# HANDBOOK ON NATURAL DISASTER REDUCTION IN TOURIST AREAS

**Handbook on Natural Disaster Reduction in Tourist Areas**

ISBN 92-844-0239-5

Published by the World Tourism Organization and
the World Meteorological Organization



The designations employed and the presentation of material in this publication do not imply the expression of any opinions whatsoever on the part of the Secretariat of the World Tourism Organization concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.

Printed by the World Tourism Organization

# CONTENTS

# PREFACE

To combat the attitude that people are helpless in the face of disasters, in 1989 the United Nations launched, by means of General Assembly Resolution 235, the International Decade for Natural Disaster Reduction (IDNDR).

Each decade, natural hazards kill more than one million people and leave countless others homeless. Moreover, economic losses from natural disasters are on the rise, in developed and developing countries alike. The global economic cost of disasters rose from US$ 44 000 million in 1991 to US$ 60 000 million in 1992, and constitutes a massive setback to economic growth.

With tourism now an important global phenomenon involving the movement of millions of individuals to virtually all countries on the surface of the globe, this worldwide industry is by no means immune to natural disasters.

Recognizing this, the World Meteorological Organization (WMO) and the World Tourism Organization (WTO) decided, following the signature in 1993 of a "Working Arrangement" between the two secretariats, to contribute to the IDNDR by producing a joint study of natural disaster reduction in tourist areas.

Tourism developments are often located in areas exposed to, or likely to be exposed to, sudden-onset natural disasters, in particular beach and coastal areas, river valleys and mountain regions. Moreover, should tourists become victims of a natural disaster, the negative impact on the image of the destination concerned can be both serious and long-lasting.

Aware that prevention and preparedness measures make the vital difference to casualty figures and economic losses in the wake of natural disasters, WMO and WTO decided that this Handbook should demonstrate convincingly to tourism planners, tour operators, resort managers and other involved in the tourism industry precisely how the risk of natural disasters in tourist areas can be reduced and their impacts mitigated.

In a cooperative effort never before attempted, the scientific and technological knowledge of WMO experts has been combined with the practical experience of WTO's tourism planners and managers to produce a Handbook that succeeds in guiding the reader through every stage of a counter-disaster strategy — from preparedness, through disaster onset to post-disaster reconstruction and re-launching of a tourist destination.

With the assistance (which WMO and WTO gratefully acknowledge) of the International Seismological Centre in England, and the Federal Institute for Snow and Avalanche Research, in Davos, Switzerland, the scope of this Handbook has been extended to cover all natural disasters that constitute serious hazards to tourist resorts.

These are:

(a) Tropical cyclones;
(b) Storm surges;
(c) Flooding;
(d) Avalanches; and
(e) Earthquakes.

Although the present Handbook is intended to have universal application, WMO and WTO hope it will prove of particular value to the developing countries. This reflects the concern expressed, inter alia, in AGENDA 21 adopted in June 1992 by the United Nations Conference on Environment and Development, that countries should not only warn one another of natural disasters that could affect tourists or tourist areas, but should offer assistance through appropriate technology to create low-cost disaster prevention and preparedness programmes.

In this way, nations could give practical application to another key principal of IDNDR, namely that disaster reduction measures should be a standard part of development programmes.

WMO and WTO gratefully acknowledge the inputs of all those who contributed to this Handbook and in particular to Mr Y. Boodhoo, Dr A. Hughes, Dr O. Lateltin, Mr D. W. Schnare, Mr D. O. Vickers and Prof. R. Ward for their substantial contribution to this Handbook; and also to Ms A. Boncy, Ms F. Brown, Ms B. Hurley, Ms. Deborah Luhrman, Dr L. E. Olsson, Ms. Diane Palumbo, and Mr P. Shackleford for their editorial and administrative work throughout this project.

The two organizations believe that cooperation on the present Handbook augurs well for future joint ventures in other areas which will serve to underscore the close links existing between climate, weather, travel and tourism.

