

The Need for Disaster Preparedness and Emergency Plans

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Resumen

Definir las necesidades para elaborar un plan de emergencia

El Departamento de Museos y Antigüedades de Malasia tiene bajo su jurisdicción dieciseis museos y coordina, administra y controla sus actividades en el plano nacional, al mismo tiempo que realiza una labor encaminada a proteger los sitios y monumentos históricos del país.

Debido a su localización geográfica, Malasia está expuesta a distintas clases de desastres naturales (inundaciones, sequías, plagas diversas, etc.) así como a catástrofes provocadas por las actividades humanas, comprendidas las de índole técnica (incendios, explosiones, daños provocados por la climatización, etc.).

El Departamento ha tenido que hacer frente a dos tipos de situaciones de emergencia importantes: las inundaciones y los incendios. De ahí que se haya visto obligado a reflexionar sobre los problemas existentes (negligencias), así como sobre las actividades prioritarias que es menester llevar a cabo, a fin de estar preparados para responder a la problemática de interés público planteada (creación de redes, campañas de sensibilización, modificación de actitudes, elaboración de planes de emergencia, etc.). Esta reflexión ha permitido formular recomendaciones para determinar qué directrices y actividades se pueden aplicar sobre el terreno (elaboración de un programa y una lista de prioridades, examen de las ofertas emanadas de las situaciones de urgencia).

Résumé

Identifier les besoins pour élaborer un plan d'urgence

Le Département des Musées et des Antiquités de Malaisie a sous sa juridiction seize musées dont il coordonne, administre et contrôle les activités au niveau national tout en travaillant à la préservation et à la conservation des sites historiques et des monuments du pays.

En raison de sa localisation géographique, la Malaisie doit faire face à différents types de catastrophes, aussi bien naturelles (inondation, sécheresse, infestations, etc.), que techniques (incendie, explosions, air conditionné, etc.) et humaines.

Ce département a connu deux expériences significatives de situation d'urgence : d'une part l'inondation et d'autre part l'incendie. Ces événements l'ont conduit à réfléchir sur les thèmes et actions majeurs à entreprendre pour prévenir les risques et répondre à ces enjeux d'intérêt public (négligence, réseau, sensibilisation, attitude, plan d'urgence, etc.). Les recommandations extraites ont permis de déterminer les orientations et actions applicables sur le territoire (la préparation d'un agenda et une liste prioritaire de préparation).

Introduction

The Department of Museums and Antiquities covers Malaysia's cultural, historical and natural heritage. It is responsible for the enforcement of the Antiquities Act (1976) and works on the preservation and conservation of historical sites and monuments in the country. It is responsible for the formulation and execution of policies for the systematic development of museums and museology in the country.

The department also coordinates activities for the protection, preservation and dissemination of knowledge of the country's rich heritage. In this way it hopes to contribute to the establishment of a harmonious society for the purpose of achieving high moral standards. Another objective of the department is to help promote tourism.

The Department's functions are:

- to conduct research, and acquire and preserve historical and cultural heritage, flora and fauna of the nation;
- to enforce the Antiquities Act No.168/1976;
- to administer, control, plan and coordinate museum activities at the national level and provide technical assistance to state museums, government departments and private museums;
- to document all collections and publish research material;
- to disseminate knowledge through displays, lectures, workshops and guided tours in museum galleries.

The National Museum has been placed under separate management within the department. The Department of Museum and Antiquities comes under the Ministry of Cultural, Arts and Tourism and is in charge of building and developing museum-related activities conducted in the museums within the department, establishing new museums throughout the country, restoring and preserving historical sites and monuments, carrying out archaeological research and implementing the provisions of the Antiquities Act 1968/1976. The department also provides technical advice to all other state museums, departmental museums and museums established by private agencies.

The Department of Museums and Antiquities has been revamped in stages since 1993 for better implementation of its stated functions and responsibilities. In August 2000, the department completely restructured its organisation and streamlined its functions so as to be able to take up the challenges of the 21st century.

The building of new museums such as the Malay World Ethnology Museum, the Maritime Museum, the Natural History Museum, the development of other site museums and the preservation of historical sites and monuments throughout Malaysia are intended as support for public education and for the development of the country's tourism industry. At present the Department of Museums and Antiquities has sixteen museums under its jurisdiction: Perak Museum, the National Museum, the Archaeological Museum of the Bujang Valley, the National History Museum, the Malay World Ethnological Museum, the Automobile Museum, Lukut Museum, Matang Historical Complex, the Chimney Information Centre, Sungai Lembing Museum, Labuan Marine Museum,

Kota Kayang Museum, Lenggong Archaeological Museum, Labuan History Museum, Kota Kuala Kedah Historical Complex, and the Architectural Museum Of Malaysia.

Type of Disasters

John Hunter, in his book "Preparing a Museum Disaster Plan National Park Service", defined disaster as an emergency event that occurs with little or no warning, causing more destruction or disruption of operations than the museum can correct by application of its own ordinary resources. Disaster preparedness means possessing in advance the capability of taking the immediate action or actions needed to cope with disaster in order to prevent its occurrence or minimise its impact. As a result, a disaster is an emergency situation that is out of control; the emergency may develop into a "disaster" and then recover to be an "emergency" until the event is dealt with.

