felt earthquakes to the media via ISD.

Tsunami Prediction

10. While larger earthquakes in general generate tsunamis, there is no one-to-one correspondence because the size of a tsunami also depends on how the sea floor is displaced by the earthquake so that the magnitude of the earthquake is not the only factor. More elaborate methods of seismic analysis have emerged in recent years for inferring the mechanism and scale of earth crust rupture associated with an undersea earthquake. But some necessary details are still difficult to determine for an accurate estimation of the size of the resulting tsunami,

particularly in the early stage of seismic analysis.

11. At a few places in the world where there is abundance of past tsunami data, the height of the tsunami at any specific point can be estimated from the location, magnitude and other characteristics of the earthquake using analogies from historical tsunami events. This is however not applicable to places which has not experienced major tsunamis in the past, like Hong Kong.

12. The absence of historical data also makes calibration of numerical tsunami models difficult and hence there exists large uncertainties in the estimations.

13. While earthquake detection and seismic analysis do enable early warnings of tsunamis to be made, it carries an inherent degree of uncertainty and the false alarm rate and missing rate could be rather high.

Tsunami Watch and Warning

14. The Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS) of the Intergovernmental Oceanographic Commission (IOC) under the United Nations Educational, Scientific and Cultural Organization (UNESCO) is coordinating the implementation of the tsunami warning and mitigation system for the Pacific and South China Sea. The PTWC serves as the operational centre of the PTWS for the Pacific (including the South China Sea), responsible for the dissemination of Tsunami Warning messages. In addition, the SCSTAC under the Ministry of Natural Resources of China and NWPTAC under the Japan Meteorological Agency also provide regional tsunami alerts for the South China Sea and the western North Pacific respectively. SCSTAC, PTWC and NWPTAC will make use of seismic data collected from seismographs all over the world to determine the location, depth and magnitude of the earthquake and assess the likelihood of a tsunami. SCSTAC, PTWC and NWPTAC would send tsunami messages to organisations participating in PTWS, including HKO, on details of any tsunami forecast including the locations affected, estimated time of tsunami arrival and tsunami height.

15. HKO makes use of the analysis results of its earthquake data processing system, the tsunami information issued by the SCSTAC, PTWC and NWPTAC as well as the monitoring of the sea level readings detected by tide gauges and buoys over the South China Sea and the Pacific to assess whether a tsunami will affect Hong Kong, and to determine the arrival time and estimate roughly the height of the tsunami. If a significant tsunami (i.e. a tsunami with a height of 0.5 metre or more above the normal tide level) is expected to reach Hong Kong within 3 hours, the HKO will issue a Tsunami Warning for the public. If a significant tsunami is expected to arrive at Hong Kong in more than 3 hours or a tsunami is not likely to be significant, the HKO will issue a tsunami information bulletin.

16. HKO also provides real-time sea level data from its tide gauges to SCSTAC, PTWC and NWPTAC for tsunami monitoring. SCSTAC, PTWC and NWPTAC make use of sea level data from coastal tide gauges and ocean-bottom mounted sea level sensors, updated seismic analysis, and other data to update their tsunami messages.

17. For a severe earthquake which occurs in the South China Sea close to Hong Kong, HKO will issue a warning as soon as practicable even before receiving any tsunami message from SCSTAC, PTWC or NWPTAC. In such cases, an assessment on the possibility of a significant tsunami in Hong Kong will be made based on the intensity of the locally felt tremor and the location of the earthquake as determined by HKO's own seismograph network.

Tsunami Warning

1. The following information will be given in a Tsunami Warning:-
 - (a) Time of occurrence, location and magnitude of the earthquake that generates the tsunami.
 - (b) The estimated time of arrival of the tsunami at Hong Kong.
 - (c) The estimated tsunami heights in Hong Kong.
 - (d) An advice for members of the public to take precautions.
 - * (e) Normal tides of the day in Hong Kong.
 - * (f) Tsunami heights recorded around the Pacific, the South China Sea or Hong Kong.
 - (g) Precautionary announcements (see Appendix B to Annex D).

Items marked with an asterisk are optional depending on availability of information and relevance for a particular event.

Annex D
Appendix B

Precautionary Announcements to Accompany a Tsunami Warning

- (a) Stay away from shores, beaches and low-lying coastal areas. If you are there, move inland or to higher grounds. The upper floors of high, multi-storey, reinforced concrete building can provide safe refuge if there is no time to quickly move inland or to higher grounds.
- (b) Do not engage in water sports.
- (c) Vessels should stay away from the shore or shallow waters. If vessels remain moored in typhoon shelters, their moorings should be doubled and all personnel should leave the vessels and head for higher grounds.
- (d) Please observe these precautions until the Hong Kong Observatory cancels the Tsunami Warning.
- (e) Please stay tuned to the radio or television for further information.

