

South Pacific Disaster Reduction Programme (SPDRP)

***A Guide To Successful
Damage And Needs Assessment***

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A GUIDE TO SUCCESSFUL DAMAGE AND NEEDS ASSESSMENT

The clear and concise assessment of damages, losses and injuries in the aftermath of a disaster is a prerequisite for the effective planning and implementation of relief and recovery.

1. PRINCIPALS FOR RELIEF PLANNING

- the primary responsibility for disaster relief lies with the affected government
- country response capacity has to be preferred over outside assistance, in order not to destroy self-help capacities
- the same principle applies to the local situation: community response capacities have to be preferred over government assistance
- assistance is based on priority humanitarian needs, which have to be determined prior to the disaster
- relief measures have to be planned in the context of long-term development. This gives an opportunity to reduce vulnerability to future disasters

2. ASSESSMENT OBJECTIVES

The objectives of damage and needs assessments are to determine:

- nature and extent of a disaster
- damage and secondary threats
- needs of the population
- resource availability and local response capacity
- options for relief assistance, longer-term recovery and development
- needs for international assistance

3. ASSESSMENT TYPES

- initial assessment
- detailed assessment

4. INITIAL ASSESSMENT

- aims at determining relief and immediate response requirements
- is conducted immediately in the early and critical stage of a disaster, as soon as the conditions allow survey teams to operate (about two to three days after the event)
- is broad in scope and focuses on overall patterns and trends

- identifies:

- the magnitude of a disaster (without necessarily delivering exact figures)
- the impact of a disaster on society
- people's capacity to cope
- the most urgent relief needs and potential methods for delivery
- priorities for action
- the utilisation of resources for immediate response
- the need for detailed assessment of specific geographical areas or substantive sectors
- the level of continuing or emerging threats
- the need for international assistance

5. ***DETAILED ASSESSMENT***

- aims at determining the longer-term recovery and development requirements
- is conducted two to four weeks after a disaster, depending on the accessibility of the affected area
- covers critical sectors in terms of the country's future economic and social development strategy
- is carried out by specialists in the sectors concerned
- identifies:

- recovery programme options
- estimates on financial and material recovery requirements
- estimates on value loss through damage
- damage to the social structure
- links between relief and development
- continuing need for relief assistance
- the need for international assistance

6. ***SITUATION AND NEEDS ASSESSMENT***

Both, initial and detail assessments contain:

- a situation assessment, that depicts a picture of the situation by describing the magnitude of the disaster and the impact on population and infrastructure (what has happened?)
- a needs assessment, that defines the level and type assistance required for the affected population (what needs to be done?)

7. ***KEYS TO SUCCESSFUL ASSESSMENT***

-
- ❑ information has to be accurate - the best sources to obtain information need to be accessed and biased information be avoided
 - ❑ information has to be timely - assessments should be carried out as soon as possible after the disaster
 - ❑ information has to be continuously updated, in order to re-evaluate the needs and the appropriateness of response and recovery actions
 - ❑ emergency and chronic needs have to be distinguished, in order to know what is normal for the location and what is the result of the disaster
 - ❑ survey methods, terminologies, ratings and classifications have to be used in a standard manner
 - ❑ surveyors have to be sensitive towards the local situation to prevent unrealistic expectations on the part of the affected population
 - ❑ information has to be presented in a manner that suits the needs of the respective addressees
 - ❑ assessment results have to be presented in a way that makes implications for prioritization and action very clear
 - ❑ assessments hardly reflect the full picture of the situation and surveyors have to be aware, that intangible things can be equally important
 - ❑ resources to carry out assessments (i.e.: teams, transportation, logistical support) have to be immediately available

8. *ELEMENTS OF THE ASSESSMENT PROCESS*

Every assessment process comprises of five basic elements or activities:

- ❑ **Planning and Preparation:**

Assessments need thorough planning, design and preparation well in advance of a disaster. Most information needs can be identified well in advance. The means for collecting data and the formats in which it is to be presented should be established well in advance during the pre-disaster planning period. Seek advice widely from survey specialists, statisticians, epidemiologists and people with local knowledge. By preparing to undertake assessments well in advance of a disaster, both the data required and the process most appropriate for its accurate and speedy collection can be identified and refined prior to the disaster. Proper design of sampling and survey methods can increase substantially the accuracy and usefulness of assessment data. Standard survey techniques, questionnaires, checklists and procedures should be prepared to ensure that all areas are examined and that the information is reported using standard terminology and classifications. Please refer to the checklist below:

