

INTOSAI



# *Appendix to ISSAI 5520*

## Appendix 1

### Characteristics of disasters

Prepared by the SAI of Indonesia. See bibliography at Appendix 15.

Types of disaster	Characteristics	General counter-measures	Special problems areas
Earthquake	<ul style="list-style-type: none"> <li>• Usually no warning</li> <li>• Usually sudden onset</li> <li>• Earthquake-prone areas are generally well identified and well known</li> <li>• Major effects arise mainly from land movement, fracture or slippage; specifically they include damage (usually very severe) to structures and systems, plus considerable casualties due to lack of warning</li> </ul>	<ul style="list-style-type: none"> <li>• Development of possible warning indicators</li> <li>• Land use regulations</li> <li>• Building regulations</li> <li>• Relocation of communities</li> <li>• Public awareness and education programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Severe and extensive damage creating the need for urgent measures, especially search and rescue and medical assistance</li> <li>• Difficulty of access and movement</li> <li>• Widespread loss of or damage to infrastructure, essential services and life support systems</li> <li>• Recovery requirements may be very extensive and costly</li> <li>• Rarity of occurrence in some areas may cause problems for economies of counter measures and public awareness</li> </ul>
Volcanic eruption	<ul style="list-style-type: none"> <li>• Major eruptions can sometimes be predicted</li> <li>• Volcanic blast can destroy structures and environmental surrounds, and also cause fires, possibly including forest fire</li> <li>• Land-surface cracking, resulting from volcanic explosion, may affect buildings and other structures</li> <li>• Lava flows can bury buildings and crops, cause fires and render land unusable</li> <li>• Ash, in its airborne form, can cause respiratory problems. It may also affect aircraft by ingestion into engines.</li> <li>• Ground deposits of ash may</li> </ul>	<ul style="list-style-type: none"> <li>• Land use regulations</li> <li>• Lava control systems</li> <li>• Development of monitoring and warning system</li> <li>• Evacuation plans and arrangements</li> <li>• Relocation of population</li> <li>• Public awareness and education programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Access during eruption</li> <li>• Timely and accurate evacuation decisions</li> <li>• Public resistance to evacuation</li> <li>• Control of incoming sightseers when evacuation programmes are being implemented</li> </ul>

Types of disaster	Characteristics	General counter-measures	Special problems areas
	<p>destroy crops and also affect land use and water supplies</p> <ul style="list-style-type: none"> <li>• Mud flows may arise from associated heavy rain</li> </ul>		
Tsunami	<ul style="list-style-type: none"> <li>• The velocity of the wave depends on the depth of water at the point where the seismic disturbance occurs</li> <li>• Warning time depends on distance from points of wave origin</li> <li>• Speed of onset varies</li> <li>• Impact on shoreline can be preceded by marked recession of normal water level prior to arrival of wave</li> <li>• The tsunami wave can be very destructive</li> <li>• Impact can cause flooding; salt-water contamination of crops, soil and water supplies; destruction of or damage to buildings, structures, and shoreline vegetation</li> </ul>	<ul style="list-style-type: none"> <li>• Early warning</li> <li>• Evacuation of threatened communities from sea level/low level areas to high ground, if sufficient warning available</li> <li>• Land use regulations (but these are likely to be difficult to implement if the tsunami risk is perceived as low)</li> <li>• Public awareness and education programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Timely dissemination of warning, in view of the possible short period between receipt of warning and the arrival of the tsunami wave</li> <li>• Effective evacuation time scale</li> <li>• Search and rescue</li> <li>• Recovery problem may be extensive and costly due to severe destruction and damage</li> </ul>
Tropical cyclone (typhoon, hurricane)	<ul style="list-style-type: none"> <li>• Usually long warning, derived from systematic international meteorological observation (including remote sensing)</li> <li>• Speed of onset gradual</li> <li>• Tends to conform to seasonal pattern</li> <li>• Major effects arise mainly from destructive force winds, storm surge (producing inundation) and flooding from intense rainfall. Landslides may follow flooding and heavy rainfall</li> <li>• Destruction and/or severe damage may be caused to buildings and other structures, roads, essential services, crops, and the environment generally. Major loss of life and livestock may occur</li> </ul>	<ul style="list-style-type: none"> <li>• Effective warning arrangements</li> <li>• Precautionary measures during warning period</li> <li>• Moving of people to safe shelters</li> <li>• Generally readiness and clean-up measures prior to expected cyclone season</li> <li>• Building regulations</li> <li>• Public education and awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of effects and needs may be difficult, especially due to bad weather following main disaster impact and to problems of access and movement caused by high damage levels</li> <li>• Widespread destruction or loss of counter-disaster resources</li> <li>• Difficulty of access and movement in carrying out urgent relief operations, especially emergency feeding, shelter, and medical assistance programmes</li> <li>• Search and rescue</li> <li>• Widespread destruction/disruption of essential services</li> <li>• Evacuation</li> <li>• Rehabilitation of</li> </ul>