G.O.P. Obasi
Secretary-General
WMO

Francesco Frangialli
Secretary-General
WTO

# FOREWORD

This handbook has been prepared by the World Tourism Organization and the World Meteorological Organization.

Its main purposes are to provide technical guidance on how the risk of natural disasters can be reduced in tourist areas through adequate preparedness and how their impacts can be mitigated during and after their disasters.

This handbook is intended for, and will be of great use to, national regional and local tourism authorities, as well as to tourism planners and developers, tour operators, resort and hotel managers, and others involved in the tourism industry. In particular, it will be of great practical benefit to countries, regions and islands which are both heavily dependent on tourism and exposed to frequent natural disasters.

Madrid, April 1998

# CHAPTER I

# INTRODUCTION

The need to study natural disaster reduction in tourist areas may be expressed in the following terms:

(*a*) Tourism is now an important global phenomenon, involving the movement of millions of individuals to virtually all countries on the surface of the globe.

(*b*) Tourism development is frequently located in areas which are exposed to, or are likely to be exposed to, sudden-onset disasters, in particular in beach and coastal areas, river valleys and mountain regions.

(*c*) Because tourists do not necessarily speak the language of the country they visit, prompt communication with them of imminent, sudden-onset disasters raises a particular problem; awareness creation among tourists before their visit to a country concerning sensible precautions in the event of a sudden-onset disaster raises issues of public education.

(*d*) Should tourists become victims of a natural disaster, the negative impact on the image of a tourist destination could be both serious and long lasting.

(*e*) As developing countries participate increasingly in world tourism, the opportunity exists for design and execution of tourism plant and infrastructure in those countries to embody the latest techniques of low-cost disaster prevention and preparedness. This raises a transfer of technology issue and provides an opportunity for tourist-generating countries (mainly the prosperous, industrialized nations) to cooperate with tourist-receiving countries.

The natural disasters covered in this Handbook are caused by:

(a) Tropical cyclones (including hurricanes and typhoons);
(b) Storm surges;
(c) Flooding, including coastal, estuarine and river flooding;
(d) Avalanches; and
(e) Earthquakes.

Disaster mitigation may be achieved through risk assessment, disaster prevention and disaster preparedness. Disaster prevention may be described as measures designed to prevent natural phenomena from causing or resulting in disaster or other related emergency situations. It includes structural measures for reduction of hazard proneness of sites and non-structural measures such as public education and awareness. The general definition of preparedness is as follows: "Action designed to minimise loss of life and damage, to organize the temporary removal of people and property from the threatened location and facilitate timely and effective rescue, relief and rehabilitation."

The essential feature of the above-mentioned hazards is that they occur with a certain frequency, are characterised by sudden onset and hence could easily catch populations unprepared, but they are amenable to forecasting and prediction.

### Objectives of this Handbook

The objectives of this Handbook are:

(*a*) To stimulate awareness among national, regional and local tourism planners in disaster-prone areas so that they include measures for the mitigation of disasters and related aspects of preparedness in the overall planning proposals for land use and tourism project formulation;

(*b*) To help tourism planners to understand the nature and extent of risks faced by tourist resorts and the local communities;

(*c*) To demonstrate ways and means to reduce those risks within the limits of the socio-economic and cultural context of the resident and visiting population;

(*d*) To promote and facilitate a proper assessment of risk to assist decision-making;

(*e*) To provide information and checksheets on emergency planning and emergency responses to natural disasters for use by resort managers, their employees and tourists; and

(*f*) To discuss the relaunching of tourism after a disaster and provide examples of tools useful to resort operators and tourism organisations to reinvigorate tourism in the wake of calamity.

Opportunities to develop and implement disaster mitigation measures occur in the wake of major disasters. This is a result of the temporary high profile of the disaster relief action and the attendant publicity focused on the international tourists involved. Advantage should be taken of such opportunities to secure resources and decisions.