Natural Events

Flood

Malaysia has tropical rain forests and flash floods caused by heavy downpours in the monsoon season and therefore has many problems with environmental control at each museum. The monsoon season has often brought heavy rain. Humidity control is a major problem with rapid changes in weather in the tropics. Some museums have been flooded with water and the artefacts destroyed. Water carries mud, sewage or other contaminants that will damage both the building and artefacts.

Drought or water rationing

Some artefacts in a museum are kept under controlled conditions, for example textile collections, as heat affects the condition of the materials.

Insect and rodent infestation

Malaysia is a tropical country and therefore has pest problems, e.g. mould, ants, white ants, silver fish, etc.

Smoke

Due to malfunction of machinery within buildings.

Mould

Due to damp conditions.

Technological Events

Fire

Causes such as:

- sabotage;
- careless use of electricity;
- faulty electric wiring/circuitry;
- improper storage or use of inflammable chemicals;
- smoking;
- catching fire from nearby houses.

Effects

Affected electrical circuits will corrupt data, trigger false signals, cause immediate or delayed destruction of sensitive electronics, etc.

Explosions

Causes such as:

- gas leaks;
- poor storage and use of inflammable chemicals, or chemical leaks;
- chemical failure.

Effects

Explosions release toxic fumes and spread thick smoke over the building and can cause minor injuries such as nausea, skin irritation or shortness of breath. When fire sweeps through buildings, nothing but ashes will remain.

Loss of air conditioning

An air conditioning system not equipped with automatic smoke and heat detection systems and fan shutdown plus automatic fire dampers can create a disastrous situation during a fire. Without these automatic features, smoke and other products of combustion are quickly drawn into the return air system and distributed to all floors and areas serviced by the air conditioning system. This can be a serious threat to the life and safety of the occupants of the building.

Human Events

Thieves

Property control problems include items missing, thefts or other losses, and lack of regulations penalising staff for losses. A valuable collection was stolen from a museum and this was considered a major loss to the museum and the nation because of the value of the objects as both national and cultural treasures.

Past Experience

Flood

The auditorium at the headquarters of the Department of Museums and Antiquities was previously subject to flooding, particularly during heavy rain, and this caused damage to the auditorium walls, electrical switches and chairs in the front row which is at a lower level.

Action taken: the areas affected were immediately cleaned and dried using a suction pump and a blower, all the water-damaged seats were cleaned or replaced and the drainage system is now maintained regularly to avoid flash flooding.

Fire

The National Museum has had two small fires over the past forty years. One was in the metal workshop, and is believed to have been started by a spark from welding equipment. The workshop was razed within half an hour, the flames fuelled by the strong afternoon wind. The loss was minimal and only concerned a few artefacts.

The second fire was on September 17, 1991, and started at 12:45 p.m. in the photography laboratory. The fire was caused by over-heated

electrical equipment left on the carpeted floor. Not only was the expensive colour lab lost, but also the conservation lab, plus valuable information from oral traditions which had been transcribed and collected since 1963, the carpentry workshop and a number of artefacts which could not be identified as the inventory listing them was also kept inside the lab which was reduced to ashes.

Action taken:

- determine what areas of damaged buildings are safe to use;
- develop projects to repair damaged parts of the building;
- conduct an inspection of utilities and their systems after an emergency has occurred to check for damaged live electrical wiring, broken gas lines and piping;
- provide additional protection staff and communication equipment for use during emergencies;
- a full report, including photographs if possible. This is valuable in learning lessons from the incident and helps others who may not have full access to information.

Issues

Negligence

We cannot deny that most disasters occur because of human negligence, but whatever the cause, mechanical failure (power cuts or equipment breakdown) and human negligence can cause disasters for all collections and buildings.

Networking

Disaster planners should identify all appropriate disaster-response and recovery services. These can range from police, fire and ambulance services to maintenance workers, insurance adjustors and utility companies. Lists of additional supplies might need to be drawn up. Lists should include emergency services, the emergency response team and arrangements for relocating the collection, in-house suppliers' names, addresses and phone numbers, and should provide backup sources for supplies. Other valuable sources of assistance are local, state and federal government agencies. Arrangements should be made for emergency cash or credit as it is sometimes difficult to get money quickly in a disaster situation.

Awareness

Alertness and observation are the principal museum security tools. All staff have to be aware of the need for the disaster control measures and have an understanding of what role they may be expected to play in protecting heritage material. Managers must give a clear definition of an emergency, stating causes and actions so that there is no confusion over the need to react in a given situation.

Attitude

All museum staff must be responsible for security matters. Each individual must therefore be alert and aware of changes in collections, the environment and behaviour. It is virtually impossible to have

adequate security without proper sharing of responsibility between staff members. This means that every member of staff, regardless of the job or department, should realise their role for security and safety, and support fellow staff members.

Emergency Planning on Disaster Management/Preparedness

Total protection cannot be gained through preventive measures alone, for while the risks will have been greatly reduced, some will remain. It is therefore necessary to have disaster reaction contingency plans for the purpose of responding to an emergency situation.

