

GUID 5330

Exposure Draft: Guidance on Auditing Disaster Management

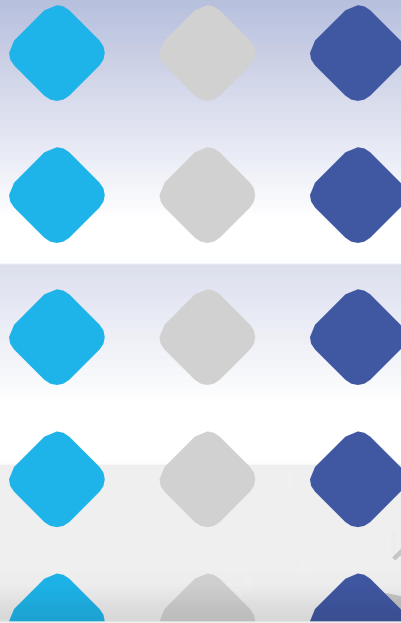


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1) Exposure draft

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INTRODUCTION

- 1) Disaster can strike any part of the world at any time. It may be the result of natural causes (e.g. earthquakes, tsunamis, flooding or volcanic eruptions) or man-made ones (e.g. building in a flood plain, inappropriate building standards for earthquake-prone areas or nuclear accidents), or a mixture of the two. They can occur suddenly (e.g. earthquakes) or develop slowly (e.g. drought). According to the International Federation of the Red Cross and Red Crescent Societies more than 90 percent of natural hazards are now regarded as climate-related, and climate change is a key driver of risk, bringing with it ever more intense weather and growing uncertainty.
- 2) Disaster can often have a considerable human, environmental and economic impact. Consequently, significant sums are spent on humanitarian aid and the rehabilitation of the people affected, together with the re-building and reconstruction of infrastructure and public facilities affected by disasters. Furthermore, significant amounts are also spent on disaster risk reduction activities, which are estimated to be highly cost-effective.
- 3) Supreme Audit Institutions (SAIs) have an important role in ensuring accountability and transparency in the way disasters are managed. This may include raising awareness of those issues (especially of risk reduction), assessing the cost effectiveness of risk reduction actions and auditing the post disaster aid and rehabilitation and reconstruction work in a context where, often, ex-ante controls may not work, standard operating procedures are not in place and institutional mechanisms are weak.
- 4) Guidance pronouncements or GUIDs are non-mandatory guidelines for use by auditors applying the International Standards of Supreme Audit Institutions (ISSAIs) in all types of audit.

- 5) The principles of public sector auditing are enumerated in ISSAI 100. In auditing Disaster Management, auditors therefore refer to the General Principles and Principles Related to the Audit Process in ISSAI 100.

EXPOSURE DRAFT

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OBJECTIVE

- 6) This GUID aims to serve as guidance for SAIs when auditing Disaster Management. The fundamental auditing principles provided in ISSAI 100, are applied in all phases of direct reporting engagements (performance and compliance audit) in order to produce quality audit reports. Financial audit is mentioned only in relation to specific risk relating to audit of financial statements of entities affected by a disaster.
- 7) This GUID provides SAIs with guidance to assess whether pre-disaster activities / disaster risk reduction, emergency response, post disaster aid and rehabilitation and reconstruction:
- limit the impact of and increase preparedness for disasters in a cost effective manner;
 - improve the effectiveness, economy and efficiency of disaster aid;
 - have appropriate internal controls and promote accountability and transparency;
 - ensure that appropriate internal control and procurement procedures are in place and are routinely tested;
 - prevent or reduce fraud, waste and abuse; and
 - assess the costs and benefits of recovery investments to ensure infrastructure is resilient to future disasters.

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DEFINITIONS

Definitions are provided in Annex I.

EXPOSURE DRAFT

4

SCOPE OF THE GUID

- 8) The GUID covers the audit phases (planning, execution, reporting and follow-up)¹ for the entire Disaster Management cycle (from pre-disaster activities (mitigation and prevention and preparedness) to post disaster activities once a disaster strikes (recovery and relief, national and international response to emergency response, rehabilitation and reconstruction). Audits can be undertaken for any stage of the Disaster Management Cycle.
- 9) The GUID provides support for all audit stages with more detailed support for the planning phase of the audit process as defined in ISSAI 100, specially the following two principles: *obtain understanding and conduct risk assessment*. This is indeed under this process that most of the specificities related to disaster management will need to be dealt with by auditors.
- 10) Thus, this guideline provides guidance on how the issues relating to auditing different aspects of disaster management could be addressed by using financial audit, in limited cases (i.e. in relation to specific risks relating to audit of financial statements of entities affected by a disaster), or performance or compliance audit. The GUID does not contain any requirements for the conduct of the audit.

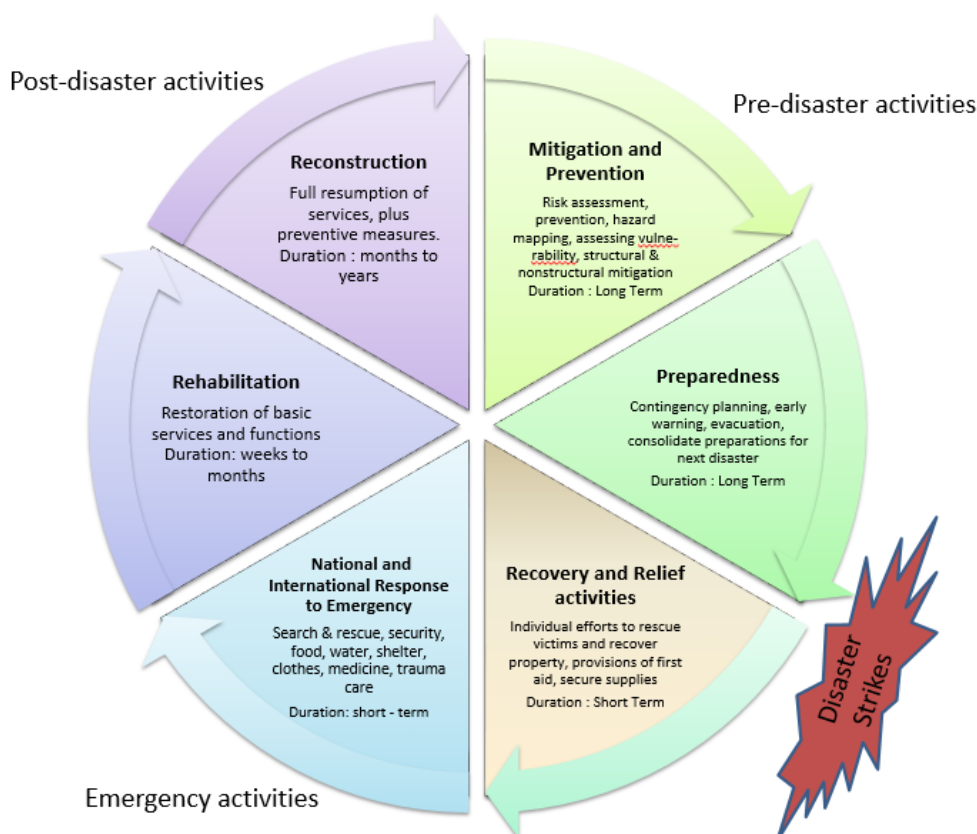
¹ As required by ISSAI 100 Paragraphs 44-51.