- collect and maintain baseline and background data (for details see annex 1)
- prepare survey forms for data collection and formats for presentation of results (see annex 2 for lists of available pilot forms)
- prepare standard survey techniques and procedures
- pre-identify survey teams
- know available personnel, resources and stocks
- pre-identify likely problem areas and indicators
- develop standards for minimal performance requirements on living conditions, human services, life-sustaining elements, safety (based on baseline data)
- establish standing agreements for emergency coordination among agencies concerning staff, communication, transport etc. and clarifying roles & responsibilities during the assessment phase

□ Survey and Data Collection:

The collection of data about the extent of damage caused by a disaster is the basis upon which decisions on relief and recovery are taken. Information gathering must proceed rapidly and thoroughly. Surveyors should look for *patterns* and *indicators* of potential problems. Using procedures developed earlier, key problems should be checked more thoroughly. Sources of information should be identified (e.g. whether the information was observed by the surveyor himself, reported by an informant, collected through a randomly sampled population, or heard by rumor). The information will be more meaningful to those who interpret it if the source is indicated, especially when there are conflicting reports. Please refer to the checklist below:

- data collection is an ongoing process, which ensures that up-to-date information is always available
- information requirements and the level of detail of information vary at different times, therefore, different types of assessments are conducted such as initial and detailed assessments
- the main subjects on which disaster management authorities need information on are:

The Disaster Situation:

- area affected
- number of people affected
- mortality rates
- injuries and illnesses
- condition of the affected population
- damage to all sectors
- level of local response
- response by NGOs and other agencies
- secondary threats

➤ ***The Needs of the Population:***

- search and rescue
- medical and health matters
- water supplies
- evacuation
- clothing
- shelter and housing
- administration, transport and communication
- food supplies
- agriculture
- lifelines and critical facilities

□ Interpretation and Forecasting:

Incoming assessment data has to be thoroughly analysed and interpreted in order to become meaningful and useful information for decision-makers. Those performing the analysis must be trained to detect and recognize trends and indicators of problems, to interpret the information and to link it to action programs. Estimates must be constructed of how the situation might develop so that contingency plans can be drawn up. Forecasting requires inputs from many specialists. People with previous disaster experience are likely to be especially helpful. Please refer to the checklist below:

- cross check and compare reports, check against baseline for validity
- differentiate chronic and disaster-related needs
- consider information sources and survey methods
- avoid generalisation
- detect and recognise trends and indicators of problems
- link information to action programmes
- estimate how the situation might develop in the future. This requires input of specialists who have had extensive experience in previous emergencies.

□ Reporting:

Information and results of the analysis process need to be disseminated in a format that enables disaster managers and decision-makers to formulate action programmes (see annex 3 for a possible format).

□ Monitoring:

Assessments must be seen as a continuous process of re-evaluating the needs and the appropriateness of response and recovery interventions.

9. ASSESSMENT METHODOLOGY

The data collection methods depicted below are some of the most commonly used during emergencies:

- Initial Self-Assessment:
automatically done by key elements in the system, i.e. staff of lifeline facilities, such as power, water or telecom.
- Visual Inspection:
through overflights or sample surveys to achieve a rapid appraisal of the damage.
- Sample Surveying:
through specialist teams which focus on specific characteristics of the affected population.
- Sentinel Surveillance:

is used predominantly in health emergency monitoring and consists of a reporting system that detects early signs of particular problems in specific areas. Such an early warning system can be introduced also for other context.

- Detailed Critical Sector Assessments by Specialists:
involves technical inspections and assessments by experts.
- Interviews with Key Informants:
as for example village leaders, head-teachers, hospital management or the like.

