

TOURISM



PDNA GUIDELINES VOLUME B



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## INTRODUCTION

What is commonly called the tourism sector is in fact part of the wholesale and retail trade or commerce sector under the System of National Accounts. However, due to the growing importance of tourism activities, especially for some countries where tourism is a significant contributor to gross domestic product, efforts have been made in recent times to measure their value under a separate satellite account. See *Tourism Satellite Account; Recommended Methodological Framework*, Commission of the European Communities, Organization for Economic Cooperation and Development (OECD), World Tourism Organization (WTO), and United Nations, Luxemburg, Madrid, New York, Paris, 2001. For disaster impact assessment in countries where tourism activities are of strategic economic importance, this chapter is included here to describe procedures for estimating disaster effects, impact as well as post-disaster recovery and reconstruction requirements.

Annex II of the *Tourism Satellite Account* includes the following list of tourism products:

- Accommodation services;
- Food and beverage services;
- Passenger transport services;
- Travel agency services;
- Cultural services;
- Recreation and other entertainment services; and
- Miscellaneous and insurance services.

However, in this chapter at least, it is recognized that products listed under bullets 3 to 7 are to be assessed under other sectors of economic activity (i.e. transport, and culture and insurance respectively), and the scope of the tourism sector will therefore be limited to the subject of accommodation and restaurants activities to ensure there is no double or multiple accounting in the assessment of disaster effects. According to the most recent UN International Standard Industrial Classification of All Economic Activities (*International Standard Industrial Classification of All Economic Activities, Rev.4*, New York, 2008. (<http://unstats.org/unsd/cr/registry/>)), the accommodation and food service activities to be assessed under the tourism sector include the following:

1. Accommodation
  - Short-term accommodation in hotels, resort hotels, suite/apartment hotels, motels, motor hotels, guest-houses, pensions, bed-and-breakfast units, visitor flats and bungalows, time-share units, holiday homes, chalets, housekeeping cottages and cabins, and youth hostel and mountain refuges;
  - Accommodation in camping grounds, recreational vehicle parks and trailer parks; and
  - Accommodation in student residences, school dormitories, workers' hostels, rooming and boarding houses.

## 1. Food and beverage services

- Provision of food service to customers in restaurants, cafeterias, fast food restaurants, pizza delivery, take-out eating places, ice-cream truck vendors, mobile food carts, food preparation in market stalls;
- Event catering and other food-service activities; and
- Beverage serving activities in bars, taverns, cocktail lounges, discotheques, beer parlors and pubs, coffee shops, fruit juice bars, and mobile beverage vendors.

The tourism sector is highly vulnerable to the effects and impacts of disasters of every kind. This is due to three main reasons: first, the frequent or usual location of tourism assets in vulnerable coastal areas; second, the volatility of tourism demand due to fear or misinformation about the possible consequences of disasters; and third, in view of the seasonality of the high-demand tourism season, a disaster may mean an entire season's worth of lost income.

Bed capacity in hotels is a measure of the availability of assets in the sector to operate and admit tourists, whether foreign or domestic. After disasters, bed capacity decreases due to the destruction – whether full or partial – of the hotels and other facilities. The arrival of tourists, especially those from abroad, is contingent on the perception of what may have happened in the affected area or country after the disaster. In Mexico, for example, during the swine flu pandemic in 2009, foreign tourists, who have a significant positive impact on the country's economy, stopped coming despite the fact that the flu was relatively mild - in some tourist areas such as Cancun no deaths occurred due to the flu. Total losses from foreign tourism income alone in 2009 amounted to US \$2,300 million. Misinformation therefore may play a negative role in the recovery of demand for foreign tourism services. Therefore, the time required for the tourism demand to fully recover after the disaster may be longer than the time required to rebuild the affected bed capacity.

The negative impact of disasters on tourism is reflected in the amount of foreign exchange earnings for the country, in the possible decline in domestic employment, and in a possible decline in government revenue earnings, since many countries have special taxes on tourism income. Countries where the tourism sector represents a significant fraction of gross domestic product would logically be more vulnerable than others where tourism activities are limited.

## ASSESSMENT PROCESS

This chapter describes the procedure to assess the effects of a disaster on the tourism sector, using the time-proven methodology originally developed by the United Nations Economic Commission for Latin America and the Caribbean (UNECLAC) (*Handbook for estimating the socio-economic and environmental impact of disasters*, 4 volumes, United Nations, 2003), further developed by the World Bank's Global Facility for Disaster Recovery and Reduction (GFDRR) (*Guidance Notes for Damage, Loss and Needs Assessment*, 3 volumes, The World Bank, Washington, D.C., 2010), and now expanded and adopted by the PDNA. Application of the methodology enables the assessment of disasters' economic and social impact on the tourism sector, and the estimation of post-disaster needs for recovery and reconstruction.