Tsunami Information Bulletin

1. The following information will be given in a Tsunami Information Bulletin:-
 - (a) Time of occurrence, location and magnitude of the earthquake that generates the tsunami.
 - (b) A statement to the effect that a tsunami has been or might be generated, and its estimated time of arrival at Hong Kong. If the tsunami height at Hong Kong is expected to be below 0.5 metre, this will be mentioned.
 - * (c) Normal tides of the day in Hong Kong.
 - * (d) Tsunami heights recorded around the Pacific, the South China Sea or Hong Kong.

Items marked with an asterisk are optional depending on availability of information and relevance for a particular event.

Annex E

Full Alerting System

<i>To be informed by</i>	<i>Through</i>	<i>Page</i>
Hong Kong Observatory	Telephone, Fax, SMS or Email	E1
Hong Kong Observatory	Fax	E1
Information Services Department	Telephone, Fax and SMS	E2
Security Bureau Duty Officer or Emergency Monitoring & Support Centre if activated	Telephone	E3
Police Headquarters Command and Control Centre	Police Internal Communications System	E3
Fire Services Communications Centre	Telephone and Fax	E3
Transport Department	Telephone and Fax	E4
Marine Department	Telephone, Fax, SMS or Email	E5
Civil Aviation Department	Very High Frequency Radio Broadcasts	E5
Airport Authority Hong Kong	Electronic Means	E5

**To be informed by HKO through
Telephone, Fax, SMS or Email**

Government Bureaux/Departments/Offices

Agriculture, Fisheries and Conservation Department
Airport Authority Hong Kong
Architectural Services Department
Audit Commission
Auxiliary Medical Service Chief
Secretary for Administration Civil
Aid Service
Civil Aviation Department
Civil Engineering and Development Department
Civil Service Bureau
Commerce and Economic Development Bureau
Correctional Services Department
Customs and Excise Department
Development Bureau
Drainage Services Department
Education Bureau
Electrical and Mechanical Services Department
Fire Services Department
Food and Environmental Hygiene Department
Government Secretariat Departmental Administration Unit (Admin Wing)
Government Flying Service
Government Laboratory
Government Logistics Department
Highway Department
Home Affairs Department
Hong Kong Examinations and Assessment Authority
Hong Kong Monetary Authority
Hong Kong Police Force
Housing Department
Immigration Department
Independent Commission Against Corruption
Information Services Department
Lands Department
Legal Aid Department
Leisure and Cultural Services Department
Marine Department
Office of the Communications Authority
Post Office
Security Bureau / Emergency Monitoring and Supporting Centre
Social Welfare Department
Transport Department
Treasury

Vocational Training Council
Water Supplies Department

Communications

HKT

To be informed by **HKO** through **Fax**

Media

Cable TV
Commercial Radio
Fantastic TV
Metro Radio
Now TV
RTHK (for both TV and radio services)
TVB
Viu TV

To be informed by **ISD through
Telephone, SMS or Email**

Government Bureaux/Departments/Offices

Architectural Services Department
Civil Engineering and Development Department
Department of Health
Development Bureau
Drainage Services Department
Food and Environmental Hygiene Department
Highways Department
Home Affairs Department
Housing Department
Judiciary
Labour Department
Lands Department
Leisure and Cultural Services Department
Security Bureau
Social Welfare Department

**To be informed by SBDO
(or EMSC if activated) through Telephone**

Chief Executive's Office
Chief Secretary for Administration Secretary for
Security
EMSC

**To be informed by PHQCCC through
its Internal Communications System**

Government Bureaux/Departments/Offices

Police Regional Command and Control Centre Hong Kong
Police Regional Command and Control Centre Kowloon
Police Regional Command and Control Centre New Territories
Police Regional Command and Control Centre Marine
Police Traffic Branch
Police Public Relations Branch