10. ASSESSMENT TEAMS

- initial assessments should be carried out by multi-disciplinary assessment teams comprising of four to five members
- the characteristics of a team are:
 - common interest
 - clear allocation of responsibilities among team members
 - complementary of tasks
 - shared commitment
 - inputs of all members are important to fulfill the task

-
- ❑ the skills and competence assessment teams should have are in the fields of:
 - team leader
 - agriculture
 - public works & logistics
 - health (environmental health specialist, epidemiologist, nutritionist)
 - education
 - regional development or other local expertise
 - gender
 - communication

 - ❑ assessment teams should be pre-identified and their contact details held at the District Office or Division and be regularly updated

 - ❑ assessment staff can be drawn from:
 - national ministries and government departments at all levels
 - national military and navy units
 - local and international NGOs
 - international organisations

 - ❑ team members should be adequately trained and familiar with:
 - damage and needs assessments
 - completion of assessment survey forms
 - reporting channels
 - procedures, roles & responsibilities
 - safety & security instructions

 - ❑ Prior to the field mission team members should be briefed on:
 - the current situation (whatever is known about the disaster situation)
 - the mission objectives (time frame, sectors to focus on, geographical area to be covered)
 - local particularities
 - their roles, specific tasks and responsibilities
 - available resources (equipment, transport, communication)
 - to whom to report to and how to transmit reports

 - ❑ team members should be equipped with:
 - pen or pencils
 - official report forms
 - a board or a file to write on
 - protection of papers from water and dirt
 - blank paper
 - maps of the area
 - food and water for the team
 - fuel supplies
 - spare clothes and first aid supplies for longer missions

11. SOURCES OF INFORMATION

- district or regional government officials
- sectoral specialists
- chiefs and other community leaders

- crews of ships and air-crafts
- police and other officials in the affected areas
- individuals living in, coming out or going to the affected area
- satellite imagery
- aerial photographs

12. ASSESSMENT TOOLS

Standard Field Assessment Reporting Forms

- standardised, pre-defined reporting forms help national authorities which are responsible for damage assessment to collect, collate and report essential information on the disaster situation
- depending on the features of the administrative system the types of forms required are:

- initial assessment reporting forms
- detailed assessment reporting forms
- district summary forms

- these forms should be prepared for the following sectors:

- rural villages/settlements
- public works
- agriculture, fisheries & forestry
- health
- education

(An overview of all pilot survey forms developed through SPDRP is displayed in annex 2. These forms can be obtained from the project team for in-country adaptation)

- the structure of the reporting forms should cover about thirteen areas and is similar for various sectors:

The Structure of Assessment Forms:

1. Disaster Identification
2. Location and/or Facility Details
3. Communication Details
4. Access Details
5. Human & Operational Details
6. Structural Damages
7. Production Damages
8. Equipment Damages
9. Water Supply Damages
10. Power Supply Damages
11. Remaining Threats
12. Source of Information
13. Reporting Officer Details

Additional areas for detailed assessments:

14. Estimates on the monetary loss of damage
15. Rehabilitation Requirements

National Disaster Situation Report

- the compilation of all incoming damage information at the national level has the purpose of creating a picture of the overall situation. This supports:
 - decision-making
 - setting of priorities
 - coordination
 - mobilisation of resources (national and international)

- note the following rules for report writing:
 - reports should be frequently updated and not repeat information that has already been provided (if necessary emphasise “since last report”)
 - reports should be instantaneously disseminated, even if certain information is lacking. Missing information can be provided in the update
 - provide a list of unmet needs
 - be explicit and precise and double check figures
 - avoid vague and ambiguous words and phrases
 - follow the instructions and definitions for filling out reporting forms (see bottom or backside of forms)
 - when summarising numbers of people affected, houses destroyed, area affected - try not to present only actual numbers, but also the percentages! Only then it is possible for decision-makers to get a picture of the severeness or extent of the situation. Information such as 5.000 houses destroyed has little value without knowing whether these are 10% or 80% of the total number of houses. Although the survey forms do not always explicitly ask for percentages, the total numbers can be derived for example by adding houses undamaged + slightly damaged + severely damaged +

destroyed. Also, baseline information could deliver total numbers for deriving percentages.

- specify the source of information. The information will be more meaningful to those who interpret it if the source is indicated, especially when there are conflicting reports.

- a standard format for national disaster situation reports is attached (see annex 3)

Reports to the International Donor Community

If the national response capacities and unmet needs exceed the government's abilities and international assistance is sought, donors want to be informed about the current situation and needs. However, the National Disaster Situation Report does not fully satisfy potential donors' information needs. The following background information should be provided, which can already be compiled during the planning phase:

- National Disaster Management Organisation: authorities responsible for response and rehabilitation, coordinating structures, focal points for international assistance
- channels for delivery of international assistance:
 - cash contributions: institutions, bank account details etc.
 - in-kind contributions: clearance formalities and costs, details of airport facilities, accessibility of disaster zones, location and capacity of storage facilities etc.
- baseline information on: population, social structure, political & cultural & religious particularities, consumption patterns of population, food marketing system, agricultural system, and economy.