Damage in the case of this sector is estimated initially in physical terms and is subsequently converted into monetary value by using the unit repair, reconstruction or replacement costs of the affected sector assets, to the same quality and quantity standards they had prior to the disaster. As for any other sector, the possible repair, reconstruction or replacement of tourism assets using improved, disaster-resilient standards, as part of a "building back better" reconstruction strategy, are to be considered later on, at the time of the estimation of needs for recovery and reconstruction. At that time, multi-year inflation is to be added as well whenever the reconstruction program takes longer than one calendar year.

Changes in production flows in this sector refer to, on one hand, a decline in revenues that arise due to the temporary non-availability of destroyed assets and/or to the decline in arrival of foreign tourists; on the other hand, to possible higher costs of operation of the tourism facilities – such as the post-disaster temporary provision of water and electricity from alternative sources – as well as the unexpected costs of promotion to convince tourists to come back after a disaster. Some of these losses may have a double impact in that they may not only decrease gross domestic production (GDP) but negatively affect the balance of payments of the affected country, since a significant foreign exchange flow may be temporarily interrupted due to the disaster, as discussed later.

In this sector as in others, a detailed assessment of all tourism facilities must be made, on a one-by-one basis, since the assets are usually very distinct from each other, and the approach of developing typical types of assets used in the housing or any other sector cannot be adopted. This will involve visits by the tourism sector assessment team to all affected areas and tourism resorts and facilities, for which assistance may be obtained from the existing hotel associations in the country.

The tourism sector assessment team requires the inclusion of architects and civil engineers for the estimation of the value of damage and the availability of economists for the estimation of production flow changes.

It should be mentioned again that tourism activities may not have a satellite account in some countries' system of national accounts, and that any disaster effects on them are to be included instead as part of the commerce or trade sector. Tourism has been included as a separate sector in the PDNA Handbook because for some small countries, especially of the small-island-development-states (SIDS) type, tourism activities may be a significant enough part of GDP to warrant the addition of a satellite tourism account in their system of national accounts.

## PRE-DISASTER SITUATION

The following is the minimum quantitative baseline information required for the assessment of disaster effects on tourism activities:

- The number, size and location of all tourism assets that exist in the affected areas, following the detailed list provided in the previous section;
- Description and quantities of the typical furniture, equipment and other goods that are normally present in the affected assets;
- Statistical data on the arrival and seasonal variation of tourist arrivals, both domestic and foreign since they are likely to behave differently;
- Information on the average length of stay of tourists in the affected country or area, and on their average expenditures, for both domestic and foreign tourists; and
- Data on any fees or special taxes charged to foreign nationals, including visa fees, special tourism taxes, etc.
- Proportion of labor force engaged in the sector and characteristics of their employ (by sex, level of education and other relevant demographic characteristics).

The place to search and obtain most of the required baseline information is the country's Statistical Office, since they normally keep data on the number and origin of tourist arrivals, as well as any seasonal variation, and also have data on the average length of stay by tourists and their estimated average expenditures. Many countries, where tourism is an important sector, conduct annual surveys of the sector. Furthermore, the private sector association of tourist operators or entrepreneurs in the affected country is likely to have detailed information for the baseline and also be willing to cooperate in the assessment.



## FIELD VISITS FOR POST-DISASTER DATA COLLECTION

Detailed field visits to obtain first-hand knowledge about the effects of the disaster on the sector's infrastructure and facilities are essential for the assessment of the value of damage and to obtain information to estimate production flow changes. During the visits, special interviews should be held with hotel and restaurant owners and tourism operators to obtain their views and determine their special needs for recovery and reconstruction, and to ascertain whether insurance is available and whether it covers both infrastructure and/or revenue losses.

Any existing reports from the emergency phase – no matter how partial in coverage – must be gathered and used to guide or orient the field visits by the tourism sector assessment team in order to ensure that all affected assets of the sector are visited and assessed. It is very likely that hotel owners may have commissioned assessments by private advisors and/or that the insurance companies that cover the assets may have done their own estimations. The tourism sector assessment team should make every effort to obtain access to such prior estimations.

The tourism sector assessment team should also visit private construction contractors operating in the affected area to obtain information on typical unit construction and repair costs prevailing at the time of the disaster that may be used in the estimation of damage, as well as learned opinions on the required length of the repair/reconstruction period.