### The National Disaster Assistance Organization and its role

In the present Handbook it is assumed that within each receiving country a national disaster assistance organisation has been established with which the national tourism administration can establish cooperation, involving also the operational sector of tourism within the country and possibly major tour operators from the generating countries. The work of this national disaster assistance organisation will be directed towards cooperation with other organisations and receiving communities to achieve greater local self-reliance in responding to the risks from natural hazards. As the coordinating body of national counter-disaster operations, this organisation will allocate by delegation the necessary responsibilities to other agencies and departments, including the national tourism administration.

### Risk assessment as part of a mitigation strategy

Risk assessment is an essential part of a disaster mitigation strategy. It will be necessary for the national government to develop a risk-assessment capability involving multidisciplinary teams operating at regional and local level. Data will be needed on hazard and disaster occurrence. This must be collected in a systematic manner with respect to the frequency, magnitude and location of hazards relevant to tourist areas. Information must also be gathered on the vulnerability of buildings and infrastructure in tourist areas. Anticipation of future hazards or disasters will be the key to effective planning. Therefore, as risk assessment is undertaken, links should be established and maintained between the physical scientists working on hazard assessment and the land use and other national planners involved in the development of tourist areas.

### Concepts, inputs, data

The complex and interdisciplinary character of mitigation planning will require clear concepts. Among key inputs will be maps, data and decision-making tools, both at regional and local level. Tourism planners need to be aware of the various sources of hazard information. For example, aerial photographs and satellite images are used extensively by meteorologists, hydrologists and geoscientists, but apparently much less so by tourism planners. They are, however, a useful source of information, reducing the time and cost of scientific assessment. Bringing the physical scientist, environmentalist and tourism planner more closely together at an early stage of resort planning and disaster mitigation should therefore be encouraged and actively stimulated.

### Objectives to be pursued in disaster reduction

The strategy of disaster mitigation involves complex decisions, not least because it is concerned with events which, as indicated above, occur irregularly. Investment in disaster mitigation, though generally cost-effective, may also be seen as expensive. Therefore, it is necessary to consider carefully the efficiency with which these scarce resources are used. It is essential to realize that disaster reduction is not an end in itself. It has two fundamental objectives:

(*a*) The reduction of deaths and injuries in tourism-receiving areas;
(*b*) The reduction of property losses (both buildings and economic assets) and environmental degradation in tourist areas.

These losses could be either direct (involving immediate damage as a result of the disaster impact) or indirect (i.e. longer-term damage to the livelihoods of populations in tourist areas through hotels and other accommodation capacity being out of service for long periods of time). Indirect losses are likely to be less tangible but, since the tourist image of the receiving country is involved, they can have a greater social and economic impact than the visible direct losses. As is well known, the media publicity that attends an accident involving even a few international tourists can have an impact on the market far exceeding the scale of the original event.Therefore, tourist areas need to pay particular attention to the indirect consequences of disasters.

### UN-DHA's nine crucial concepts for disaster reduction

The United Nations Department of Humanitarian Assistance (UN-DHA) has identified nine crucial requirements and mechanisms for effective implementation of disaster reduction. These requirements apply to tourism areas as well as to other zones in countries affected by natural disasters. They are as follows:

*Governmental resources*

(a) Political will and commitment;
(b) Resources; and
(c) Leadership, management and coordination.

*Knowledge and skills*

(a) Public awareness;
(b) Community participation;
(c) Training and education; and
(d) Research and development.

*Restrictions and incentives*

(a) Legal and administrative framework; and
(b) Financial incentives.

In the course of this Handbook, reference will periodically be made to one or other of these nine crucial requirements.

