

REPUBLIC OF SINGAPORE  
COUNTRY REPORT ON DISASTER REDUCTION MEASURES

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## 1. AIM

This report provides an overview of the Preparedness programme and activities undertaken by Singapore to prevent and manage disasters.

## 2. INTRODUCTION

The Republic of Singapore is a small island City State with a land area of about 600 square kilometres with a multi-racial population of about 2.9 million people. More than 80 percent of its population lives in about 4,700 high-rise apartment buildings in public housing estates. The republic also has hundreds of high-rise commercial buildings, some reaching a height of over 280 metres, mostly in its central business district.

Geographically, Singapore is just outside the 'pacific Rim of Fire' and is thus spared from the ravages and destruction caused by natural phenomena such as earthquakes and volcanic eruptions. The republic nevertheless has from time to time, experienced some localised man-made disasters and major accidents, which also had painful and tragic consequences.

## 3. MAIN CONSIDERATIONS

The Emergency Preparedness Programmes and Disaster Management activities undertaken by Singapore are based on the following main principles:

- a. Man-made disasters can be prevented, and their tragic consequences, minimised through a set of stringent and comprehensive government regulation on fire and building safety, coupled with strict enforcement.
- b. Emergency and contingency plans should be developed to deal with disaster should they occur. Such plans should also be tested and fine hone through regular exercises and drills.
- c. The community should be educated on the need for and importance of emergency preparedness. Where possible, they should also be involved in exercises, training and physical preparations.
- d. Emergency response and management of disasters should be a co-ordinated multi-agency effort. All available expertise and resources should be co-ordinated and swiftly channelled to the disaster site to maximise the chances of survival of the injured and to minimise damage to infrastructure.

e. Restoration work and the rehabilitation of the injured should be an integral part of the total disaster management programme.

#### **4. EMERGENCY AUTHORITIES**

The Ministry of Home Affairs is the principle policy and directing authority responsible for civil defence emergency preparedness and disaster management. Under its command are two emergency agencies - the Singapore Civil Defence Force and the Singapore Police Force which are responsible for planning, co-ordination and implementation of the various programmes and activities. Several other Ministries, Statutory Boards and government departments are also involved in supporting roles (e.g. the Ministry of Health).

#### **5. LEGISLATION**

Singapore's Emergency Preparedness Programme and disaster management activities are supported by various laws. The main laws in this context are:

a. CIVIL DEFENCE ACT 1986

This Act provides the legal framework for, amongst other things, the declaration of a state of emergency and the deployment of operationally ready national service rescuers to support the SCDF.

b. FIRE SAFETY ACT 1993

This Act provides the legal framework to impose fire safety requirements on commercial and industrial premises as well as the involvement of the management and owners of such premises in emergency preparedness against fires.

c. CIVIL DEFENCE SHELTER ACT 1997

This Act provides a legal framework to require all new houses and flats and suitable buildings owned by statutory boards to be provided with civil defence shelters and to designate any part of any building as civil defence shelters for use by persons needing to take refuge therein during a state of emergency, and to regulate the use of civil defence shelters.

#### **6. EMERGENCY PREPAREDNESS MEASURES**

Singapore's Emergency Preparedness programme for major disasters comprised the following main elements:

a. Plans

A multi-agency approach, co-ordinated by the Singapore Civil Defence Force, was adopted for the development of emergency or contingency plans covering the following types of disasters:

- (1) Fires in high-rise commercial and residential buildings
- (2) Fires in petro-chemical installations and oil refineries
- (3) Release and spread of hazardous and toxic materials
- (4) Collapse of buildings and other major structures
- (5) Accidents involving land, air, sea and rail transport.

b. Drills and Exercises

To ensure that the contingency plans are comprehensive and effective, drills and exercises are conducted by the various emergency authorities. Such exercises and drills also involve the owners and occupants of the building premises as well as the general public. An example is the weekly Monday Morning Fire Exercise conducted by the Singapore Civil Defence Force for various commercial high-rise buildings. In addition, the Singapore Civil Defence Force also conducts regular

training exercises to hone the operational readiness and capability of the emergency response personnel.

c. Public Awareness, Education & Participation

(1) An effective emergency preparedness programme should involve the population. Since its inception in 1982, the Singapore Civil Defence Force has been implementing community relations programmes for emergency preparedness. The public is regularly kept informed and reminded on the need for and importance of emergency preparedness through various communications tools e.g. news and press advertisements, posters, leaflets etc. The underlying message to the public is “Readiness is your only protection”

(2) Public education programmes covering fire prevention and safety, evacuation, rescue, first aid, etc. have been developed for different target groups. These target groups include children, housewives, senior citizens, schools, factories and commercial premises. The long-term goal is to have at least one person in each household to be educated or trained in emergency preparedness.

(3) An extensive community and grassroots network has also been established by the Singapore Civil Defence Force to promote civil defence and involve the population in emergency preparedness activities, especially exercises, (e.g. rescue, water rationing and blood collecting exercises).