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Disaster management cycle

- 11) For practical purposes, Disaster Management is depicted here as a cycle divided into six segments, as shown in figure 1. Two of these segments relate to the preventive and preparatory measures which government can establish and operate in advance of potential disaster (pre-disaster activities). The other four segments describe the activities that follow the occurrence of disaster (post-disaster activities).

Figure 1: Disaster management cycle showing pre- and post-disaster phases



Source: Prepared by the SAI of Indonesia

- 12) In advance of a disaster, governments focus on prevention, mitigation and preparedness measures which are carried out in preparation for a potential disaster. They include activities such as assessing the risk of disaster, the installation of early warning systems, developing and testing plans of action, educating the population at risk and taking actions to reduce the vulnerability of infrastructure to disaster impacts. These activities must reflect relevant lessons from previous or similar disasters. Pre-disaster activities can be grouped together under the heading “**Disaster Risk Reduction**”.
- 13) Activities which take place once disaster strikes can be emergency or non-emergency in nature and can be carried out at individual, local, national and international level. **Emergency response activities include:**

- rescue, recovery, first aid assistance, evacuation of the injured and dignified and proper management of the dead;
- emergency assistance and services (shelter, water, medicines etc.);
- emergency food aid; and
- coordination of the relief and assistance actions, and crisis communications.

14) Once the urgency of the situation abates, **post-disaster rehabilitation and reconstruction** activities commence. These are designed to rebuild housing and infrastructure, while exploring opportunities to reduce future disaster risks, and restore services and the functioning of the local economy and alleviate survivor's emotional distress.

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AUDITING DISASTER MANAGEMENT

15) This section aims at providing auditors with supplementary guidance on the matters to consider when performing Financial (in relation to specific risks relating to audit of financial statements of entities affected by a disaster), Performance, and Compliance audits of Disaster Management. It does not cover all the issues auditors may need to take into account when performing an audit on Disaster Management. For auditing standards relevant to each type of audit, auditors would refer to the principles and standards of the related ISSAIs and corresponding GUIDs.

Planning the Audit

16) ISSAI 100 requires that auditors when planning an audit need to apply the following principles:

- establish the terms of the audit clearly;
- obtain an understanding of the nature of the entity / programme to be audited;
- conduct a risk assessment or problem analysis and revise this as necessary in response to the audit findings;
- identify and assess the risk of fraud relevant to the audit objectives; and
- develop an audit plan to ensure that the audit is conducted in an effective and efficient manner.

Establish the terms of the audit

17) In Disaster Management auditing, as for any other topic, SAIs agree or establish a common

understanding of the terms of the audit with the audited entity's management, those charged with governance and others as applicable.

- 18) They can also usefully consider the legal mandate under which they operate since, for example, audit work can involve examining aid paid directly to operational agencies which are not part of the government. They may also consider cooperating with other SAs, for instance in situations where multi-donors operate.
- 19) Since the audit often takes place in a difficult environment, when defining the terms of the audit, particular attention can be given to a risk analysis in view of defining a realistic and feasible scope and audit objectives. The same applies for the access to or availability of information, which may be challenging in situations of emergency. Disaster management or governance is often characterized by multiple layers and therefore it is useful to clearly defining the respective roles, responsibilities and obligations to the engagement.
- 20) **In a financial audit, auditors** determine through the collection of audit evidence, whether an entity's financial information is presented in its financial statements in accordance with the financial reporting and regulatory framework applicable. The disaster may affect the circumstances under which the financial audit can be conducted.
- 21) **Performance auditors** assess the economy, efficiency and effectiveness of government undertakings, systems, programmes or operations in relation to the disaster.
- 22) **Compliance auditors** assess whether activities undertaken in relation to a disaster comply with legislation (i.e. the building code, public procurement act), agreed policies or principles outlined in international agreements aiming at guiding entities that are providing emergency assistance (i.e. adherence to the humanitarian principles of humanity, neutrality, impartiality and operational independence²).

² United Nations General Assembly Resolutions 46/182 of 1991 and 58/114 of 2004.

Obtain understanding of the subject matter and its context

- 23) For the audit on disaster management, this includes determining at which stage of the disaster management cycle the country is. It also includes understanding the disaster types, the likelihood with which they are expected to occur, the relevant objectives, operations, regulatory environment, internal controls, financial and other systems and researching the potential sources of audit evidence. Knowledge can be obtained from regular interaction with those charged with governance and other relevant stakeholders. This may also mean consulting experts and examining documents (including earlier studies and work done by other SAs).
- 24) Because disaster management is primarily the responsibility of governments, an important element for auditors to consider at this stage is the existence of a **governance framework and policies** for managing disaster risk reduction or disaster-related short-term, medium-term and/or long-term operations. Gaining knowledge on these issues would also help auditors to better understand how, for instance, national disaster plans are based on an analysis of potential risks, outline disaster management strategies, and provide the basis for prioritizing disaster management activities and coordinating them at all levels (see Annex III – Point A.1).
- 25) In defining their own disaster management policies, countries at risk have the primary role of establishing and maintaining adequate arrangements for dealing with their vulnerability to disaster. But disaster management is also a shared responsibility between government, the private sector and civil society, hence there are many other institutions or agencies involved in disaster risk reduction, in providing, coordinating, delivering and reporting on relief, in recovery and emergency responses, and in post disaster rehabilitation and reconstruction.
- 26) In order for auditors to apply their professional judgement throughout the audit process and to identify the potential sources of evidence, it is important that auditors identify and gain an understanding of the **entities involved**, their legal framework and organizational structure and the stage of the disaster cycle (see figure 1) at which they operate. This also includes understanding their roles and responsibilities, the programmes or activities they manage, the cooperation mechanisms in place between them and the tools they are using, such as disaster plans, risk assessment and appropriate information systems (see Annex III – Point A.2).