To be informed by FSCC through Telephone and Fax

Government Bureaux/Departments/Offices

Auxiliary Medical Service
Civil Aid Service

To be informed by TD through Telephone and Fax

Mass Transit Systems

MTR Corporation Ltd

Bus Services

Citybus Ltd

Discovery Bay Transit Services Ltd

Long Win Bus Co Ltd

New Hong Kong Bus Co Ltd

New Lantao Bus Co (1973) Ltd

New World First Bus Services Ltd

Park Island Transport Co Ltd

The Kowloon Motor Bus Co (1933) Ltd

廣東港珠澳大橋穿梭巴士有限公司

Ferry Services

Chuen Kee Ferry Ltd

Coral Sea Ferry Service Co Ltd

Discovery Bay Transportation Services Ltd

Eastern Ferry Company

Fortune Ferry Co Ltd

Hong Kong & Kowloon Ferry Ltd

Hong Kong & Yaumatei Ferry Co Ltd

New World First Ferry Services Ltd

Park Island Transport Co Ltd

Peng Chau Kai To Ltd

The "Star" Ferry Co Ltd

Tsui Wah Ferry Service Co Ltd

Tramway Services

Hong Kong Tramways Co Ltd

Peak Tramways Co Ltd

Tunnels, Toll Roads and Bridges

Aberdeen Tunnel

Central-Wanchai Bypass

Cross Harbour Tunnel

Discovery Bay Tunnel

Eastern Harbour Crossing

Heung Yuen Wai Highway

Hong Kong-Zhuhai-Macao Bridge

Kai Tak Tunnel

Lion Rock Tunnel

Shing Mun Tunnels

Tai Lam Tunnel
Tate's Cairn Tunnel
Tseung Kwan O Tunnel
Tsing Ma Control Area (Cheung Tsing Tunnel, Lantau Link and Ting Kau Bridge)
Tsing Sha Control Area – Route 8
Western Harbour Crossing

Others

Hong Kong School of Motoring Ltd
Public Omnibus Operators Association Ltd
Ngong Ping 360 Ltd
Cross-boundary bus / coach services in Man Kam To, Sha Tau Kok, Lok Ma Chau (LMC),
LMC-Spur Line and Shenzhen Bay Port

**To be informed by MD through
Telephone, Fax, SMS or Email**

Cross-boundary Ferry Services

Companies operating cross-boundary ferry services in ferry terminals under the management of MD or AAHK, namely:-

- Hong Kong-Macau Ferry Terminal
- China Ferry Terminal
- Tuen Mun Ferry Terminal
- SkyPier

Freight Terminals and Dockyards

Asia Container Terminals Ltd
COSCO - HIT Terminals (HK) Ltd
CSX World Terminals Hong Kong Ltd
Hongkong International Terminals Ltd
Hong Kong Pilots Association Ltd
Hongkong United Dockyards Ltd
Kai Tak Cruise Terminal
Modern Terminals Ltd
Ocean Terminal
River Trade Terminal Co Ltd
Yiu Lian Dockyards Ltd

**To be informed by CAD through
Very High Frequency Radio Broadcasts**

Aircraft Services

Aircraft operating in the Hong Kong Flight Information Region

**To be informed by AAHK through
Electronic Means**

Airport Operations

All Airline Companies
Air Cargo Operators
Apron Operators
Passenger Handling Operators
Cross-Border Ferry Handling Agent
Franchised Public Bus Operators
Mass Transit Railway Corporation

**Emergency Stores List for Natural Disasters
(including those arising from severe weather conditions)
at Government Logistics Centre**

Item	C.C. No.	Description	Quantity
1	11601810A	Woolen blanket, 1.5 m x 2.0 m	1,000 nos.
2	13002621C	Nail brush, double side, 114 mm	1,000 nos.
3	94435309G	Disposable PVC gloves, small, 100's	1,900 packs
4	94435709B	Disposable PVC gloves, medium, 100's	2,300 packs
5	80006100E	Industrial Type Rubber Gloves	4,500 pairs
6	11822141J	Hand towel, white, 60 cm x 120 cm	880 nos.
7	13024031B	Toilet soap, 100 gm cake	880 pieces
8	11307100A	Black rubber boots, half-wellington, UK men size 5	165 prs.
9	11307120F	Black rubber boots, half-wellington, UK men size 6	165 prs.
10	11307140L	Black rubber boots, half-wellington, UK men size 7	290 prs.
11	11307160E	Black rubber boots, half-wellington, UK men size 8	290 prs.
12	11307180K	Black rubber boots, half-wellington, UK men size 9	315 prs.
13	80001020F	Household Bleach in litre (5 litres/drum)	54,000 litres
14	16705159J	Chloride of lime in 50 kg/drum	5,000 kg
15	19982001F	Sand bag, empty, 360 mm x 810 mm	10,000 nos.