## 7. DISASTER MANAGEMENT AGENCIES

The following is an overview of the disaster management measures instituted in Singapore:

a. Main Agencies

(1) The Singapore Civil Defence Force and the Singapore Police Force are the main agencies under the purview of the Ministry of Home Affairs responsible for on-site Disaster Management. The Singapore Civil Defence Force is responsible for the conduct of fire fighting and rescue operations at the disaster site and the transportation of victims to hospitals for medical treatment. The Singapore Police Force is responsible for the security, investigation and traffic management as well as co-ordination matters.

(2) With a strength of about 100,000 personnel comprising 65,000 Operationally Ready National Servicemen (Reservists) and full-time National Servicemen, 43,000 volunteers and a core of about 1,500 regular officers and men, the Singapore Civil Defence Force responds to all types of emergencies round-the-clock. Over the last few years, the Singapore Civil Defence Forces responded to an average of 13,500 emergency fire and rescue, and 60,000 ambulance calls. Major Incidents that the Singapore Civil Defence Force had responded to in the last 2 years included the fires involving tyres warehouse and chemical factory.

(3) Organised with a 3-tier structure, Singapore Civil Defence Force Headquarters command and control four territorial Divisional Headquarters, which in turn manage the fire stations and other ground units (please see [Annex A](#)). The fire stations will provide the first response. Depending on the scale and nature of the disaster, the fire stations are supported by the Rescue Battalions, the Division Headquarters and Singapore Civil Defence Force Headquarters. Its mobile rescue units, such as the Immediate Response Units and Rescue Battalions can be swiftly mobilised

(4) The Singapore Civil Defence Force also has an elite rescue team, DART, which stands for the Disaster Assistance and Rescue Team, to carry out complex and difficult rescue operations, including tunnelling, Mass Rapid Transport rescue and high-rise rescue. DART is equipped with state-of-the-art equipment, such as the robots, Search Cameras, Fibre-Optical scope, Thermal Imaging Camera, Trapped Person Locator, as well as rescue dogs.

b. Supporting agencies

In the management of disasters, the Singapore Civil Defence Force and the Singapore Police Force are supported by other government agencies, viz. the following:

- (1) The Ministry of Health, which is responsible for medical treatment of the injured; and physical and psychological rehabilitation of victims.
- (2) The Ministry of Community Development, which is responsible for management of the homeless in relief centres.
- (3) The Ministry of Information and The Arts, which is responsible for media relations and public information.
- (4) The Ministry of Environment, which is responsible for disposal of the dead and cleaning up operations (e.g. debris disposal).
- (5) The Public Works Department, which provides advice on engineering and structural safety.
- (6) The Public Utilities agencies, which are responsible for shutting down and diversion of power, gas and water supplies to facilitate the fire-fighting and rescue operations, and for their restoration after the disaster.

## **8. INTERNATIONAL CO-OPERATION**

Over the past years, Singapore was involved in the following areas in co-operation in disaster management:

### **a. International Relations Programme**

Singapore has an on-going exchange programme with a number of countries from the Asia-Pacific and Europe. The various emergency authorities in Singapore, especially the Ministry of Home Affairs, the Singapore Civil Defence Force and the Singapore Police Force meet their respective foreign counterparts from time to time to exchange views and experiences on emergency preparedness and disaster management.

### **b. Overseas Rescue Assistance**

The Singapore Civil Defence Force has since assisted the Philippines in the Baguio Earthquake rescue operation in 1990 and Malaysia in rescue operation in the collapse of the Highland Towers in Kuala Lumpur in 1993. This contingent is registered with the United Nations Disasters Reduction Organisation (UNDRO) as an International Search and Rescue Team.

### **c. Training**

- (1) The Singapore Civil Defence Force has provided assistance to some of its ASEAN neighbours in rescue and fire fighting. Some examples include the training attachments for the Brunei fire services and training for the Special Malaysia Disaster Assistance and Rescue Teams (SMARTs). A number of Singapore Civil Defence Force's personnel were attached to the fire services of Japan and Hong Kong for training in order to benefit from the experiences of these countries.
- (2) The Singapore Civil Defence Force also offers its training courses on Urban Search and Rescue and Emergency Behaviour Management to its ASEAN neighbours. These training will be conducted with realism in the Civil Defence Academy, with its modern innovation like training simulators and facilities.

Singapore deeply values the exchange of ideas and sharing of expert knowledge and technology in disaster prevention and management. We have on-going programmes with countries in the Asia-Pacific, Europe and the USA. Singapore has a lot to learn from countries with vast experience in managing disaster reduction programmes. We have been learning and adopting suitable ideas for use in our own local context and over the years have been able to develop proficiency in some areas of disaster preparedness response, particularly in the area of disaster prevention and education and in handling and mitigating disasters in urban environment. These are areas in which Singapore would be able to share our own experience with other countries.

## **9. CONCLUSION**

Singapore values public safety and security. It believes in being prepared to face major disaster so as to ensure minimum disruption by any disaster to its community, environment and infrastructure. It garners all efforts to promote and

institutionalise emergency preparedness among its people, while developing and exercising contingency plans for a range of foreseeable disasters to be executed by various emergency agencies in close co-ordination. Where appropriate, it also shares its experience and rescue resources to nearby countries in need of assistance.

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## ANNEX A

### Organisation Structure of SCDF