Types of disaster	Characteristics	General counter-measures	Special problems areas
Flood	<ul style="list-style-type: none"> <li>• Long, short, or no warning depending on the type of flood</li> <li>• Speed of onset may be gradual or sudden</li> <li>• There may be seasonal patterns to flooding</li> <li>• Major effects arise mainly from inundation and erosion; specifically, they may include isolation of communities or areas, and involve the need for large-scale evacuation</li> </ul>	<ul style="list-style-type: none"> <li>• Flood control</li> <li>• Land use regulations</li> <li>• Building regulations</li> <li>• Forecasting, monitoring, and warning systems</li> <li>• Relocation of population</li> <li>• Evacuation plans and arrangements</li> <li>• Emergency equipment, facilities and materials, such as flood boats, sandbags, supplies of sand (plus designated volunteers for implementation of emergency measures)</li> <li>• Public awareness and education programmes</li> </ul>	<p>agriculture (especially tree crops)</p> <ul style="list-style-type: none"> <li>• Difficulties of access and movements</li> <li>• Rescue</li> <li>• Medical and health difficulties (for example arising from sanitation problems)</li> <li>• Evacuation</li> <li>• Loss of relief supplies</li> <li>• Large-scale relief may be required until next crop harvest</li> </ul>
Landslide	<ul style="list-style-type: none"> <li>• Waning period may vary</li> <li>• Speed of onset is mostly rapid</li> <li>• Damage to structures and systems can be severe</li> <li>• Rivers may be blocked, causing flood</li> <li>• Crops may be affected</li> <li>• When landslides are combined with very heavy rain and flooding, the movement of debris may cause high levels of damage and destruction</li> </ul>	<ul style="list-style-type: none"> <li>• Land use and building regulations</li> <li>• Monitoring systems, where applicable</li> <li>• Evacuation and/or relocation of communities</li> <li>• Public awareness programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulties of access and movement in affected areas</li> <li>• Search and rescue</li> <li>• Risk of follow-up landslides may hamper response operations</li> <li>• Relocation (as distinct from temporary evacuation) may be resisted by indigenous communities</li> <li>• Rehabilitation and recovery may be complex and costly</li> <li>• In severe cases, it may not be possible and/or cost-effective to rehabilitate the area for organized human settlement</li> </ul>
Bushfire (or Wildfire)	<ul style="list-style-type: none"> <li>• Most bushfire-prone areas are well known and well defined</li> <li>• Bushfire threat tends to be seasonal</li> <li>• Speed of onset may vary</li> </ul>	<ul style="list-style-type: none"> <li>• Accurate risk assessment</li> <li>• Effective monitoring and warning systems</li> <li>• Fire prevention</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of adequate community awareness and preparedness</li> <li>• Arson can be difficult</li> </ul>

