

term security of investments, or even more importantly, the safety of tourists. Actions to be taken to prevent or at least strongly discourage such practices will depend on local policies, practices and the circumstances.

In any event, tour operators should establish active awareness and information programmes for tourists. It is essential that individual tourists have at least some information on tropical cyclones and associated phenomena, a basic understanding of the dangers they pose, the prevention and preparedness measures implemented and the action that they may need to take.

It is probable that dissemination of information on disaster reduction measures in force will diminish tourists' concern for their safety and be a good advertisement for a destination. It may be noted that information, including posters and other material to support these programmes, is normally available from the national authorities (see Figure 11) or from regional and international disaster management organisations. However, tour operators, who usually understand the tourists better, may wish to design their own material based on this information which is suited to the requirements as they perceive them.

### *Disaster preparedness*

Tropical cyclone disaster preparedness comprises actions designed to minimise loss of life and damage, and includes warnings and response to warnings. These actions may also facilitate post-disaster activities (see ESCAP/WMO/LRCS [1977]).

Disaster preparedness should be based on risk evaluation and should take into account the assessment of the cyclone hazard and the vulnerability of the specific area after allowing for the impact of prevention measures. Its main aim is the security of tourists, also with attention to reduction of property damage.

*Planning.* Although most of the preparedness measures would be put in force only in the hours immediately preceding the onset of a tropical cyclone, preparedness planning, training, making contingency arrangements and testing of the measures should take place much earlier. Plans should be made for the tourism industry to promote and participate in the dissemination of warnings on a timely and reliable basis to ensure that the tour operators, their staff and individual tourists are informed. Response to warnings should be carefully planned, with particular attention to items such as:

- (a) Ensuring tourists are in a safe place by the onset of and throughout the tropical cyclone's passage;
- (b) Evacuation where appropriate — who, how, when and to where;
- (c) Stockpiling of supplies food, water, etc;
- (d) Search and rescue and medical attention;
- (e) Preparing for the cyclone, erecting of shutters, securing outdoor small objects, etc;
- (f) Preparation of emergency communication system;
- (g) Coordination with transport and traveller venue operators;
- (h) Development of employee and guest rosters, in the latter case paying special attention to their home addresses and next destinations; and
- (i) Post-storm inspections and safety measures.

It is important that warnings reach those in small craft at sea, those in trailer or mobile homes and others who are particularly at risk. Actions to be taken vary from place to place and depend on the circumstances. To assist resort managers, a checklist of emergency preparations is provided in Appendix A. These cover: protecting the physical plant; emergency shelter coordination; communications; employee coordination; guest roster maintenance; evacuation coordination; travel assistance and transport coordination; and security coordination. Other sections of the appendix provide venue managers with checksheets useful during and immediately after a tropical storm. Appendix B provides checklists for tourists that can be copied directly and distributed by venue managers. Pages B-1 and B-2 cover what to do before, during and immediately after tropical storms. Similar checksheets for employees and their families are presented in Appendix C.

Tourism managers should make the necessary plans to ensure that their staff are fully trained and motivated to carry out their respective roles in preparedness actions, particularly in dissemination of warnings, emergency arrangements and other responses to warnings. Training material should be available from the local authorities.

In regard to evacuation, the likely state of communications, roads, bridges, airports, etc. and changes or breakdowns, caused for example by the onset of floods, lightning and congestion, should be considered and contingency plans should be drawn up.

Plans should be made in coordination with local authorities and should be periodically reviewed or tested. The suitability of the new location upon evacuation should be checked in the planning stage. Arrangements should be made for records to be kept and advice to be given out when possible.

*Implementation of preparedness measures.* Implementation should follow a pre-prepared plan to avoid a last-minute hurry or leaving tourists unready. Some activities may require more time than the lead time given in the warnings. In such cases they should commence before warnings are

issued, to ensure completion in good time. Warning bulletins usually contain information which allows estimation of the time of onset of the cyclone, if it hits the locality. Otherwise, advice may be sought from the national Meteorological Service.

When cyclones are imminent, tourists have some advantages over residents, such as a place of origin to which they could return if appropriate. In addition, they are more responsive to evacuation arrangements. On the other hand, they have some disadvantages, such as probably little or no experience of a cyclone and limited familiarity with the place, the local practices and maybe even the language. These problems require special attention. Also, morale is an important factor.

#### *Relief, rehabilitation and reconstruction*

For the tourism industry, the main post-disaster concerns are with rehabilitation, that is restoration of normal activities and repair or reconstruction of damaged tourism plant and infrastructures. It is possible that some tourists will emerge from a cyclone disaster disappointed by a ruined holiday and the discomfort experienced. Keeping up morale during the cyclone can help tourists to recognise that the efforts made on their behalf are prompted by regard for their safety and their value to the industry, and to foster feelings of concern for the host community. Rehabilitation should aim at a return to services as usual as soon as possible, but this may depend on the severity of the disaster and the time taken to restore infrastructures. In reconstruction the aim might be to make the facilities more cyclone-resistant rather than merely restoring them.