During the field visits, the assessment team should also obtain, directly from hotel owners and tourism operators, data on actual post-disaster occupancy of bed capacity that may be used to compare to the “normal” or “non-disaster” trends and conditions. Care must be exercised in this to avoid optimistic estimates that may be based on the temporary occupancy of hotels by the usually large humanitarian assistance crews whose stay is not long term, and which may distort the estimates about real decline in foreign tourist arrivals.

Using this field information in combination with the baseline data collected before, the tourism sector assessment team must come up with a scenario of how the sector's bed capacity will be restored over the time of reconstruction. Projections about tourist arrival recovery should also be carried out, dealing separately with domestic and foreign tourists, bearing in mind that reconstruction of bed capacity and demand for tourism services do not necessarily match. In view of the uncertainty of how foreign tourist arrivals may recover, use can be made of data on recovery from recent, past disasters, and campaigns to adequately inform potential clients abroad may be factored in for this purpose.

The estimations and projections described above should enable the preparation of a calendar of sector economic recovery over time, which can then be used for the subsequent estimation of production flow changes.

# ESTIMATION OF DISASTER EFFECTS

## EFFECTS ON INFRASTRUCTURE AND PHYSICAL ASSETS

The value of damage must be estimated as the cost to rebuild or repair buildings and associated facilities that were (totally or partially) destroyed, as well as the replacement value of the destroyed furniture, equipment and other goods in the buildings, assuming they are replaced or rebuilt to the same standards of quality and quantity they had prior to the disaster. Needless to say, these costs are to be based on the actual unit costs of construction and repair obtained by the tourism sector assessment team after visiting reputable building contractors, and/or after revising insurance companies' estimations. Any desired improvement in quality and quantity and for disaster-risk reduction is to be left for consideration in the subsequent estimation of post-disaster financial requirements or needs, if the adopted reconstruction strategy is that of "building back better."

It is to be noted that the estimated value of destroyed assets (damage) should not be modified in the presence of partial or total insurance. Any existing insurance on assets is to be used subsequently in the estimation of reconstruction needs, as it would reduce the financial requirements for reconstruction instead.

In addition to the above, the tourism sector assessment team should ascertain information in regard to the age of destroyed buildings and equipment. This information is not to be used for the estimation of the value of damage, but instead delivered to the assessment team in charge of macroeconomic impact assessment to utilize in the analysis of the capital account and in the estimation of global disaster impact.

As part of the damage assessment, a very clear definition of the time frame required for reconstruction and restoration of nominal bed capacity is to be made, which will be an essential input for the estimation of production flow changes.

In order to avoid double counting in the assessment for the tourism sector, the team must make sure that damage to environmental assets and services that make tourism attractive to the users is duly included in the assessment of the environment sector. In addition, damage to roads leading to and within the premises of the hotels and damage to the services of water and sanitation, electricity and communications, is only included within the tourism sector in those cases where the roads and services are owned and operated by the hotels. Otherwise, it should be included in the assessment of the institutional sectors of transport, communications, water supply and sanitation, and electricity, respectively.

## EFFECTS OR CHANGES IN TOURISM FLOWS

For the estimation of production flow changes, the tourism sector assessment team may assume initially that they would occur over the time required to reconstruct bed capacity; and then should carefully introduce the most likely recovery pattern of foreign tourist arrivals that will enable full recovery of tourism demand. Putting it differently, production flow changes are to be estimated over the period of time defined by:

- The time required to repair or rebuild the physical or environmental assets that were subject to damage; and/or
- The time required to overcome the fear or lack of information among foreign tourists.

The assessment team should be aware of the possibility of a decline of tourist arrivals from abroad for an entire tourism season, in view of the time required to rebuild assets and the need to design and undertake information and promotion campaigns abroad. The timing of the disaster along the calendar year and the previous experience from past disasters should provide insights on this time frame. The demand of domestic tourists is likely to follow a different and more positive



trend and timeframe, since the tourism operators may actually undertake special campaigns to attract more domestic visitors to partially offset the losses in the foreign market. This is what happened in Mexico after the 2009 swine flu outbreak. Domestic tourists who took advantage of special tourism packages partially compensated for the loss of foreign arrivals in some tourism resorts and locations.

To sum up, the tourism sector assessment team must develop a post-disaster schedule of sector performance that combines a calendar of staged recovery of bed capacity (the supply side of the sector) with the schedule of possible recovery of domestic and foreign tourist arrivals, which covers the demand side. In turn, recovery of bed capacity would depend on the construction sector capacity of the affected country (since after a large disaster large numbers of housing units, schools, hospitals, roads and other infrastructure works would have to be rebuilt or repaired concurrently), the timing for availability of financing for reconstruction, and the existence and efficiency of bureaucratic requirements for reconstruction permits and licenses. Furthermore, the recovery of demand will depend on the opportunity and efficiency of information campaigns to regain the trust of the usual foreign target groups and/or to capture new foreign target groups, or to capture an increased number of domestic tourists.