Types of disaster	Characteristics	General counter-measures	Special problems areas
	<ul style="list-style-type: none"> <li>• Effects can be very destructive, especially in loss of buildings, timber and livestock (and human life if counter-disaster arrangements are inadequate)</li> <li>• Recovery from effect on the environment may take several years</li> <li>• Evacuation of communities may be difficult and dangerous in the face of a major fire front</li> </ul>	<ul style="list-style-type: none"> <li>regulations</li> <li>• Seasonal mitigation measures</li> <li>• Building regulations</li> <li>• Public awareness and education programmes</li> </ul>	<ul style="list-style-type: none"> <li>to prevent</li> <li>• Establishment and maintenance of adequate fire-fighting resources, especially if the threat is spasmodic</li> <li>• Establishment of an adequate warning system, particularly the meaning of signals and their representation by threatened communities</li> <li>• Timely dissemination of warning and, if applicable, decision to evacuate</li> <li>• Long term recovery may be prolonged, due to high levels of environmental damage and destruction</li> <li>• Evacuation movements, either out of affected areas, or to safe havens within such areas</li> </ul>
Drought	<ul style="list-style-type: none"> <li>• Major areas liable to drought are usually well known</li> <li>• Periods of drought can be prolonged</li> <li>• Areas affected may be very large</li> <li>• Long warning</li> <li>• Effects on agriculture, livestock, rural industry production and human habitation may be severe</li> <li>• Long-term effects can be in the form of severe economics loss, erosion which affects future habitation and production, and sometimes abandonment of large tracts of land</li> <li>• Man-made activities may aggravate the possibility and extent of the drought problem</li> <li>• The inability and/or unwillingness of the population to move from</li> </ul>	<ul style="list-style-type: none"> <li>• Effective counter-measures tend to be mostly long term</li> <li>• The long-term resolution of drought problems usually rests with national governments and involves major policy decisions</li> <li>• Since this decisions involve human settlement, they are often sensitive and difficult ones</li> <li>• International co-operation and assistance usually play an important part in coping with major drought problem</li> <li>• Land management and spatial plans</li> <li>• Response to drought-caused emergencies</li> </ul>	<ul style="list-style-type: none"> <li>• Response requirements may be extensive and prolonged, thus involving major commitment and expenditure of resources</li> <li>• Prolonged drought may undermine self-reliance of affected communities, thus making it difficult to withdraw disaster management assistance</li> <li>• Logistics requirements may exceed in-country capability, particularly if large inputs of outside (international) commodities are involved</li> </ul>

Types of disaster	Characteristics	General counter-measures	Special problems areas
	drought-prone areas may exacerbate the problem	usually include provision of food and water supply, medical and health assistance, emergency accommodation <ul style="list-style-type: none"> <li>• Information programmes, especially to assist aspects such as land management</li> </ul>	
Epidemic	<ul style="list-style-type: none"> <li>• Arises generally from the disrupted living conditions which follow disaster impact</li> <li>• May arise from food sources, water sources, inadequate medical and health facilities/standards, malnutrition, vector-borne sources</li> <li>• Under post-impact conditions, when personnel and facilities may be limited, outbreaks may prove difficult to contain and control</li> <li>• Warning is self-evident in most post-impact circumstances</li> <li>• Speed of onset is mostly rapid</li> </ul>	<ul style="list-style-type: none"> <li>• An effective health sub-plan within the overall area counter-disaster plan</li> <li>• Close post-disaster monitoring of medical and health aspects</li> <li>• Reinforcement of medical resources and supplies in anticipation of epidemic outbreaks</li> <li>• Public awareness and education, both before and after disaster impact</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of medical and health resources during disaster impact</li> <li>• In-country shortage of special equipment</li> <li>• Integration of outside (international) medical and health assistance with local systems</li> <li>• Containment and control of common diseases which can have a mass effect, especially if relevant medical and health resources are severely limited</li> </ul>
Major accident, CBRNE (Chemical, Biological, Radiological, Nuclear and Explosive) event, or IED (improvised explosive device) incident	<ul style="list-style-type: none"> <li>• Usually violent in nature (for example industrial or other explosion, aircraft crash, etc)</li> <li>• Can have limited or widespread effect</li> <li>• Mostly limited or no warning, though there may be longer warning of effects of, say, chemical or oil spill</li> <li>• Speed of onset usually rapid</li> </ul>	<ul style="list-style-type: none"> <li>• Good physical planning</li> <li>• Special building regulation, if applicable</li> <li>• Good in-house safety and management standards/procedures including evacuation plans and periodic tests</li> <li>• Effective organizational emergency services which are available to take immediate response action prior to the arrival of public emergency services</li> <li>• Effective community or areas disaster plans, so that coordinated response can be achieved</li> <li>• Training in handling</li> </ul>	<ul style="list-style-type: none"> <li>• Unexpected nature of accidents may pose problems of reaction and response time</li> <li>• Response problems may be severe, extensive and difficult</li> <li>• Victim identification may be difficult in some cases</li> </ul>