## From disaster to risk reduction

This Handbook is based on the notion that disaster reduction is synonymous with risk reduction. Risk, as defined by UN-DHA, means the sum of all losses that can be expected from the occurrence in a tourist area of a particular natural phenomenon. In order to introduce the consideration of risk into tourism area planning, planners require information from physical scientists and engineers which enables them to:

(a) Assess the specific risk to various types of tourist plants within the region considered;
(b) Compare the risk incurred in locating a given type of tourist plant at one or other of several possible sites with different hazard levels; and
(c) Decide on appropriate planning measures to control or reduce risk.

For the above purposes the following information will generally be needed:

(a) Regional hazard maps at a scale of 1:50,000 or 1:100,000 showing hazard intensities expected;
(b) Local microzoning maps showing the expected intensities for the same probability levels and time periods;
(c) Probability distribution functions of macro intensity for each locality under study; and
(d) Vulnerability functions, relating damage degree to hazard intensity for each structural type of tourist establishment found in the locality.

Even this assessment of risk will only relate to the probability of losses caused directly by hazard force, however. A complete analysis of risk must also take into account: secondary losses caused by events or changes of events triggered by the hazard or by its primary damaging effects; and consequential losses resulting from death and injury, loss of function of essential services, loss of markets, interruption of tourism, etc.

## Tourism in the sensitivity classification

The consequential losses resulting from damage to buildings or to elements of tourism infrastructure are determined by the sensitivity of these buildings or elements, that is to say by their contents and function, and may greatly exceed the value of the elements themselves. A tentative classification of buildings into four categories of sensitivity, according to their function, should be developed. This will include the following subdivision:

(a) Infrastructure (roads, power grids, telecommunications);
(b) Housing (whether modern or of traditional construction);
(c) Economic activities (including tourism and tourism related services); and
(d) Community services (health, administration, etc.).

As will be seen, tourism's classification as an economic activity suggests that damage to tourism plant and facilities will have primarily economic con-

sequences for the population. Damage to community services, plant and infrastructure will have predominantly social consequences for the local population even though these can be measured in financial terms. Damage to infrastructure will affect both the temporarily resident tourist population and the permanent population of the resort. Finally, damage to housing, while it may not directly concern the tourism population, will most likely affect the population providing services for tourists.

### Disaster preparedness: a good advertisement for a tourist destination

The concept of disaster preparedness is particularly important for tourist areas. An area which shows evidence of good disaster preparedness is likely to reassure international tourists considering a holiday trip to the resort concerned, while making them aware of the natural disaster risk to which the area is prone. The general definition of disaster preparedness is as follows: "Action designed to minimise loss of life and damage, to organize and facilitate timely and effective rescue, relief and rehabilitation." Measures supporting disaster preparedness include:

(a) Legislation and regulations;
(b) Readiness for disaster situations and similar emergencies;
(c) Forecasting and warning machinery;
(d) Planning and organisation for evacuation and other actions to be taken in response to warnings;
(e) Education and training of the local population, operators of tourist facilities such as hotels, tour operators and tourists; and
(f) Other organisation for and management of disaster situations, including preparation of operational plans and training of personnel involved, stockpiling of supplies and earmarking of necessary funds.

### Information and education: the role of the tourism industry

The application of the concept of disaster preparedness to tourism will involve a number of measures. First, tourists and, above all, the tour operators who arrange visits to the area concerned for international tourists, should be involved in the information and education process. Second, tour operators and the tourists concerned should be involved in the dissemination of and response to warnings and any evacuation process.

This means that warnings should be communicated in a form and language which tourists can understand while tour operators should be given the opportunity to cooperate in contingency planning. Naturally, plans for evacuation also include the cancellation or postponement of inbound tourism to a region threatened by a natural disaster.

With respect to organisation for and management of disaster situations, third countries participating in relief, rescue and rehabilitation activities in the country concerned may be more strongly motivated if tourists from their own country will be among the beneficiaries of such measures.

### The sociopsychology of disasters befalling tourists

The study of tourism and natural disaster reduction in tourist areas involves an understanding of the sociopsychology of tourism and natural disasters. This is a field in which very little research has been undertaken. Therefore, only a number of hypotheses can be put forward.