In addition to losses of revenue, the tourism sector may also sustain higher costs of operation that must also be included in the assessment, as they would affect the enterprise performance. This may include, among other factors, overtime payment to personnel, temporarily higher costs of water (for instance, bringing in tanker trucks) and electricity (renting portable power units) while the regular services are being repaired by the appropriate utilities, and many other possibilities that are impossible to list.

If there are insurance on possible revenue losses in the case of some or all of the affected tourism facilities, the tourism sector assessment team should not use the estimated insurance proceeds to reduce the estimated value of revenue losses. Instead, the value of insurance proceeds on revenue losses should be used to reduce the value of economic recovery needs in terms of post-disaster working capital that the sector may require, as discussed later.

## **EFFECTS ON GOVERNANCE AND DECISION MAKING PROCESSES**

In most countries, the tourism sector is virtually in the hands of private sector entities, and the public sector provides regulatory and oversight functions. Others have publicly-owned tourism facilities. After a disaster, the function of governance may be negatively affected, and the assessment must include an analysis of such disaster effects.

Governance is affected in five possible areas:

1. Knowledge and skills: technical expertise and institutional information for the sector;
2. Resources: human, material and financial, including availability of skilled labor, raw materials for processing, cost and price structure, etc.;
3. Systems, information management, communications and basic inputs; and
4. Legal authority, monitoring, oversight and reporting.

As part of the assessment, analyses are to be made to ascertain how the capacity of the public sector to oversee the normal functioning of the tourism sector may have been compromised (including the availability of registries, etc.), how the disaster may have modified the structure of costs for tourism service provision that may result in changes in consumer prices, how the disaster may have caused non-performance of existing pre-disaster credit loans for tourism operators, and also the availability of skilled labor.



## EFFECTS ON RISKS AND VULNERABILITIES

After a disaster, it is necessary to analyze risk for the tourism sector. On one hand, pre-existing disaster risk may not have been evident, as many hotels are usually located in disaster-prone geographical areas due to the location of environmental attractions, absence or insufficiency of land-zone mapping and other urban planning standards. On the other hand, the disaster event may have increased risk and vulnerability through instability of sloping terrain that may cause further landslides, the occurrence of aftershocks following an earthquake, breaching of levees and other protective structures which may cause further flooding, increased fire risk after droughts, etc. Such higher risks need to be fully analyzed and schemes for reducing or eliminating them must be devised as part of recovery and reconstruction with risk reduction.

## INPUTS FOR MACROECONOMIC AND PERSONAL IMPACT ANALYSES

The tourism sector assessment team must also make additional estimations that go beyond disaster effects, and that would have a bearing at the macroeconomic and personal or family levels, and deliver them to the appropriate assessment teams dealing with impact analysis (the macroeconomic impact analysis team and the human development impact analysis team).

For macroeconomic impact analysis, the following items must be estimated by the tourism sector assessment team and provided to the macroeconomic assessment team:

- The estimated value and timeframe of decline in tourism services flows and of higher intermediate consumption or higher production costs, both expressed in current or nominal values, for use in the subsequent analysis of disaster impact on gross domestic product;
- The estimated corresponding values and time frame of foreign exchange losses due to the temporary non-arrival of foreign tourists, for use in balance of payment analysis;
- The estimated value and timeframe of the information and promotion campaigns to regain foreign tourists trust, also for use in balance of payments analysis;
- The estimated value of temporary decline in government revenues corresponding to the decline in foreign tourism arrivals, including tourism and sales taxes, tourist visas and permits, etcetera, for the analysis of fiscal impact;
- The cost of the possible share of the government in the financing of the information and promotion campaign, for fiscal sector impact analysis;

- The estimated value of imported assets (of both construction materials and equipment and furniture) that are not manufactured in the affected country and that must be imported from abroad for the reconstruction program, for use in the analysis of balance of payments; and
- The estimated value of re-insurance proceeds that may be received in the affected country after the local insurances request for reimbursement from foreign insurance companies, to be used in the analysis of balance of payments.

The tourism sector assessment team should deliver its estimation of the value and expected time frame of losses in tourism services flows to the assessment team in charge of estimating disaster impact on employment and personal or household income. Based on the value of tourism sector revenue losses, that team should estimate possible losses in employment and personal income of the tourism sector labor force.

## CROSS-SECTORAL LINKAGES AND ISSUES

During the assessment, several cross-cutting issues must be given due consideration. These include the differential impact of the disaster on gender and the possible impact on the environment.