Conduct risk assessment or problem analysis

- 27) ISSAI 100:46 states that “the auditor should consider and assess the risk of different types of deficiencies, deviations or misstatements that may occur in relation to the subject matter”. This can be done by the auditor while obtaining an understanding of the subject matter and its context. Thereby the auditor assesses management’s response to identified risks, as well as how this response is implemented. It may cover an evaluation of the appropriateness and quality of the risk/vulnerability assessment carried out by the government’s agency responsible for developing disaster plans for instance as well as an analysis of internal controls.
- 28) The task of evaluating the quality of the risk assessment carried out in a specific country is a complex one: when is it good or good enough? what is sufficient? Therefore, SAIs can often benefit from sharing experience with other SAIs to identify answers to some of these questions by referring to examples from previous audits. SAIs can also consider using the work of external experts. The G20/OECD methodological framework for Disaster Risk Assessment and Risk Financing³ could provide a useful guide for auditors on how to assess, or promote the assessment of, disaster risk.
- 29) Due to the complexity of managing disasters or to the fact that governments may not accurately estimate their exposure to a disaster, auditors need to conduct risk assessments of the audit environment to properly identify high-risk areas as potential audit subject matters or audit objectives (See Annex III – point B). Undertaking such assessment may help auditors:
- to identify the elements at risk in the community and whether those elements have been prioritized or protected by authorized parties;
 - to identify whether government has defined appropriate disaster preparedness and mitigation responses which the community will include in the disaster plan;
 - to identify whether a community is aware of the potential disaster risk and what they and related parties can do about it;
 - to assess capabilities at all levels of government against established criteria to identify gaps in preparedness;
 - to obtain other disaster specific information; and

³ <http://www.oecd.org/gov/risk/g20oecdframeworkfordisasterriskmanagement.htm> - This framework is intended to help government in developing more effective disaster risk management strategies.

- to identify emergency relief needs and compare.

30) In **performance audit**, auditors need to specify the risks with regard to economy, efficiency, and effectiveness. The extent to which these risks exist depends on the type of disaster, its risk of occurrence and the impact it is likely to have. Once this information has been documented, risks to economy, efficiency, and effectiveness are likely to result from inadequate risk assessment; organization, planning, monitoring, internal control, coordination and lack of a sound disaster management information system. Assessing the risks allows the auditors to identify control weaknesses and high-risk areas in disaster risk reduction measures and activities (see Annex III – Point B.1).

31) In **compliance audit**, auditors' risk assessment starts by identifying significant risks of non-compliance with the regulatory framework of the country and/or international agreements (see Annex III – Point B.1).

32) In **financial audit**, auditors identify and assess the risk of material misstatement in the financial statements as a whole, and at assertion level, in order to determine the most appropriate audit procedures to address those risks. Auditors assess the risk of financial statements being materially impacted by a disaster. (see Annex III – Point B.2).

Identify the risk of fraud

33) Auditors make enquiries and perform procedures to identify and respond to the risks of fraud relevant to the audit objectives. They maintain an attitude of professional skepticism and are alert to the possibility of fraud throughout the audit process.

34) There are specific risks of fraud in disaster management activities which can be assessed:

- increased risk of fraud and corruption in emergency situations following the occurrence of a disaster, due to the large volume of aid arriving quickly into affected regions for rapid distribution to disaster victims;
- once rehabilitation and reconstruction activities commence, increased risk of fraud and corruption in procurement associated with high volumes of public expenditure on reconstruction projects; and

- issues around tax revenues and insurance recoveries which may also require careful examination by auditors⁴.

35) Fraud and corruption can take various forms, such as overstated needs and data manipulation (exaggerating the number of victims for instance), demands for kickbacks from suppliers and from those applying to receive aid, as well as mark-ups and embezzlement or asset theft.

Develop an audit plan and design the audit

36) Planning for a specific audit includes strategic and operational aspects.

37) Strategically, planning defines the audit scope, objectives and approach. The objectives refer to what the audit is intended to accomplish. The scope relates to the subject matter and the criteria which the auditors will use to assess and report on the subject matter and is directly related to the objectives. The approach will describe the nature and extent of the procedures to be used for gathering audit evidence. The audit needs to be planned to reduce audit risk to an acceptably low level.

38) Operationally, planning entails setting a timetable for the audit and defining the nature, timing and extent of the audit procedures. In post-disaster conditions, it is important for auditors to assess the appropriate timing of the audit. During planning, auditors assign tasks to the members of their team as appropriate and identify other resources that may be required, such as subject experts.

39) Audit planning need to be responsive to significant changes in circumstances and conditions. It is an iterative process that takes place throughout the audit. Before selecting the audit area/topic/subject matter, auditors consider, where relevant to the audit, whether they have:

- understood the disaster management processes and the focus of each phase (pre disaster, emergency relief, post disaster);
- understood the structural, legal and regulatory framework of the entities being audited;

⁴ See for instance <https://www.auditnz.govt.nz/who-we-are/news/scott-tobin-feature>

- assessed the nature of the risks in each phase; and
- familiarized themselves with the internal controls applied by each of the organizations responsible for managing disaster-related aid and tested whether those internal controls are operating and are sufficient to overcome or reduce the risks.

40) In **financial audit**, often defined in national legislation and in SAls' mandates, auditors proceed to designing the audit based on the results of the assessment of risks of material misstatement due to error and fraud. Disasters may affect the quality of financial statements. Financial audits include a review of the accounts and the underlying transactions, including disaster-related expenditure.

41) For **compliance and performance audits**, based on the audit risks assessed as critical/priority, auditors decide on the following:

- whether to conduct a compliance audit or performance audit or a combination of both; and
- the specific life cycle stage(s) of the disaster management cycle to be covered in the scope of the audit.