Types of disaster	Characteristics	General counter-measures	Special problems areas
		effects of specific hazards	
Civil unrest	<ul style="list-style-type: none"> <li>• Usually the responsibility of police, paramilitary, and armed forces</li> <li>• Violent and disruptive activities occur</li> <li>• Patterns of civil unrest are difficult to predict. Therefore, effective warning may also be difficult</li> <li>• In many civil unrest circumstances, especially terrorism, the instigators have the initiative, thus complicating the task of law enforcement authorities</li> </ul>	<ul style="list-style-type: none"> <li>• Firm application of law and order regulations and requirements</li> <li>• Imposition of special emergency measures and regulations</li> <li>• Positive information programmes aimed at maintaining majority public support for government action against disruptive elements/factions</li> </ul>	<ul style="list-style-type: none"> <li>• Overloading of resources organization due to demands of civil unrest incidents, in addition to normal commitments</li> <li>• Difficulty of integrating “peacetime” resource organizations with “military-type” operations which are necessary to deal with violent civil unrest</li> </ul>

## Appendix 2

### **Risk-based audit strategy for auditing disaster-related aid management – a case study by the Indonesian SAI**

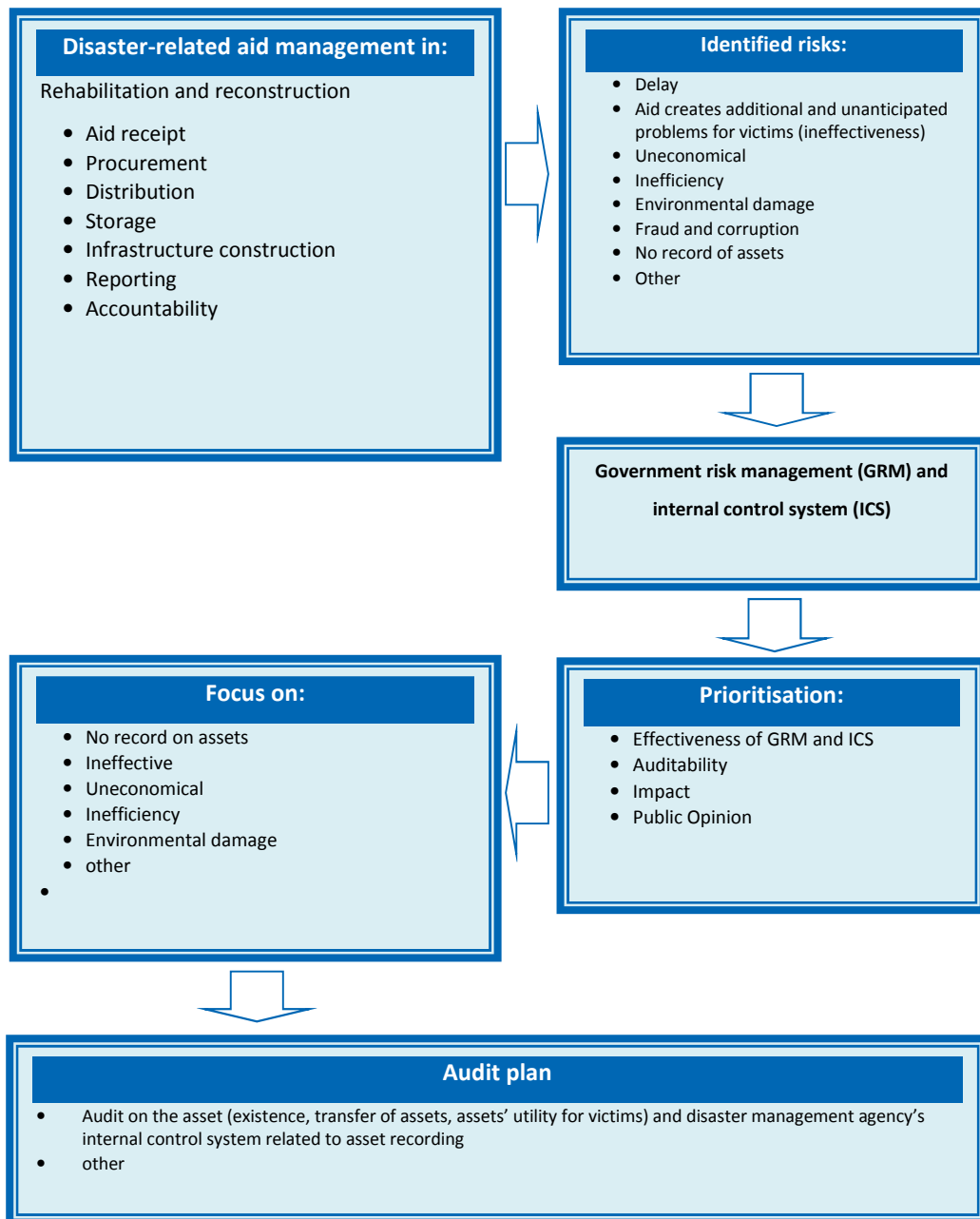
1. Before conducting an audit on disaster management and disaster-related aid management, SAI auditors examine and obtain an understanding of the entity. This example from the SAI of Indonesia shows auditors selecting topics for the audit of disaster management by a Disaster Management Agency in the rehabilitation and reconstruction phase. They have selected topics for audit and using the matrix in section 7 of ISSAI 5520, they have identified potential risks for each of the topics. The auditors have not considered all of the suggested risks in the matrix to be of relevance for all of the topics.
2. Once the risks have been highlighted, the auditors examine the Government Risk Management (GRM)<sup>1</sup> procedures and the appropriateness and the strength of internal controls to assess the extent to which each apparent risk may have been addressed by the Disaster Management Agency. This involves an evaluation of the sufficiency and effectiveness of laws, regulations, guidelines, manual and any other tools created by government or the agency itself to address the potential risks. The auditors also consider feasibility of carrying out the audit, for example it may at present be too dangerous for auditors to reach the disaster affected areas, the likely impact of the audit in terms of improving the implementation of the programmes or the management of the agency and public opinion on the topics. The results of the assessment are then prioritised and ranked. Auditors develop the audit plan based on the priority chosen by referring to the audit design matrix in Appendix 3.
3. The process is summarised in the following diagram.