For the tourism sector, the gender breakdown of the labor force – whether skilled or not – is an essential part of the baseline information gathered at the start of the assessment, together with information on wages and salaries. Once the estimated values of production losses for the tourism sector have been made, separate estimates are to be made of the number of jobs temporarily or permanently lost due to the disaster for both men and women, together with how their personal income may have declined. In addition, information about gender breakdowns in the ownership of hotels and restaurants should also be obtained.

Due to the disaster, environmental conditions may be altered which may cause further difficulties to the tourism sector, since many of the sector assets are located precisely in the vicinity of environmental attractions (beaches, mountains, etc.) that may have been affected by the disaster. Any such difficulties must be quantified by the assessment team with assistance from environmental economists, and expressed in monetary terms for inclusion in the assessment.

## ESTIMATION OF POST-DISASTER ECONOMIC RECOVERY AND RECONSTRUCTION REQUIREMENTS OR NEEDS

The tourism sector assessment team needs to be aware that it is only after completing and delivering the results of the estimation of the value of destroyed tourism assets (damage) and the value of tourism sector services changes in flows have been delivered to the macroeconomic assessment and to the human development impact assessment teams, that they may initiate the estimation of tourism sector financial requirements to achieve economic recovery and reconstruction under disaster-resilient standards. This is so because only in that fashion is it possible to guarantee the accuracy and consistency of the entire assessment, and to avoid any undue influences in the estimation of post-disaster financial requirements or needs.

Economic recovery financial requirements in the tourism sector are equal to the amounts of financing required to ensure the return of the services (in quantity and quality) to normal or non-disaster conditions. They may include some of the following activities:

- Provision of soft-term credit to provide working capital to tourism entrepreneurs and restaurant owners – channeled through the private banking system or the development banks – or to facilitate the rescheduling

of disaster-induced non-performing loans, when the enterprises were not sufficiently or adequately covered by insurance on revenues or sales;

- Provision of temporary tax relief for the above as an additional method to alleviate financial difficulties arising from the disaster, when required; and
- Partial government financing of information campaigns to reach foreign visitors and convince them to return to the tourism facilities after the disaster effects have been overcome.

As in the commerce sector, the amounts required for working capital or to re-schedule loans in the tourism sector enterprises may be estimated as a fraction of the unearned revenues caused by the disaster. The experience acquired over the past 40 years of conducting post-disaster needs assessments indicates that a range of between 20 to 35 per cent of the value of tourism revenue losses may be adequate to meet such economic recovery needs. The exact value is to be defined by the tourism sector assessment team on the basis of a detailed analysis of financial data obtained during the assessment, and after informal discussions are held with representatives of the different size and type of affected tourism establishments.

The cost of an information and communication campaign to attract or re-attract foreign visitors after the disaster must be estimated on the basis of experience acquired in previous disaster events. The tourism sector assessment team needs to bear in mind that the cost of such an information campaign is to be borne in foreign currency since the target groups of the campaign reside abroad. In cases where special tourism packages are to be advertised for acceptance by domestic tourists, to increase their use of tourism facilities as a way to partially compensate for the loss of foreign visitors, the cost would of course be estimated on the basis of local currency requirements.

The value of insurance proceeds to compensate for tourism revenue losses, when such insurance was available, must be deducted from the estimated value of needs before recommending a ceiling for the economic recovery needs.

Reconstruction requirements under disaster-resilient standards are normally estimated by taking the value of asset destruction or damage, and increasing it by a certain percentage to enable the introduction of quality improvement, technological modernization and adoption of disaster-risk reduction standards defined in a “building-back-better” reconstruction strategy. The experience acquired in conducting post-disaster needs assessments indicates that the usual range to increase the value of estimated damage would be between 15 to 20 percent. In some cases, reconstruction requirements may include the cost of relocating the destroyed premises in safer places, and the cost of land acquisition and of provision of basic services must be added to the value of damage.

After coming up with a value of reconstruction requirements, the value of insurance-on-assets proceeds that the tourism enterprises may have had must be factored in to come up with a net value of reconstruction requirements.

## ESTIMATION OF POST-DISASTER HUMAN DEVELOPMENT RECOVERY REQUIREMENTS OR NEEDS

The tourism sector assessment team must deliver the estimated values of tourism flow changes or decline to the separate assessment team in charge of estimating disaster impact on human development, for them to estimate the possible decline in employment and personal or household income. On that basis, the human development assessment team will be able to ascertain whether the labor force of the tourism sector will need to be part of a possible, temporary “cash-for-work” post-disaster program.