13. ASSESSMENT ORGANIZATION & ROLES AND RESPONSIBILITIES

Effective disaster assessment requires the coordinated allocation of roles and responsibilities to all entities involved in the assessment process and well-functioning arrangements for information handling and analysis. This can be achieved by designing operational procedures for damage assessment, which establish areas of responsibility and accountability, guidelines and standard working procedures and reporting channels.

The first step towards developing assessment procedures is to identify each and every task during the assessment process (see elements of the assessment process). Then allocate for each task the responsible organization. It should be stated whether this organization needs assistance in carrying out assigned responsibilities and who could provide this assistance. Draft procedures will be developed during the workshop that will be finalized and completed succeeding the workshop. Please refer to the following checklist:

- list each assessment task, then check whether the total of these tasks can achieve the assessment objectives. This is important to ensure that all relevant tasks are covered.

- ❑ examine each task to see if it can be broadly subdivided. This will help in identifying the tasks that need the involvement of more than one organization.
- ❑ alongside each task, list the organization responsible for it and which one(s) should provide assistance.
- ❑ involve all organizations in this process likely to play a role to make sure that they agree to that role.

14. DAMAGE ASSESSMENT ACTIVATION SYSTEM

Pre-Impact

- work on activities listed under 'planning and preparation of assessments'

Stage One - Readiness

- contact assessment team members and hold them on stand-by; identify replacements where necessary
- hold assessment reporting forms ready
- recapitulate procedures for damage assessment

Stage Two - Stand-by

depending on the prognosis of future development of the disaster threat:

- identify vulnerable areas, where impacts are likely
- examine availability of personnel to support collation and analysis of assessment forms
- examine availability of transportation and communication facilities as well as other equipment in case assessment teams will be mobilised (this includes provisions for search and rescue)

Stage Three - Activation

- complete stage one and stage two activities

Post -Impact

- activate damage assessment teams
- brief teams
- teams carry out field assessments
- teams submit assessment data
- interpret incoming information
- compile and disseminate reports (see roles and responsibilities)
- monitor assessment process

SOURCES:

- Disaster Assessment: United Nations Training Programme, UNDP, 1991.
- United Nations Disaster Assessment and Coordination (UNDAC) – Field Handbook, UNOCHA, 1997.
- Field Operations Guide for Disaster Assessment and Response, OFDA, FOG version 2.0.
- Module Four – Organizational Plan and Operational Procedure Development, UNDHA – SPPO/EMA.
- Brian Ward: Post Disaster Assessment, ADPC.

ANNEX 1: Disaster Management Baseline Data

Baseline and background data that is relevant for disaster management purposes is listed below:

Baseline Data	
Population	
Village/settlement details	
Health sector details	
Agricultural sector details	
Educational facility details Transportation network details	<ul style="list-style-type: none"> • air • sea • roads/bridges
Plant and equipment	
Commercial sector	<ul style="list-style-type: none"> • location of central economic sectors or high risk sectors
Food supply	
Critical government stockpiles	<ul style="list-style-type: none"> • food • fuel • energy • building material • relief materials • pharmaceuticals
Social system	
Lifelines	<ul style="list-style-type: none"> • water • power • sewage • waste
Communication	<ul style="list-style-type: none"> • broadcasting • radio
Critical facilities	<ul style="list-style-type: none"> • government buildings
Manpower	<ul style="list-style-type: none"> • critical persons in emergency phase
Shelter and evacuation facilities	<ul style="list-style-type: none"> • Location • capacity

Specific baseline data reporting forms may be developed.

ANNEX 2:

Pilot Damage Assessment & Baseline Data Forms
Developed through SPDRP

Baseline Data			
Time	Form	By	Contents
Before a disaster strikes; updates on a yearly basis prior to the cyclone season	Baseline Data Form- Rural Village / Settlement		Sectoral baseline & background data about the conditions in the rural areas: <ul style="list-style-type: none"> resources general problems and needs
	Baseline Data Form- Rural Health Facility		Sectoral baseline & background data: <ul style="list-style-type: none"> resources & personnel general problems and needs
	Baseline Data Form- Educational Institution		Sectoral baseline & background data: <ul style="list-style-type: none"> resources & personnel general problems and needs
	Baseline Data Forms - Agriculture: <ul style="list-style-type: none"> crop and fruit trees livestock 		Sectoral baseline & background data: <ul style="list-style-type: none"> resources & personnel general problems and needs
Initial Needs and Damage Assessment			
Time	Form	By	Contents
as soon as possible after the disaster	Initial Damage Report - Rural Village / Settlement		Initial picture of: <ul style="list-style-type: none"> immediate needs of community; esp. life support and safety -> rationing, evacuation etc. extent of damage & losses
	Initial Damage Report -Rural Health Facility		<ul style="list-style-type: none"> Early identification of threats to public health epidemiological surveillance immediate needs of village health facilities
	Initial Damage Report -Educational Institution		Initial picture of: <ul style="list-style-type: none"> immediate needs damage and losses suitability for shelter

	Initial Damage Reports - Transportation Infrastructure: <ul style="list-style-type: none"> • Road / Bridge • Airfield • Wharf 		Initial picture of: <ul style="list-style-type: none"> • access situation, damages & losses
Detailed Needs and Damage Assessment			
Time	Form	By	Contents
Within 14 days	Detailed Damage Report - Rural Village / Settlement: <ul style="list-style-type: none"> • through household surveys 		Detailed picture of: <ul style="list-style-type: none"> • long-term needs of households and communities • rehabilitation requirements • damage & estimated loss costs
	Detailed Damage Report - Rural Health Facility		Detailed picture of health facilities : <ul style="list-style-type: none"> • long-term needs • rehabilitation requirements • damage & estimated loss costs
	Detailed Damage Report -Educational Institution		Detailed picture of: <ul style="list-style-type: none"> • long-term needs • rehabilitation requirements • damage & estimated loss costs
District Summary Forms			
Time	Form	By	Contents
	District Summary - Rural Village / Settlement		Summary of initial assessments
	District Summary - Rural Health Facility		Summary of initial assessments
	District Summary - Educational Institution		Summary of initial assessments
	District Summary - Agriculture <ul style="list-style-type: none"> • crop and fruit trees • livestock • fisheries & forestry 		Summary of initial assessments
	District Summary - Transportation Infrastructure		Summary of initial assessments

NATIONAL DISASTER SITUATION REPORT

TYPE OF DISASTER AND NAME:

DATE OF REPORT:

A. SITUATION:

1. Nature of the Disaster
Specify: - event, cause, intensity, date, time, place.
2. Area Affected
Specify: - name, size, climate, topography
- estimated total number of population of affected area
- worst affected areas
3. Impact
 - 3.1. Damage by Sector:
 - buildings (type of construction)
 - lifelines and critical facilities:
 - transport and infrastructure (roads, railways, bridges, ports, airports)
 - telecommunications
 - health facilities
 - public utilities (electricity, gas, fuel, water supply, sanitation)
 - agriculture and fisheries (crops, livestock, irrigation, fishing boats and equipment)
 - 3.2. Effects on Population
Specify: - number of dead, missing, injured
- number of people affected in specific ways, e.g. homeless, evacuated
4. Projected Evolution/Secondary Threats
Specify: - how is situation expected to develop (further flooding, population movements, potentially hazardous sites, release of toxic substances etc.)

B. NATIONAL RESPONSE

5. Administrative Measures
Specify: - nature and expected outcome of measures taken; e.g. declaration of emergency, requisition of means of transport, restrictions on movements
6. Operations/Mobilization of Resources
Specify: - search and rescue actions, evacuations, assessment, mobilization of local resources, distribution of relief, allocation of emergency funds etc.
7. Constraints
Specify: - areas where national response capacity seems to be overburdened

C. IN-COUNTRY INTERNATIONAL RESPONSE

8. Priority needs
Specify: - unmet priority needs under the following sub-headings: search and rescue, medical teams and supplies, shelter, blankets, clothing, household utensils, water and sanitation's, food items, logistics, communications, repairs to infrastructure, expertise for assessment and coordination.
- quantities etc.
9. Assistance items which are not needed
Specify and explain why
10. Government requests
Specify: - by whom and to whom
- whether provisions have been assured
11. Resources mobilized
Specify: - funds, materials, transport, personnel
- origin, amount, destination, expected duration
12. Coordination
Specify: - mechanisms for coordination of teams, donors and government (e.g. meetings, significant decisions etc.)
13. International pledges and contributions
Specify: - list of new pledges/contributions
- whether delivered
- estimated arrival time

ANNEX 3: