

Country Report

Singapore 2001

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I. AIM

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

II. INTRODUCTION

The Republic of Singapore is a small Island City State with a land area of 645 square kilometers and a multi-racial population of about 4 million people. More than 80 percent of its population lives in high-rise apartment buildings in public housing estates. The republic also has numerous high-

rise commercial buildings, some reaching a height of over 280 meters, 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 localized man-made disasters and major accidents, which also had painful and tragic consequences.

III. MAIN CONSIDERATIONS

The Emergency Preparedness Programs 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, minimized through a set of stringent and comprehensive government regulations on fire and building safety, coupled with strict enforcement.
 - b. Prepare and develop emergency and contingency plans to deal with disaster should they occur. Such plans should be tested and fine hone through regular exercises and drills.
 - c. Educate the community on the need for and importance of emergency preparedness. Where possible, involve the community in exercises, training and physical preparations.
 - d. Coordinate multi-agency effort in emergency response and management of disasters. Coordinate available expertise and resources swiftly to the disaster site to maximize the chances of survival of the injured and to minimize damage to infrastructure.
 - e. Restoration work and the rehabilitation of the injured is an integral part of the total disaster management program.
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IV. EMERGENCY AUTHORITIES

The Ministry of Home Affairs is the principal policy and directing authority responsible for civil defense emergency preparedness and disaster management. Under its command are two emergency agencies - the Singapore Civil Defense Force and the Singapore Police Force which are responsible for planning, coordinating and implementing the various programs and activities. Several other Ministries, Statutory Boards and government departments are also involved in supporting roles, including the Ministry of Health, Ministry of Environment, Public Utilities Board and Housing and Development Board.

1. Legislation

The main laws supporting Singapore's Emergency Preparedness Program and disaster management activities are:-

1) THE CIVIL DEFENSE 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.

2) 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.

3) CIVIL DEFENSE SHELTER ACT 1997

This Act provides the legal framework for buildings to be provided with civil defense shelters for use by persons needing to take refuge therein during a state of emergency.

V. EMERGENCY PREPAREDNESS MEASURES

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

1. Plans

Disasters are managed within a multi-agency framework involving various supporting agencies such as the Ministry of Defense, Ministry of Health, Ministry of Community Development and Sports, Building Control Authority etc. Contingency plans covering the roles of the various government agencies have been adopted for a wide range of disasters, including the following:-

- (1) Fires in high-rise commercial and residential buildings
- (2) Fires in petrochemical 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

2. Drills and Exercises

To ensure that these 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. Fire fighting exercises conducted by the Singapore Civil Defense Force include those held at commercial high-rise buildings every Monday. In addition, the Singapore Civil Defense Force conducts and participates in joint operational readiness exercises with other government agencies to test the contingency plans for coping with major disasters.

3. Public Awareness, Education & Participation

(1) An effective emergency preparedness program should involve the population. Since its inception in 1982, the Singapore Civil Defense Force has been continuously implementing community relations programs for emergency preparedness. The public is regularly kept informed and reminded of the need and importance of emergency preparedness through news and press advertisements, posters, leaflets etc. The underlying message to the public is "Readiness is your only protection". Over the years, the Singapore Civil Defense Force has built up an extensive

community and grassroots network to involve the population in emergency preparedness activities such as rescue, water rationing and blood collecting exercises.

(2) Since 1999, the Singapore Civil Defense Force has also been working closely with the Ministry of Home Affairs, Singapore Police Force, grassroots organizations and residents to synergise efforts to involve the community in a wide range of security and safety-related activities through the Community Security and Safety Program (CSSP). This program is based on the concept of "self-help" whereby residents play active roles and work with government agencies to solve problems specific to their own communities.

VI. DISASTER MANAGEMENT AGENCIES

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

1. Main Agencies

(1) The Singapore Civil Defense 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 Defense 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 coordination matters.

(2) SCDF has a strength comprising 23,000 Operationally Ready National Servicemen, 3,500 full-time National Servicemen, 56,000 volunteers and a core of about 1,800 regular officers and men. The Singapore Civil Defense Force responds to all types of emergencies round-the-clock. Over the last few years, the Singapore Civil Defense Forces responded to an average of 13,500 emergency fire and rescue, and 60,000 ambulance calls.

(3) Organized with a 3-tier structure, Singapore Civil Defense Force Headquarters command and control four territorial Divisional Headquarters, which in turn manage the fire stations and other ground units. The fire stations will provide the first response. Depending on the nature and extent of the disaster, the fire stations are supported by the Rescue Battalions, the Division Headquarters and Singapore Civil Defense Force Headquarters. Fire stations at strategic locations in Singapore are also staffed and equipped with Hazmat capabilities to mitigate incidents involving the harmful release of chemicals in industrial premises and along transportation routes.

(4) The Singapore Civil Defense Force has an elite rescue team, the Disaster Assistance and Rescue Team (DART), which carries out complex and difficult rescue operations, including tunneling, Mass Rapid Transport rescue and high-rise rescues. DART is equipped with state-of-the-art equipment, such as the robots, Search Cameras, Fiber-Optical scope, Thermal Imaging Camera, Trapped Person Locator and rescue dogs.

2. Supporting agencies

In the management of disasters, the Singapore Civil Defense 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 centers.

(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.

VI. INTERNATIONAL CO-OPERATION

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

1. International Relations Program

Singapore has an on-going exchange program 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 Defense 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.

2. Overseas Rescue Assistance

The Singapore Civil Defense Force has since assisted the Philippines in the Bagnio Earthquake rescue operation in 1990 and Malaysia in rescue operation in the collapse of the Highland Towers in Kuala Lumpur In 1993. More recently, the SCDF overseas rescue contingent assisted Taiwan in the Taiwan 921 Earthquake rescue operation in September 1999. The Singapore Civil Defense Force's Overseas Rescue Contingent is listed with the United Nation's International Search and Rescue Advisory Group (INSARAG) register as an international Search and Rescue Team. Since April 1999, the Singapore Civil Defense Force registered two of its disaster management experts to be part of the United Nations Disaster Assessment and Coordination (UNDAC) Team.

3. Training

(1) The Singapore Civil Defense Force deeply values the sharing of ideas, expert knowledge and technology in disaster prevention and management with its overseas counterparts and has ongoing programs with countries in the Asia-Pacific, Europe and the USA. Singapore is continuously learning from other countries and adopting suitable ideas for use in its own local context, so as to constantly upgrade its mode of operation to tackle both old and new challenges.

(2) The Singapore Civil Defense Force also offers training courses, such as the Urban Search and Rescue Course and Emergency Behavior Management Course, to its international partners. These training are conducted with realism in the Civil Defense Academy, with its modern innovation like

training simulators and facilities. Overseas participants in CDA courses include personnel from the fire and rescue departments in Taiwan, Brunei Fire Services and the Special Malaysia Disaster Assistance and Rescue Teams (SMARTS).

VIII. CONCLUSION

Singapore values public safety and security. It believes in being prepared to face major disasters so as to ensure minimum losses and disruptions. It garners all efforts to promote and institutionalize emergency preparedness among its people, while developing and exercising contingency plans for a wide range of foreseeable disasters to be executed by various emergency agencies in close coordination. Where appropriate, it also shares its experience and rescue resources with nearby countries in need of assistance.