Market research relating both to international and to domestic tourism regularly shows that tourists, especially international travellers, have levels of educational attainment that are relatively higher than average. Tourists are therefore easier to communicate with in terms of information, awareness and educational campaigns. This is a positive aspect both for the tour operator in the country of origin — whose task is to provide general guidance and briefing to travellers on the risks in the destination concerned — and for the national tourism administration of the receiving country — whose task in communicating with tourists staying at its resorts will be correspondingly facilitated. Hotels and other places where tourists stay will have an important role and will need to establish their credentials as reliable sources of information concerning potential hazards and disasters. As will be discussed in the following chapters, information provided in hotel rooms concerning disaster situations should be clear and concise and should increase tourists' confidence that the authorities of the receiving country are experienced in managing the kind of problem experienced in the region concerned.

While the educational level of tourists is relatively high, facilitating communication and information campaigns, tourists are in an unknown environment when visiting a foreign country. While tourists may learn on repeat visits, there is a considerable danger that, through lack of experience, they may disregard warning signs of impending disaster which the local population would tend to heed. This is a matter which must be taken into account in developing educational material and warning services for tourists. It will be especially important in the case of the risk of avalanches, flash flooding and tropical storms. The provision of easy-to-understand guidance (flags on beaches or exposed coastal areas; avalanche warnings to mountaineers; meteorological warnings for campers and other tourists whose activities are likely to be affected by dangerous weather conditions or sudden floods) will assist in bridging this particular communication gap.

With the exception of those staying in condominiums or second homes, tourists are unlikely to have a financial stake in the place at which they are staying during their vacation. Therefore, if a natural disaster threatens, they do not face the prospect of losing their home. Nor are the possessions or personal effects taken on holiday by tourists likely to be especially valuable (even though the evidence of airline accidents suggests that tourists are likely to take unnecessary risks to rescue possessions and valuables). On balance, therefore, it might be predicted that, at the slightest hint of trouble or impending disaster, tourists would be willing to evacuate a resort. This would also lead to the prediction that tourists are not stayers (that group of the population identified, for example, after hurricane Camille struck the southern United States in 1969 and who preferred to stay rather than leave their homes). These considerations suggest that tourists would not be unduly reluctant to be evacuated from a disaster area, although human psychology is such that it might be advisable for tour operators to indicate that appropriate compensation would be paid for the loss of holiday time because of such forced evacuation procedures (this could be the subject of insurance). Such an argument is based on the economic principle that leisure time is a scarce resource and tourists may therefore resent interference with the progress of their holiday and even discount forecasts of adverse meteorological events. Here, the influence of the travel agency or generating country tour operator on tourist atti-

tudes and behaviour will be important and a significant information and education role can be played by the travel trade in this respect.

**Tourists at risk: dangerous forms of tourism?**

A final consideration in what must necessarily be a tentative discussion of sociopsychological issues is that some tourists may, as more active forms of tourism become popular, expose themselves to risks (surfing, water-skiing, winter sports, hang-gliding, etc.) which make them particularly vulnerable should disaster threaten. The fact is that no tourist season is complete without the sad news of accidents befalling tourists engaged in some particular form of sporting or mountaineering activity and who are surprised by a sudden onset disaster or simply an adverse change in weather conditions.

**Options for risk reduction relating to tourism plant and infrastructure**

In this part of the introductory chapter, consideration will be given to options for risk reduction. These options will be discussed in greater detail in the chapters relating to specific disasters. However, it will be useful at this stage to indicate briefly the kinds of options which may be available and how they can be exercised.

The first option for risk reduction is the modification of the hazard through a reduction of the hazard proneness of sites. Reduction of hazard proneness may relate either to the site or to the buildings constructed on it. Site improvement aims at mitigating disaster by changing the physical characteristics of the site itself. The aim of this option is to prevent the triggering of the hazard or to regulate its impact by ground improvements or drainage or slope modification. This option is of course governed by the type of hazard involved.