42) Auditors identify and rank potential audit topics for performance audit based on two criteria:

- audits expected to add maximum value in terms of improved accountability, transparency, economy, efficiency and effectiveness; and
- audits that ensure an appropriate coverage of disaster management within the limitations of the resources available for the audit.

43) Auditors need also to take account of whether they have sufficient knowledge and audit experience collectively as a team to audit the potential topics.

44) Once auditors have chosen an audit area/topic/subject matter, they start designing the specific audit. To define the scope of the audit, auditors identify which entities are to be included in the audit. The audit objective(s) can be the basis for defining the overall audit question to which auditors will seek an answer. Examples of audit objectives per types of audits are provided in

Annex II.

- 45) In order to develop an effective approach, especially for performance and compliance audits, auditors may find useful to obtain a sufficient understanding of **initiatives / tools developed by the international community** to develop or deepened their knowledge of the matter, such as the Yokohama (1994) and Kobe (2005) conferences, the Hyogo Framework for Action, the Sendai Framework and/or the International strategy for risk reduction⁵ for instance.
- 46) When designing the audit auditors can also ask themselves whether there is a benefit in **cooperating** with other auditors.
- 47) For instance, disaster management activities in one country may be funded by another country. In such cases the need for the donor and recipient countries' SAIs to collaborate and thus allow their audits to cover all aspects of disaster management takes on added importance. Collaboration between the SAIs of different countries is equally important when auditing bilateral or multinational treaties on disaster management and/or promoting cooperation on hazards which transcend national borders such as the establishment of early warning systems.
- 48) Moreover, the flow of disaster-related aid from donors to recipients and the corresponding flow of information from recipients to donors is complex. Several different auditors may seek to audit very complex aid flows: governments donating humanitarian aid, international agencies receiving and donating aid and governments receiving aid. There is often scope for cooperation between auditors which can involve carrying out joint, parallel or coordinated audits (see INTOSAI GUID 9000). For example, two or more SAIs of donor governments may seek to cooperate on auditing national contributions to a disaster-affected population. Donor and recipient government SAIs may find it useful for both parties to coordinate their audits of aid provided by the donor government for a specific disaster in the recipient country. This is especially the case when major disasters take place and many donors are involved in making significant donations. SAIs of donor governments can learn much from SAIs in recipient countries about the national legal and operational environment for auditing disaster-related aid and SAIs from recipient countries can learn about the international context of receiving disaster-related aid. The exchange of information and transfer of knowledge between SAIs in the context of disaster-related aid can be of mutual benefit.

⁵ <https://www.unisdr.org/who-we-are/international-strategy-for-disaster-reduction>

- 49) In many cases, SAls have similar objectives and apply the same auditing standards. This makes it possible for SAls to consider the feasibility of cooperating, by carrying out joint or parallel audits. This would allow SAls to pool resources, share tools, learn from each other and possibly overcome issues regarding the adequacy of their individual audit mandates. Experience shows that parallel audits are often the most convenient way of cooperating.
- 50) When planning an audit, auditors may also consider organizing an on-the-spot visit at an early stage of the emergency to gather information and to understand and record evidence of the way in which disaster-related aid is being implemented.
- 51) Examples of elements to guide auditors when planning an audit can be found in Annex III.

Conducting the audit

- 52) Auditors perform audit procedures that provide sufficient appropriate audit evidence to support the audit report (ISSAI 100:49).
- 53) In the same way as for any other type of audit, when auditing disaster management, auditors' decisions on the nature, timing and extent of audit procedures will affect the evidence to be obtained. Auditors' approach to obtaining the required audit evidence will reflect the complexity of disaster management activities.
- 54) Auditors need to be aware of emergency procedures which may be in operation during the emergency phase following a disaster. It may not be possible to comply with all the relevant laws and regulations in emergency situations and auditors need to take into account the need to circumvent some rules in exceptional circumstances or due to force majeure, in order to prioritize the saving of lives and the alleviation of human suffering. However, auditors will expect that, where it is reasonable, the deviations from the rules need to be documented and explained. Auditors may also verify the degree to which appropriate disaster preparedness measures were already in place and whether the measures took into account the need for pre-defined emergency procedures.
- 55) Furthermore, particular methods for obtaining audit evidence such as on-the spot inspection or observation may be challenging and require particular attention. Therefore, if possible,

alternative methods for obtaining evidence can be applied. In such a case, auditors may continuously evaluate if the evidence is sufficient to persuade a knowledgeable person that the findings are reasonable, relevant and reliable.

Reporting and follow-up

- 56) Auditors can perform financial, compliance or performance audits of disaster management. They would therefore refer to the specific reporting and follow-up requirements of their audit engagement⁶.
- 57) When conducting their work, auditors bear in mind the need to make timely recommendations, which are formulated to maximize their positive impact on disaster management.
- 58) Auditors may develop recommendations that:
- would be of use in preparatory measures for potential future disasters (for example, in the field of infrastructure development, auditors may recommend rebuilding infrastructure in such a way as not only to replace damaged facilities, but also to reduce the impact of future disasters and create a resilient community);
 - would advocate for improvements of local legislation, regulations and/or policies, including on the need to clearly assign roles and responsibilities;
 - would draw attention to the absence of disaster risk reduction policies if this is the case, or raise awareness of the importance of such policies if they are not a matter of high priority to the Government;
 - advocate the establishment of clear roles and responsibilities within the different aspects of emergencies and for a more effective management of donor coordination. For that purpose, they can recommend improvements to the policies, procedures, planning, and oversight of international cash and in-kind donations in response to disasters. They can also recommend, for instance, that Parliament enacts appropriate laws or concludes international agreements to facilitate international cooperation;
 - propose that a fraud and corruption prevention strategy is built;

⁶ See ISSAIs 200, 300 and 400.

- seek to improve human resources, develop organizational capacity and/or strengthen organizations' monitoring systems based, for instance, on comparative cost information;
- advocate the inclusion of crisis counselling in post-disaster activities.

59) The success of disaster risk reduction depends on the participation of society as a whole, including an understanding of the importance of the resilience of nations and communities. The clarity of the audit reports is vital in this respect, to ensure maximum impact. Auditors may consider giving publicity to recommendations in audit reports by using other media, such as civil society organizations and academia and by making themselves available for discussion with stakeholders.

60) Auditors may consider distributing their reports widely since, for instance, other auditors, such as auditors of a donor government, may use the work already carried out by the auditors of the recipient government.

Annex I: Glossary

Annex II: Examples of audit objectives

Annex III: Examples of elements to consider when planning an audit

Annex I – Glossary

Most of the definitions below are taken from the UNDRR terminology adopted by the United Nations General Assembly on 2 February 2017⁷ (i.e. adopted by the international community and generally accepted).

DISASTER:

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. The effect of the disaster can be immediate and localized, but is often widespread and could last for a long period of time. The effect may test or exceed the capacity of a community or society to cope using its own resources, and therefore may require assistance from external sources, which could include neighboring jurisdictions, or those at the national or international levels.

The following terms are also used:

- Small-scale disaster: a type of disaster only affecting local communities which require assistance beyond the affected community;
- Large-scale disaster: a type of disaster affecting a society which requires national or international assistance;
- Frequent and infrequent disasters: depend on the probability of occurrence and the return period

⁷ <https://www.unisdr.org/we/inform/terminology>

of a given hazard and its impacts. The impact of frequent disasters could be cumulative, or become chronic for a community or a society;

- A slow-onset disaster is defined as one that emerges gradually over time. Slow-onset disasters could be associated with, e.g., drought, desertification, sea-level rise, epidemic disease;
- A sudden-onset disaster is one triggered by a hazardous event that emerges quickly or unexpectedly. Sudden-onset disasters could be associated with, e.g., earthquake, volcanic eruption, flash flood, chemical explosion, critical infrastructure failure, transport accident;

DISASTER MANAGEMENT:

The organization, planning and application of measures preparing for, responding to and recovering from disasters.

DISASTER PREPAREDNESS PLANNING:

Disaster preparedness planning can be defined as the process of systematically preparing for future contingencies, including major incidents and disasters. The plan is usually a document shared between participants and stakeholders that specifies tasks and responsibilities adopted in the multi-agency response to the emergency. It is a blueprint for managing events and should be responsive to management needs. It should specify the lines of action, collaboration, command, and communication during a disaster or major event. In other words, it is the framework for emergency response. In addition, the plans are needed to maintain continuity while managing the crisis, and to guide recovery and reconstruction effectively, therefore disaster preparedness planning is often referred to as contingency planning. In addition to planning, another important aspect of preparedness is assessing capabilities to better identify gaps and measures to address these gaps.

DISASTER-RELATED AID:

Disaster-related aid covers aid provided to fund disaster preparedness measures or activities as well as aid provided to help people who are victims of a natural disaster or conflict to meet their basic needs and rights.

This aid aims at saving lives, alleviating suffering and protecting human dignity.

It can be provided from public and private donors to those affected by disaster (individual, community, organization or government) as cash or financial aid and in-kind aid, or a mixture of these.

Financial aid is cash or other monetary assistance.

In-kind aid is assistance in the form of materials or services, such as food, tents, and the secondment of staff or international military assistance.

Disaster aid can flow:

- directly from donors to the affected by disaster, for example from donor governments to the governments of affected countries or from NGOs which have collected private contributions to affected communities;

- through one or more intermediary entities which may be operational agencies implementing aid actions directly, or international agencies channeling aid towards operational agencies or directly to individuals or communities in need.

DISASTER RISK:

The potential loss of life, injury, and destruction or damage to assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity. Disaster risk comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socioeconomic development, disaster risks can be assessed and mapped, in broad terms at least.

It is important to consider the social and economic contexts in which disaster risks occur and to bear in mind that people do not necessarily share the same perceptions of risk and their underlying risk factors.

DISASTER RISK MANAGEMENT:

Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses. Disaster risk management actions can be divided into prospective disaster risk management, corrective disaster risk management and compensatory disaster risk management, also called residual risk management.

Prospective disaster risk management activities address and seek to avoid the development of new or increased disaster risks. They focus on addressing disaster risks that may develop in future if disaster risk reduction policies are not put in place. Examples are better land-use planning or disaster-resistant water supply systems.

Corrective disaster risk management activities address and seek to remove or reduce disaster risks which are already present and which need to be managed and reduced now. Examples are the retrofitting of critical infrastructure or the relocation of exposed populations or assets.

Compensatory disaster risk management activities strengthen the social and economic resilience of individuals and societies in the face of residual risk that cannot be effectively reduced. They include preparedness, response and recovery activities, but also a mix of different financing instruments, such as national contingency funds, contingent credit, insurance and reinsurance and social safety nets.

DISASTER RISK MANAGEMENT PLANS:

Disaster risk management plans set out the goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives. They should be guided by the Sendai Framework for Disaster Risk Reduction 2015-2030⁸ and considered and coordinated within relevant

⁸ The Sendai Framework for Disaster Risk Reduction is a 15-year, voluntary, non-binding agreement which recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders. It aims for the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

development plans, resource allocations and programme activities. National plans need to be specific to each level of administrative responsibility and adapted to the different social and geographical circumstances that are present. The timeframe and responsibilities for implementation and the sources of funding should be specified in the plan. Links can be made to sustainable development and climate change adaptation plans should be drawn up where possible.

DISASTER RISK REDUCTION:

Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

DISASTER RISK REDUCTION STRATEGIES AND POLICIES:

Disaster risk reduction strategies and policies define goals and objectives across different timescales and with concrete targets, indicators and time frames. In line with the Sendai Framework for Disaster Risk Reduction 2015-2030⁹, these should be aimed at preventing the creation of disaster risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience.

EARLY WARNING SYSTEM:

An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.

Effective “end-to-end” and “people-centred” early warning systems may include four interrelated key elements: (1) disaster risk knowledge based on the systematic collection of data and disaster risk assessments; (2) detection, monitoring, analysis and forecasting of the hazards and possible consequences; (3) dissemination and communication, by an official source, of authoritative, timely, accurate and actionable warnings and associated information on likelihood and impact; and (4) preparedness at all levels to respond to the warnings received. These four interrelated components need to be coordinated within and across sectors and multiple levels for the system to work effectively and to include a feedback mechanism for continuous improvement. Failure in one component or a lack of coordination across them could lead to the failure of the whole system.

EMERGENCY:

A serious situation or occurrence that happens unexpectedly and demands immediate action.

EMERGENCY RELIEF:

Emergency relief represents the financial assistance, goods or services made available to individuals and communities that have experienced losses due to disasters.

⁹ Ibid.

EMERGENCY RESPONSE:

Emergency response is the effort made to mitigate the impact of a disaster on the population and the environment.

GEOGRAPHIC INFORMATION SYSTEMS (GIS):

GIS are used to integrate, store, analyze, manage and present data that are linked to locations. GIS technology can be used by governments to assess where hazardous natural phenomena are likely to occur. Mapping hazards and potential sources of disaster using GIS provides essential data for disaster risk reduction plans by allowing governments to link data using a geographical dimension.

HAZARD:

A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. Hazards may be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity or magnitude, frequency and probability.

PREVENTION:

Activities and measures to avoid existing and new disaster risks. Prevention (i.e., disaster prevention) expresses the concept and intention to completely avoid potential adverse impacts of hazardous events. While certain disaster risks cannot be eliminated, prevention aims at reducing vulnerability and exposure in such contexts where, as a result, the risk of disaster is removed. Examples include dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high-risk zones, seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake and immunization against vaccine-preventable diseases. Prevention measures can also be taken during or after a hazardous event or disaster to prevent secondary hazards or their consequences, such as measures to prevent the contamination of water.

RECONSTRUCTION:

The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

RECOVERY:

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

REHABILITATION:

The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

Annex II – Examples of audit objectives

Examples of performance audit objectives:

- Determine if Government's activities to accomplish the goal of disaster risk reduction, such as emergency exercises, training and public awareness-raising or management tools in the form of Geographic Information Systems or Early Warning Systems are likely to mitigate the impact of disaster when it strikes and/or reduce vulnerability or exposure to hazards;
- Determine if disaster preparedness activities are based on identified characteristics of the potential disasters and the likelihood with which they are expected to occur;
- Determine if activities are based on national strategy and action plans which are themselves based on sound risk assessment, and if they are coordinated, with responsibilities specified;
- Assess the appropriateness of the policies to reduce disaster risk;
- Assess the appropriateness of the responses of disaster management agencies in the event of disaster, including the use of disaster management tools such as Remote Sensing and a Global Positioning System, for instance;
- Assess whether the aid pledged has been provided, and has led to appropriate expenditure;
- Assess whether the aid has been spent on the intended purposes, as efficiently and effectively as possible;
- Determine if the affected population received the help needed;
- Assess the effectiveness of recovery and control of operations;
- Assess the economy with which the disaster-related aid was used;
- Assess the efficiency with which human, financial and other resources were used;
- Assess how effectively those responsible for managing and implementing disaster-related aid have performed in relation to the objectives set.

Examples of compliance audit objectives:

- Determine and document whether disaster risk reduction policies comply with the Sendai

Protocol or any relevant international agreements on disaster risk reduction;

- Determine and document whether the rehabilitation and reconstruction projects are compliant with the terms of the contractual agreements and/or the tender/procurement procedures;
- Determine and assess whether the Government has put in place an anti-fraud strategy in order to prevent, or detect and correct identified risks in a manner consistent with the legal and regulatory framework;
- Verify compliance with the requirements of international agreements covering recovery, relief, rehabilitation and reconstruction measures and activities (for instance with the United General Assembly Resolutions 46/182 of 1991 and 58/114 of 2004 to adhere to the humanitarian principles of humanity, neutrality, impartiality and operational independence);
- Assess the extent to which potential deviations from rules, laws and regulations, which may be required in order to save lives and alleviate human suffering, are documented and explained.

A. Understand the subject matter and its context.

	Questions to be asked	Yes	No	Note
1.	Identification of the disasters' characteristics			
	<i>Specifying disaster types and the likelihood with which they are expected to occur can be the first step in auditing disaster management. Government approaches and policy preparedness activities depend on this first step.</i>			
	What types of disaster affect each country?			
	What is the probability of each type of disaster?			
	Does the government (specific agency) prepare risk assessments, taking into account the following aspects, among others:			
	*natural, human, indirect hazards;			
	*specific vulnerabilities;			
	*specific geographic locations;			
	*disaster management capacities?			
	Are there up-to-date hazard maps and/or hazard analysis?			
	What are the possible combinations of types of disasters?			
	What is the likely average annual and probable maximum extent of loss or damage?			
	What is the government's approach to prepare for such disasters and increase the resilience of the country?			
	What is the recent experience of major disasters? What were the government's responses?			
	What lessons have been learned?			
	What was the worst disaster experienced by the country and how great was the damage?			
2.	Governance framework and policies			
	What are the framework and policies in place?			
	*At central, regional and/or local level?			
	*What are the accountability practices and national requirements?			
	*What is the legal framework underpinning emergency procedures, procurement procedures, tax revenue issues, insurance contracts, recoveries?			
	*What are the internal controls in place?			
	*What are the legislative measures in place to prevent or mitigate the vulnerability of certain areas / population? (such as measures for the control of land use, building regulations, land planning...)?			

	*Has the State signed any bilateral or multilateral treaties or agreements on reducing disaster risks and/or promoting cooperation against the threat of hazardous events?			
	Do the framework provide for:			
	*Developing a national disaster management policy and allocation funds to the disaster management plan?			
	*An integrated risk-based approach between different possible disaster types?			
	*Preparing national plans and programs under this policy?			
	*Setting up a general framework for the responsibilities and roles of the institutions involved in disaster management and the arrangements for coordination between these institutions?			
	*A facilitating framework for international disaster relief and recovery assistance?			
	*A specific budget for the institutions involved in disaster management, and if yes, is this budget in harmony with the tasks and responsibilities of those institutions?			
	Are there disaster plans (or substitutes)?			
	*At central, regional and/or local level if in high-risk areas or in case of cross border risks? Is consistency and harmonization ensured?			
	*Are NGOs/International Organizations involved in the design of the National Disaster Plan?			
	*Are there specific criteria such as accountability or transparency for NGOs determined as part of disaster management plans?			
	*Are they updated regularly?			
	*Do the plans include risk scenarios for multi-disastrous events which trigger each other?			
	*Are there procedures for systematically reviewing plans for timeliness, completeness, consistency with existing guidelines and overall usefulness?			
	*What information has been used for the plans? What is the quality of the information used? Have experts been involved?			
	*To what extent do the disaster plans have priority over other legislation? (e.g. limitations of ownership or property rights in the event of an emergency.)			
	*Does the national plan contain operational details to provide a good basis for timely, clear and organized action or is it complemented by more detailed sub-plans?			
	*Is the critical infrastructure determined on a national scale within the scope of disaster plans/substitute tools?			
	*Do the disaster plans promote regular disaster risk reduction exercises, including evacuation drills, with a view to ensuring rapid and effective disaster response and access to essential food and non-food relief supplies,			