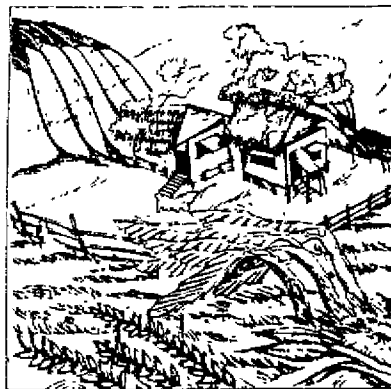
As was discussed in the introduction to this Handbook, repairing the physical plant is only one element of the recovery from a tropical storm. Relaunching tourism will be critically dependent on how well the tourism site is portrayed by the media, and how well the tourism industry develops and spreads a message to market its site. Appendix D provides detailed guidance on marketing and news media relations. Appendix E can be used to assess the status of the infrastructure essential to tourism.

While infrastructure repair and marketing are dependent on available funding, funding assistance varies widely from nation to nation. Tourism resorts should seek assistance from their respective regional, state and national government officials, who will have information on funding availability and procedures.

# PAGASA FORECASTS AND WARNINGS



Public Storm Signal No. 1



Public Storm Signal No. 2



Public Storm Signal No. 3



Public Storm Signal No. 4

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PIIAS/PAGASA/DOST

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Figure 11 — Example of cyclone poster used in India.

## HURRICANE SAFETY RULES

Hurricane advisories will help you save your life . . . but you must help.  
Follow these safety rules during hurricane emergencies:

1. **Enter each hurricane season prepared.** Every June through November, recheck your supply of boards, tools, batteries, nonperishable foods, and the other equipment you will need when a hurricane strikes your town.
2. **When you hear the first tropical cyclone advisory,** listen for future messages; this will prepare you for a hurricane emergency well in advance of the issuance of watches and warnings.
3. **When your area is covered by a hurricane watch,** continue normal activities, but stay tuned to radio or television for all National Weather Service advisories. Remember, a hurricane watch means possible danger within 24 hours; if the danger materializes, a hurricane warning will be issued. Meanwhile, keep alert. Ignore rumors.
4. **When your area receives a hurricane warning:**  
Plan your time before the storm arrives and avoid the last-minute hurry which might leave you marooned, or unprepared.  
**Keep calm** until the emergency has ended.  
**Leave low-lying areas** that may be swept by high tides or storm waves.  
**Leave mobile homes** for more substantial shelter. They are particularly vulnerable to overturning during strong winds. Damage can be minimized by securing mobile homes with heavy cables anchored in concrete footing.  
**Moor your boat securely** before the storm arrives, or evacuate it to a designated safe area. When your boat is moored, leave it, and don't return once the wind and waves are up.  
**Board up windows** or protect them with storm shutters or tape. Danger to small windows is mainly from wind-driven debris. Larger windows may be broken by wind pressure.  
**Secure outdoor objects** that might be blown away or uprooted. Garbage cans, garden tools, toys, signs, porch furniture and a number of other harmless items become missiles of destruction in hurricane winds. Anchor them or store them inside before the storm strikes.  
**Store drinking water** in clean bathtubs, jugs, bottles, and cooking utensils, your town's water supply may be contaminated by flooding or damaged by hurricane floods.  
**Check your battery-powered equipment.** Your radio may be your only link with the world outside the hurricane, and emergency cooking facilities, lights, and flashlights will be essential if utilities are interrupted.  
**Keep your car fueled.** Service stations may be inoperable for several days after the storm strikes, due to flooding or interrupted electrical power.  
**Stay at home,** if it is sturdy and on high ground; if it is not, move to a designated shelter, and stay there until the storm is over.  
**Remain indoors** during the hurricane. Travel is extremely dangerous when winds and tides are whipping through your area.  
**Monitor the storm's position** through National Weather Service advisories.

### Beware the Eye of the Hurricane

If the calm storm center passes directly overhead, there will be a lull in the wind lasting from a few minutes to half an hour or more. Stay in a safe place unless emergency repairs are absolutely necessary. But remember, at the other side of the eye, the winds rise very rapidly to hurricane force, and come from the opposite direction.

5. **When the hurricane has passed:**  
**Seek necessary medical care** at Red Cross disaster stations or hospitals.  
**Stay out of disaster areas.** Unless you are qualified to help, your presence might hamper first-aid and rescue work.  
**Drive carefully** along debris-filled streets. Roads may be undermined and may collapse under the weight of a car. Slides along cuts are also a hazard.  
**Avoid loose or dangling wires,** and report them immediately to your power company or the nearest law enforcement officer.  
**Report broken sewer or water mains** to the water department.  
**Prevent fires.** Lowered water pressure may make fire fighting difficult.  
**Check refrigerated food** for spoilage if power has been off during the storm.  
**Remember** that hurricanes moving inland can cause severe flooding. Stay away from river banks and streams.

Tornadoes spawned by hurricanes are among the storms' worst killers. When a hurricane approaches, listen for tornado watches and warnings. A tornado watch means tornadoes are expected to develop. A tornado warning means a tornado has actually been sighted. When your area receives a tornado warning, seek inside shelter immediately, preferably below ground level. If a tornado catches you outside, move away from its path at a right angle. If there is no time to escape, lie flat in the nearest depression, such as a ditch or ravine.

**HURRICANE WATCHES MEAN A HURRICANE  
MAY THREATEN AN AREA WITHIN 24 HOURS.**

**HURRICANE WARNINGS MEAN A HURRICANE IS  
EXPECTED TO STRIKE AN AREA WITHIN 24 HOURS**

NOAA/PA 70023 1974

For sale by the Superintendent of Documents, U.S. Government  
Printing Office, Washington, D.C. 20402. Price 25 cents.



• GPO : 1974 O - 551-474

Figure 12 — Hurricane safety rules — United States example.