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<sup>1</sup> <http://govacc.per.gov.ie/files/2011/05/RM-Guidance-for-WebSite.pdf>



## Risk-based audit strategy for auditing disaster-related aid management

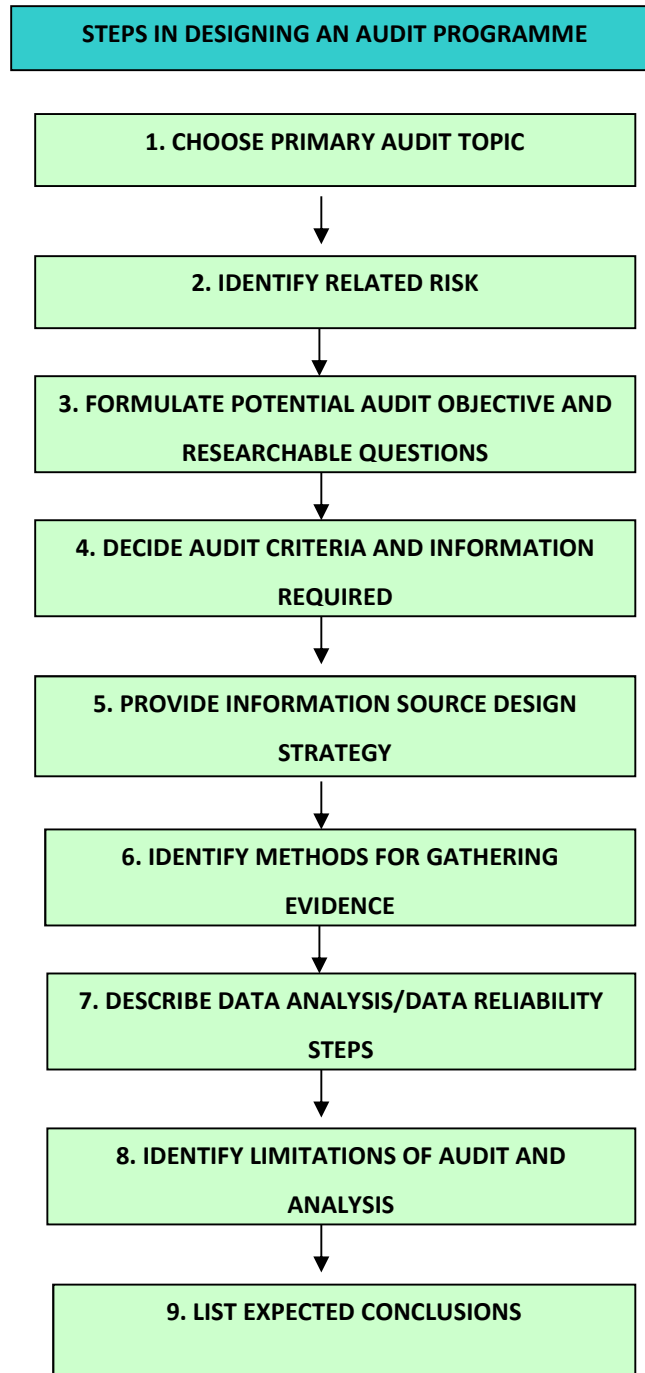


Source: The SAI of Indonesia

## Appendix 3

### Audit Design Matrix

This matrix has been designed by the SAI of Indonesia using INTOSAI guides.<sup>2</sup> It is proposed as a tool to assist auditors to design an audit programme. It consists of a number of steps.




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<sup>2</sup> <http://www.environmentalauditing.org/Home/WGEAPublications/StudiesGuidelines/tabid/128/Default.aspx> and [http://www.wgpd.org.mx/Anexos/Meetings/03UKaudStds\\_i.pdf](http://www.wgpd.org.mx/Anexos/Meetings/03UKaudStds_i.pdf)

### **1. Choose primary audit topic**

This is the most important step in the audit process. The SAI needs to identify key issues in disaster-related aid management which are of the greatest importance for the recipients of the report. If possible (where mandated), this should be done in consultation with the client to ensure that both parties agree and clearly understand the main purpose of the audit. A selection of key audit topics (disaster-related aid activities) can be found in section 7.2 of ISSAI 5520.

### **2. Identify related risk**

After deciding on a topic, the SAI needs to start identifying risks which could influence the direction and aim of the audit and the work on each subtopic. The identified risks may ultimately feature in the audit findings. A list of potential risks for each activity is set out in section 7.2 of ISSAI 5520.

### **3. Formulate potential audit objective and researchable questions**

The identification of risks enables the SAI to develop a clearer picture of the audit's course and possible findings, and thus to formulate the principal audit objective. Once a potential audit objective has been formulated, the auditors should develop researchable questions or lines of enquiry that are likely to guide the audit towards achieving that objective. The questions should be clear and specific, fair and objective, and state measurable objectives. They should also be sufficiently comprehensive to enable the auditors to meet the audit objective in full.

### **4. Decide audit criteria and information required**

The auditors should then examine how the questions can be answered. This is crucial to determining the audit criteria. Each question will require corresponding and measurable criteria to determine the degree of compliance of the entity being audited. The criteria may be developed from international conventions, agreements, national regulations, policies, best practices, and benchmarks. In financial and compliance audits, the SAI may use criteria that are broadly defined in the national accounting and legal framework. However, criteria for performance audits cannot necessarily be taken from accounting and legal documents, and will vary from audit to audit and case to case. Nevertheless, in all types of audit the criteria adopted must be clear, relevant, reasonable, and generally accepted.

Besides establishing criteria, the auditors should identify what evidence is needed to support findings, conclusions, and potential recommendations. Audit evidence can be categorised as physical, documentary, testimonial or analytical. The SAI can obtain physical evidence by, for example, observing the work of a disaster management agency or conducting on-site visits to check for internal controls. Documentary evidence can be obtained in the form of laws and regulations, contracts, accounting records, etc. Testimonial evidence can be obtained through surveys and interviews with disaster management agencies and disaster victims, focus groups of disaster experts, etc. Audit evidence should be sufficient, competent and relevant.<sup>3</sup> See ISSAI 3000, Appendix 2 for guidance on performance audit criteria.

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<sup>3</sup> ISSAI 3000/62

**5. Provide information source design strategy**

This step concerns the sourcing of information. The necessary information may be found in previous audit reports, disaster reports prepared for internal and external monitors, interviews with disaster management agencies, disaster victims and experts, disaster management laws and regulations, crowd sources, etc. Auditors should assess the quality of the information in these sources before using it.

**6. Identify methods for gathering evidence**

Having identified their sources, the auditors should come up with plans to obtain the necessary information. To gather evidence in the context of an audit of disaster-related aid, the SAI may have recourse to procedures that are commonly used in all types of audit, including:

- a. Making inquiries of disaster management agency staff. The audit team should ask staff to explain their disaster management and aid management duties.
- b. Examining key documents and records for each management cycle.
- c. Observing control activities that do not leave a written audit trail. The audit team should perform a walkthrough of the main activities in the aid management cycle.

**7. Describe data analysis/data reliability steps**

Having obtained the necessary information, the auditors should plan how to use it. The procedure for analysing the evidence collected by the SAI will depend on the audit objectives.

**8. Identify limitations of audit and analysis**

After defining a data analysis/data reliability procedure, the auditors should focus their attention on the limitations of audit and analysis. Relevant questions are:

- a. What action cannot be envisaged?
- b. What are the caveats?
- c. Has the information and evidence obtained been verified?
- d. Can significant limitations affecting disaster-related information be overcome?

**9. List expected conclusions**

This step concerns what the auditors expect to find. The auditors should:

- a. Identify potential findings
- b. Predict the suitable audit conclusion based on the potential audit findings

## THE AUDIT DESIGN MATRIX

Each of the preceding steps is presented in an audit design matrix below. Although these steps are presented in sequential order, the steps are all interrelated to a greater or lesser degree.

Audit Topic:						
Audit risk:						
Audit Objective/s:						
Researchable questions	Criteria & information required	Information sources & design strategy	Evidence gathering methods	Data analysis methods / Data reliability	Limitations of audit and analysis	Expected conclusions
What do you want to know?	What information do you need to answer the question?	Where is the information obtained?	How do you plan to obtain the information?	What do you want to do with the information?	What is not possible?	What do you expect to find?
Questions should be: <ul style="list-style-type: none"> <li>• Clear &amp; specific</li> <li>• Fair &amp; objective</li> <li>• Measurable</li> <li>• Doable</li> </ul> Classify the questions: <ul style="list-style-type: none"> <li>• Descriptive</li> <li>• Normative</li> <li>• Impact</li> <li>• Prospective</li> </ul>	Identify the evidence needed: <ul style="list-style-type: none"> <li>• Physical</li> <li>• Documentary</li> <li>• Testimonial</li> <li>• Analytical</li> </ul> Are case studies needed?  Criteria: Disaster-related aid management principle.	Officials, experts to be interviewed  Laws and regulations  Previous audits  Internal audit reports  Disaster report	Interviews  Questionnaires  Inspection  Walk-through testing  Examine Documents	Descriptive statistics  Data reliability assessments  Qualitative analysis  Cost/benefit analysis	What are the caveats?  Are there limitations to access?  Are there any stipulated accounting standard for disaster?  Are auditors subject to resource constraints?	List of possible findings  Findings related to the sample  Effect of proposed programme changes  Cost of implementing changes

Below is an example of an audit design matrix for a particular objective in the area of aid distribution.

Audit Topic: Distribution of aid to earthquake victims						
Audit Risk: Possibility of delay in distribution of aid						
Audit Objective/s: To evaluate the timeliness of distribution of aid to earthquake's victims						
Researchable questions	Criteria & information required	Information sources & design strategy	Evidence gathering methods	Data analysis methods / Data reliability	Limitations of audit and analysis	Expected conclusions
Has disaster management agency distributed the aid in time?	<p><u>Criteria:</u> Disaster management act</p> <p><u>Information:</u> Information and description obtained from disaster management agency and earthquake victims</p>	<p><u>Sources:</u> Documentary and physical evidence obtained from reliable sources (such as stipulated laws and regulation) and on site visit</p>	<p>Interview earthquake victims to obtain their description related to distribution of aid</p> <p>Interview disaster management agency to obtain schedule of aid distribution to disaster victims</p>	Verify the information validity by comparing legal document to recent condition resulted from interview and walkthrough	Any known problems or limitations on the evidence will be described	<p>We will identify any gaps between the current legal framework stipulating schedule and provision of aid distribution</p> <p>We will show any delay in aid distribution (if any)</p>