	as appropriate to local needs?			
	*Does the plan cover the international treaty/agreement obligations if any?			
3.	Entities involved			
	<i>The many institutions and agencies involved in disaster risk reduction should be identified. For this, the auditor should have a comprehensive knowledge of the legal framework and organizational structure, of all entities involved. Establishing their roles, responsibilities and cooperation among them will help the auditor assess where and how to collect data, who is responsible for what actions, etc.</i>			
	How are roles and responsibilities defined and allocated?			
	Which body is responsible for coordinating disaster planning and management?			
	Which bodies are related to disaster management at each level? (evaluate the organization structure as a whole, for example, by preparing an organizational map)			
	Are the organizational structures and systems well defined and designed to facilitate successful disaster management activities?			
	Are authority and responsibility clearly assigned?			
	Does the main body responsible have capable and sufficient human resources?			
	Is there a Quick Response Team to respond to disasters as they occur?			
	What are the reviewing entities of the disaster plans? Are they independent with objective views?			
	What is the chain of command?			
	What are the feedback mechanisms?			
	How are information flows designed among the various actors?			
	What lessons have been learned from previous experiences of disasters in view of the position and authority of the relevant organizations? Have these lessons been properly reflected in such areas as the reorganization and strengthening of authorities?			
B. Conduct risk assessment or problem analysis.				
	Questions to be asked	Yes	No	Note
1.	General risk assessment for compliance and performance audits			
	Risk that the assessments of hazard risk, vulnerability and disaster risk, at national and subnational levels are not undertaken on a regular basis			
	Risk that the following issues are not been covered by the assessments:			
	*areas of the territory that are the most vulnerable to a particular hazard?			
	*type of disasters and likelihood of each disaster (natural, human, indirect hazards, earthquake, tsunami, epidemic, major accident etc.)?			

	*possible combinations of types of disasters?			
	*vulnerability of people living in that area (identification of affected or potentially affected people, their needs and interests)?			
	*vulnerability of critical infrastructures in that area?			
	*what is the extent to which communities, structures, services and geographic areas are likely to be damaged or disrupted by the impact of a particular hazard, on account of their nature, construction and proximity to hazardous terrain or to a disaster-prone area (physical & socio-economic vulnerabilities)?			
	*impact/influence of a disaster on the other areas of the country?			
	*disaster management capacities?			
	Risk that those assessments do not use information generated from GIS?			
	Risk that lessons have not been learned from recent experience of major disasters?			
	Risk that the risk and vulnerability assessments are not properly documented for reference and audit purposes?			
	Risk that data used for these assessments are not the data needed, or that there are insufficient quality measures in place to ensure quality of information/data used, and/or that this information cannot be exchanged between relevant entities?			
	*does it evaluate the magnitude and likelihood of potential losses/damages?			
	*does it provide full understanding of the causes and impact of potential losses?			
	Risk of incompleteness linked to the fact that the government has not used the voluntary framework developed by the OECD (see http://www.oecd.org/gov/risk/g20oecdframeworkfordisasterriskmanagement.htm)?			
	Risk that the risk assessment is not used to guide the allocation of resources?			
	Risk that cost-benefit analyses of a range of disaster risk reduction measures are not performed on a regular basis and are not a requirement for public investment planning?			
	Absence of a strategic reserve of disaster relief goods?			
	Risks related to procurement processes and flow of funds evaluated not well-defined and tested to assess whether services and goods can be delivered swiftly to the affected population?			
	Procurement processes not flexible enough in design to accommodate unexpected events?			
	No pre-specification for services and goods which may be delivered in urgent circumstances in order to avoid low quality?			
	In urban settlements, the auditor can consider the key risks to be able to evaluate local disaster risk reduction activities and perform sampling in a sound manner:			
	*Risk that rising urban populations and increased population density is leading to poor quality of housing, infrastructure and services.			
	*Weak urban governance preventing local authorities to provide			

	infrastructure, services or safe land housing.			
	*Unsustainable urbanization: unplanned urban development taking place outside the official legal building codes, land use regulations and land transactions.			
	*Increased risks in case of disaster if economic assets are clustered in large cities.			
	*Risks that public buildings do not meet safety standards and are not upgraded.			
2.	General risk assessment for financial audits (in case financial statements of audited entities are affected by a disaster)			
	To what extent documentation, evidence have been destroyed by the disaster?			
	Are essential functioning of the entity or the Government significantly weakened by the scale of the disaster?			
	Is the aid collected from donors being recorded correctly (non-cash donations, committed donations that are not yet received)?			
	Are procurement rules being respected?			
	Are goods and materials donated in kind or purchased stored properly?			
	Are damages of infrastructures properly assessed?			
	Have the processes for receiving, managing, spending and recording disaster-related funds been clearly established for each of the various funding channels, such as governmental funds and domestic and foreign donations?			
	Is there any periodic reporting on disaster fund allocation and utilization by recipient agencies?			
	Is the management and use of the financial and in kind contributions received recorded and reported?			
	Are accountability principles respected? (government's record of commitment to rehabilitate or reconstruct infrastructure in the next period, government's accounting of assets given or built by a donation fund, disclosure of matters related to the receipt and use of disaster-related aid funds in the notes to the financial statements)?			
3.	Risks/problems analysis linked to Disaster Monitoring/Management Information			
	Is a monitoring system in place to determine the extent of loss or damage following a disaster?			
	Is there and up-to-date disaster management information system?			
	Is the existing disaster management information system suitable for analyzing risks and planning efforts to reduce the risk and/or mitigate the impact of disasters?			
	Does the management information system contain enough information on hazards			