The second option is strengthening of buildings, an important consideration when new hotel or accommodation developments are being planned. For the reduction of earthquake risk, strengthening is the main option. Resistance against ground shaking can also be increased and this will lead to significant risk reduction. For flood and cyclone hazards, this option can be applied to all structural types.

An associated option will be the strengthening of infrastructure at the tourist resort. The physical strength of infrastructure systems may need to be improved in order to ensure adequate functioning of day-to-day facilities and services during and after a natural disaster. This option may comprise, for example, the strengthening of bridges against lateral slide in an earthquake or against flood-induced forces.

Since areas with access to sea, river or lake shores are frequently considered attractive for tourism development, it follows that hydrological hazards are particularly significant for the industry. Therefore, options to mitigate flood risks are important for tourism developments. Civil engineers have developed efficient methods of protecting sites against floods. Technically speaking, there are virtually no flood risks that cannot be mitigated through engineering measures. But cost is a relevant factor and, in practice, engineering measures can only provide partial solutions, especially in developing countries.

The aim of protective measures is to prevent floods from reaching tourist resorts. In the case of riverine floods, this must be achieved by preventing the

river spilling over the flood plain. This requires increasing the discharge capacity of the river, either by channel improvements or by the construction of dykes. Protection against heavy rainfall-induced floods is also achieved by the same means.

There are several techniques for improving the capacity of rivers. Deepening and widening the riverbed is a direct measure to increase capacity. The construction of protective dykes limits the occurrence of flooding. Likewise, an increase in pumping capacity is an option which will help reduce the impact of local heavy rainfall. Sometimes, natural drainage is problematic because of high river levels, in which case artificial emergency drainage may be installed at critical locations.

In flood-prone areas, the number of casualties is usually related to the population density of the neighbourhood at risk. A low-density tourism development is likely therefore to lead to a reduction of risk. Given that the risk in a given area depends on the specific functions in that area, tourism may be one of the functions that could be prohibited. For example, an area prone to flooding would be unsuitable for the location of a hospital because of high damage potential. In an area where the location of tourist accommodation would not be advisable it may nevertheless be possible to provide a park area or sport facilities for tourists. In any area of known flood-hazard intensity, guidelines for water-resistant building materials should be established and followed. They would be part of measures to strengthen buildings. The layout of a tourist resort will also influence risk. A resort with a complex physical layout and a lack of alternative exits could become a death-trap for tourists staying there.

In the case of cyclone-prone areas the main mitigation options for the high winds experienced during the cyclone are a reduction in the vulnerability of buildings and infrastructure and a reduction in the hazard proneness of sites. For cyclone-associated floods and storm surges, the mitigation response is similar to the response for other floods.

However, for cyclone mitigation the most important way to reduce risks is based upon the installation of an effective warning system. The appropriate response to timely warnings will lessen economic losses and much more importantly, could prevent or at least minimise human losses among the tourist population. Again, the involvement of hoteliers and tour operators will be crucial to success.

In areas affected by geological hazards such as earthquakes, the strengthening of buildings to reduce structural vulnerability is the most important measure. The following considerations are important in the case of buildings:

(a) Building configuration should be regular and symmetrical.
(b) Opening sizes should be as small as possible.
(c) The prevention of sudden collapse is more important than the prevention of damage.
(d) The rigidity of the building should be distributed uniformly.
(e) Brittle materials should be made more ductile by adding materials such as wood or steel at points of tensile stress.
(f) Reinforced concrete footings are considered to be the most effective foundations where earthquakes are concerned.

(g) Even the best earthquake design may fail if it is badly constructed. Poor quality of construction or the use of substandard materials is a significant cause of building failure.

Where infrastructure is concerned, the following factors should be taken into consideration:

(h) Many bridges are not designed to resist lateral slide; suitable techniques should be applied to new bridges as well as to the retrofitting-fitting of existing ones.

(i) Flexible pipelines for public utilities are important.

(j) If utility installations are located in the open, damage to them from falling buildings can be avoided.

In conclusion, land use regulations together with vulnerability reductions are important earthquake mitigation options. This will be discussed further in the earthquake chapter.

**Planning and immediate response during the onset of a natural disaster**

Despite the use of the best engineering practices, buildings and people remain susceptible to natural disasters. Thus, in addition to prevention through engineering and building construction, resort managers should have detailed plans on how to react when a disaster is imminent, or one arises without warning. There is extensive literature on emergency planning, and key references are provided at the conclusion of this Handbook on each type of disaster. Resort managers are encouraged to make full use of these references and develop detailed plans on how to deal with the various types of disasters. Annual employee training on the use of these disaster plans is equally recommended.

If, however, such detailed plans are not available when calamity strikes, the appendices of this Handbook provide checksheets that venue operators may find valuable. There are checksheets for dealing with tropical storms, floods and earthquakes. For each such disaster, there are checksheets for resort managers, employees and their families, and tourists. The employee family and tourist checksheets are prepared for immediate use and can be copied for immediate distribution.

For tropical storms and floods, the checksheets include emergency preparations that can be taken during the warning period before the calamity actually arrives. For each disaster, there is a sheet on what to do during the event itself. There is also a section for each on what to do immediately after the event to ensure safety and deal with the physical aftermath.

The basic elements of these checksheets are presented in their associated chapters within the Handbook. These discussions, however, are mere introductions to the subject. For more extensive discussions of planning and emergency response as used at sites throughout the world, reference to the literature is strongly recommended.

**Relaunching tourism after a natural disaster**

The severity of a natural disaster determines the intensity needed to maintain or relaunch tourism after the event. Actions to reassure the travelling public are often more significant than physical plant repair. Letting the public know the resort is open, ready for business and continuing to offer the attractions

that make it a desirable tourism destination are essential elements in recovery from a disaster. It is not possible to overstate the importance of marketing the tourist destination, even after a small storm, flood or earthquake. A single negative rumour can destroy the marketability of the area, especially if there is no countering statement from the community of tourism venues at that destination. Thus, preparations for dealing with the media and with tourists scheduled to arrive after the disaster event are critical. Appendix D provides a sample press pack and includes sample question-and-answer briefing sheets useful to resort managers and tourism industry spokespeople; a draft news release, a sample fact sheet, a sample position statement and a typical free call-in hotline questionnaire.

Few tourism sites consist of a single resort. A coordinated response to a disaster from all members of the local tourism industry will be both cost-effective and will significantly increase the benefits of a relaunching effort. Whether through a chamber of commerce or a disaster response team established by the local tourism industry, it pays to find a mechanism through which to coordinate marketing and news media efforts. Detailed guidance on establishing a tourism relaunching team is provided in Sonmez (1994). Additional readings providing perspectives from throughout the world are available in the abstracts published by the Union of Local Authorities in Israel (1994). Appendix E provides a useful tool for collecting information on the infrastructure status of the tourist destination, which is extremely important to a coordinating team and those responsible for developing material for the press.

The need to know the perceptions of the tourism client is common to all disasters. A tourism destination that does not know what makes the site desirable will not know what elements must be quickly repaired and made available to the travelling public. It is these attractions that draw the public and which will serve as the basis for relaunching tourism after a disaster. Therefore, the one aspect of relaunching tourism that can and should be done well before the potential for any disaster to arise is an ongoing assessment of tourist perceptions. This is a normal element of routine tourism marketing and should be done regularly. The perceptions of potential tourists after a disaster must also be evaluated and factored into marketing associated with the relaunching effort. Also included in Appendix D is a list of precautions useful when creating the basic marketing message that will be the common thread in news media relations, advertising and responses to queries from the travelling public. The later sections of Appendix D provide guidance on basic news media relations.