There are three key points in emergency planning:

1. anyone who is in the cultural institution when an emergency occurs can be part of the emergency team, protection is everybody's business;
2. every object requires a consistent level of at least minimum adequate care, particularly during emergencies;
3. the protection manager prepares the institution to survive a major emergency or disaster by developing a long-term emergency protection plan providing emergency protection and conservation services when no outside assistance is available.

Security

Security is not only the job of security personnel, but concerns everyone working at the museum. Security involves not just the areas open to the public, but all other parts as well. All staff must be involved in museum security and safety. The security of the building and artefacts is important to prevent any damage caused by a disaster outside working hours.

Fire

Managers have to prepare staff for emergencies without alarming them. Exercises or drills will train staff to become skilled in protecting the institution and to be cooperative. The manager has to motivate the staff, have them cooperate and thank them for reacting properly with exercises and drills.

Professional training courses can deal with real circumstances. For burglary or robbery, controls include equipment, doors, enclosed spaces, cases, lighting and regular monitoring of the articles in the museum exhibitions. These programmes can be developed as a defensive approach to help reduce losses in an emergency or disaster situation.

Alarm systems are often considered the best security system for buildings, people, collections and facilities and are useful provided they alert people to a problem in time to prevent excessive damage. Surveillance equipment such as Closed-Circuit Television Systems (CCTS) has been overrated as a security system, for it is only helpful if a person is watching. Alarm systems and surveillance networks are valuable tools, but alone they are not deterrents.

Regular building inspections and maintenance should be a very high priority, if this is not already the practice, and can prevent or reduce common emergencies resulting from problems such as burst pipes, defective climate-control equipment, worn electrical wiring or clogged

drains. Make sure that if all improvement work cannot be done immediately, the employer must set a schedule and follow it. If some jobs on the schedule cannot be done or are delayed, move onto the next task and return to the earlier problem as soon as it is feasible.

Storage

Actions designed to reduce the vulnerability of buildings and collections include a properly maintained collection inventory, improved collection storage and proper compliance with good security and housekeeping procedures. An inventory will provide a basic list of holdings to assist in assigning priorities for salvage and will be essential for insurance purposes. Improved collection storage such as placing articles in boxes and raising materials above floor level will reduce or avoid damage when emergencies occur. Comprehensive security and housekeeping procedures will help ward off incidents such as theft, vandalism and insect infestation.

High humidity and warmth are ideal conditions for many organisms especially insects. Regular cleaning of collection and exhibition areas is essential for controlling the environment, and access to collections should also be checked. Good housekeeping will help prevent particulates and pollutants from building up on collections. Most of the time, housekeeping activities are considered the realm of the custodial or janitorial staff who should be given instructions on the proper methods and materials to use near collections.

Disaster teams

Each museum should set up a team of volunteers willing and able to form salvage teams if needed. Such people must be prepared to be called at any time of day or night, and able to work to strict guidelines in an emergency situation.

Pests

The primary pest control method is prevention. Reducing opportunities and resources for pests to invade and thrive. Uncontrolled access to collections provides opportunities for introducing pests. Food must be banned from collection, storage and exhibition areas. Any materials entering either storage or exhibition areas should be carefully examined and if organisms are found, must be treated before being displayed. Regular fumigation is also carried out to prevent pests from breeding. Regular inspections must therefore be made of the storage areas and records need to be kept.

Recommendation

Disaster does not discriminate. Unfortunately, all too often disaster does occur and usually to those without a disaster plan in place.

Features of a good plan

- simplicity, flexibility and adaptability;
- ease and speed in response;
- all necessary resources identified;
- sources of assistance identified.

Preparedness planning includes

- supplies;
- priority lists;
- insurance details;
- response teams and recovery;
- practice and drills.

Emergency supplies

- materials and equipment;
- located in right position;
- portable supplies properly located;
- what quantity would you need?
- maintain supplies well stocked.

Preparing priority lists

- irreplaceable objects;
- significance or cost;
- are they replaceable, how readily and at what cost?
- reproductions or original properties;
- objects on loan or at risk.

Conclusion

The purpose of a disaster preparedness plan is to prevent or reduce harm to people, buildings and collections in the event of catastrophic events. To be truly useful, a disaster plan must address all aspects of emergency preparedness such as prevention, protection, response, recovery and rehabilitation. Prevention includes documenting, regularly inspecting both interior and exterior hazards for the building and collections, regular maintenance of buildings and equipment, proper housekeeping and environmental control. Protection includes the installation of alarms, fire suppression systems, the establishment of basic building security measures, the assembly of emergency supply kits and the organisation of an in-house disaster response team. Response includes actions to be undertaken to deal with the damaged collections often with the help of outside expertise and advice. Disaster can strike at any time on a small or large scale, but if an institution is prepared, the damage may be reduced or avoided.

Museums need to take practical measures to minimise the risk of disaster and be prepared to react quickly and effectively should a disaster occur. A disaster control plan is much more likely to be successful if people know what to expect and what to do, if they have been given the opportunity to practice their roles beforehand. Disaster planning is therefore an essential requirement of any disaster programme.