	and risks to determine, at the local level, who is exposed and who is vulnerable?			
	Has the main authority developed effective and appropriate instruments to guide the local authorities in making the risk assessment in their own areas in accordance with the national strategy and policies?			
	Does the main agency responsible regularly review disaster management tools and measure on their efficiency and effectiveness? When is this assessment done?			
	Are the results of this assessment used for decision-making and the improvement of future disaster management initiatives?			
	Does the main authority enable an integrated database system among and between local and central units?			
4.	Risks/problem analysis linked to Geographical Information System (GIS)			
	Is an appropriate geographical information system used? For what purpose?			
	Is there a need for using a GIS in disaster risk reduction?			
	*What planning decisions need to be made?			
	*Which decisions involve the use of mapped information and information appropriate for map display?			
	*What information cannot be managed efficiently with manual techniques?			
	*What information management activities can be supported by the proposed GIS?			
	*What types of decisions can be supported with a GIS?			
	*Are the GIS appropriate for the analysis? Will it produce the necessary maps?			
	*To what extent will a GIS help achieve the desired objectives?			
	Is the GIS suitable?			
	*Are its capabilities compatible with the needs of the new users?			
	*Is the in-house technical expertise capable of serving the new users?			
	*What are the institutional arrangements that would enable the appropriate use of this GIS?			
	Is the GIS sustainable?			
	*Who will be the users of the information generated with the GIS?			
	*In terms of information, time, and training needs, what is required to obtain the desired results? Can these requirements be fulfilled?			
	*Is the budget sufficient and is staff availability adequate?			
	*What agencies are participating in similar projects?			
	*To what extent would a GIS help to attract the interest of other agencies and facilitate cooperation?			

5.	Risks/problem analysis linked to Alert Mechanisms, Hazard Maps, and Other Tools			
	Does the country have early warning mechanisms to predict calamities that may hit the country during a certain period?			
	Are the warning systems built based on identified risks for relevant areas?			
	Are hazard maps prepared taking into consideration the existing environmental plans, land use planning and building development schemes, etc.?			
	Are hazard maps and/or hazard analyses updated?			
	Are there any special tools intended to mitigate disaster risks and impacts?			
	Are there any standby arrangements for purchasing, receiving, storing and distributing disaster relief supplies?			
6.	Risks/problem analysis linked to pre-disaster activities			
	<i>Taking multi-national and stakeholders structure of disaster management into account, auditors would focus on how coordination and concerted action can be achieved by the various bodies involved.</i>			
	Is the government promoting public awareness and education and strengthening community participation in the area of disaster risk reduction? Are there plans for disaster risk reduction training for the public and/or public education campaigns in order to raise public awareness? Are these executed according to plan?			
	Are education programmes and training on disaster risk reduction planned and realized in schools and local communities?			
	Have training requirements and effective training plans been established and are they being updated as appropriate?			
	Do programmes provide organizations and individuals with the necessary knowledge and skills to respond effectively and quickly recover from various types of disaster?			
	At the local level, have more practical matters such as evacuation areas/routes and possible shelters been considered, disseminated and reflected in the disaster drills?			
	Is responsibility for developing and conducting emergency exercises and training clearly defined and assigned to an appropriate agency, department or individual?			
	Are local drills and simulation exercises conducted at all levels of government?			
	Are training/emergency exercises at the national and local levels, including at the town level, implemented and/or supervised by an authorized body/agency? Is it ensured that training functions and activities are not unnecessarily duplicated or overlapping?			
	Is there any specific programme for training/emergency exercises for particularly vulnerable people (Patients in hospitals, students in schools, employees in government/private sectors housed in tall buildings/dilapidated buildings, people living in low-lying areas or near river banks)? Are various local departments (fire dept., police, and hospitals), community-based organizations, NGOs, the media			

	and local businesses involved in the training/emergency exercises?			
	Has the government been involved in capacity building by sending officials to other more developed countries for purposes of learning the most effective emergency exercises during disasters?			
	Is a communication mechanism established and introduced into the community?			
7.	Risks/problem analysis linked to post disaster activities			
	<i>Risk/problem analysis related to short-term post disaster activities</i>			
	Are damages and needs assessments performed to identify the destruction caused by a disaster, the location of the victims and/or their basic requirements in order to effectively select the aid needed?			
	Are those assessments the basis for providing shelter, emergency food and water, or any other support to victims?			
	Does the affected population receive the help needed?			
	*Goals attainment: did the affected population receive the help it needed in a timely manner, including crisis counseling?			
	*Process: were procedures adequately prepared in advance and then respected during the post-disaster period? Are procurement processes cost-effective with due regards to quality, quantity and timeliness?			
	*Cost/benefit: were the objectives of the disaster-related aid met at the lowest possible cost?			
	*Quality: was the quality of the output (food aid, shelters, etc) acceptable? (no damaged or outdated stock for instance)			
	Are the goods and materials donated in kind or purchased using financial aid inventoried and stored so that they can be retrieved to meet the victims' requirements?			
	Is the aid distribution organized in an effective manner either directly to victims or through appropriate distribution channels?			
	<i>Risks/problem analysis related to medium and long-term post disaster activities</i>			
	Are the newly built infrastructures disaster-resilient to prevent and mitigate future potential disasters, socially acceptable and sustainable?			
	Are the maintenance and operating costs of the newly built infrastructures ensured?			
	Are there reporting mechanisms on disaster-related aid and its economy, efficiency and effectiveness?			
	Risk that planned reconstruction projects do not take place			
8.	Risks/problem analysis linked to coordination between the different bodies at regional, national and international level			

	Has a coordination mechanism been established that should function in the event of a disaster?			
	Are responsibilities clear to everyone at every layer of government: “who, when, what?”			
	What responsibilities have private entities, NGOs?			
	Could the main body responsible provide the facilities and support necessary for the activities of the non-government bodies?			
	Are all relevant participants identified and included in this coordination mechanism (national/regional/local level and the main contact point for external bodies)?			
	Has the expected level of coordination between and among the agencies concerned been achieved during recent disasters (if any) or by means of test exercises?			
	Is there a monitoring mechanism to provide information to help ensure cooperation, as appropriate, with different bodies at the regional, national and international levels?			
	Does the existing coordination foster collaboration in order to avoid the duplication and overlap of activities in the field, to make the most efficient use of resources and to raise awareness of the risk of disaster?			
	Are different forms of cooperation to reduce disaster risk, such as technical assistance, consultancy, equipment and supplies, etc. specified in accordance with the nature, role and work of different participants in this field?			
	What alternative means of communication are ready, such as telephones, radios and the internet? Are there multiple options in the event of a disaster?			