## **Appendix 4:**

### **Example of disaster auditing guidelines for private sector auditors**

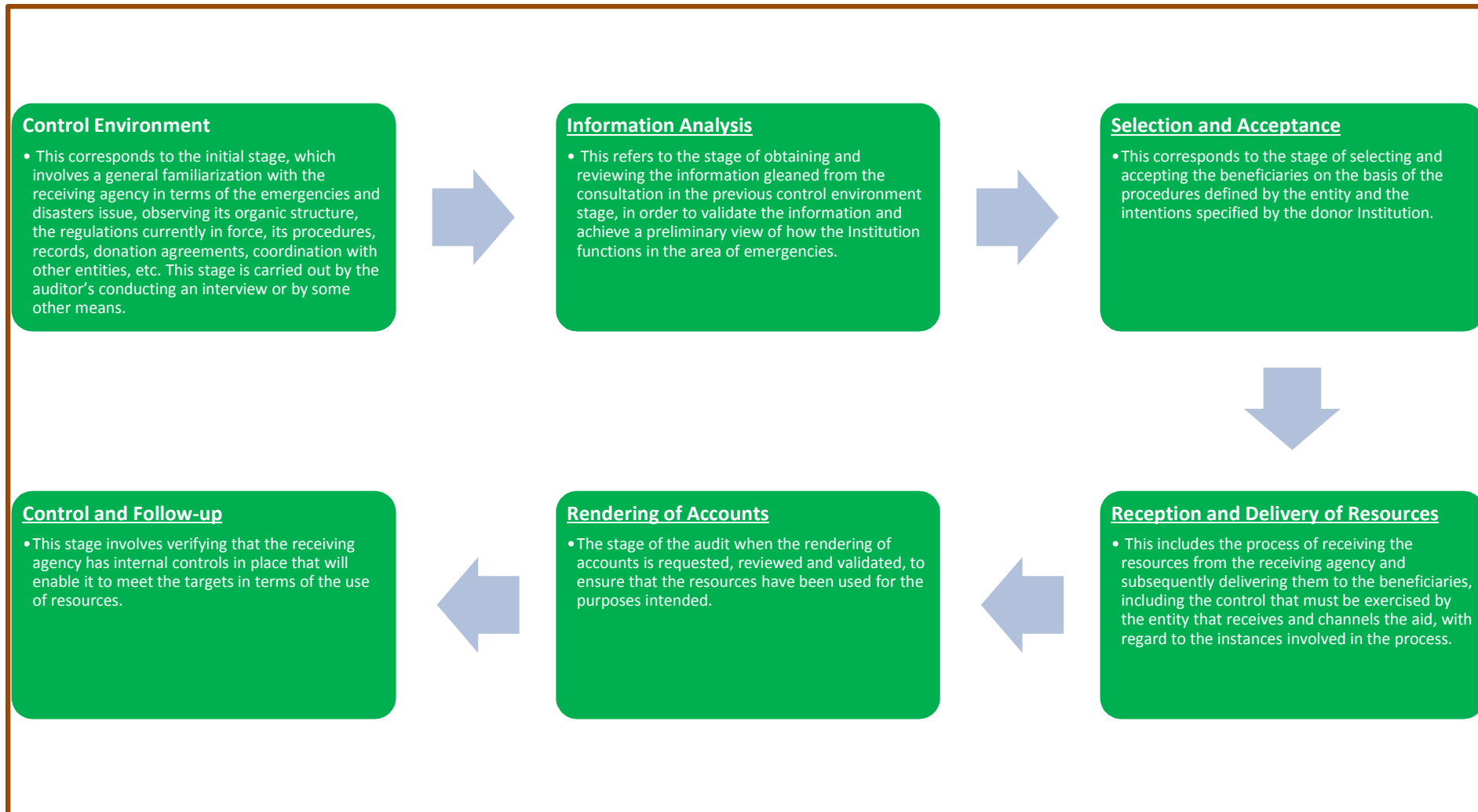
#### **Prepared by the SAI of Chile**

1. The following disaster auditing guidelines were prepared by the SAI of Chile in collaboration with representatives from donor organisations, Non-Governmental Organisations, private sector auditing firms and the Government General Internal Auditing Council of Chile. In the course of this work the SAI of Chile also consulted accounting standard setters, accounting and auditing bodies and colleges and representatives from a range of government services associated with disaster-related aid and audit. The SAI of Chile based the guidelines on the auditing procedures used by the Chilean Office of the Comptroller General. The guidelines were reviewed by and agreed to by the representatives of the donor organisations, Non-Governmental Organisations, private sector auditing firms, the internal Government General Internal Auditing Council of Chile and the SAI of Chile. The guidelines have been tested by private sector auditors of a humanitarian NGO in Chile. See WG AADA final report for more details.

2. The guidelines take auditors through the steps of the audit:

- Control environment
- Information analysis
- Selection of beneficiaries
- Reception and delivery of resources
- Accounting for aid
- Internal controls and meeting targets

The steps are summarised in the following flow chart.





**CONTROL ENVIRONMENT:** This corresponds to the initial stage, which involves a general familiarization with the receiving agency in terms of the emergencies and disasters issue, observing its organic structure, the regulations currently in force, its procedures, records, donation agreements, coordination with other entities, etc. This stage is carried out by the auditor's conducting an interview or by some other means.

CONTROL ENVIRONMENT STAGE		YES	NO	REASON
1	Is there any legislation governing the receiving agency?			
2	Are there policies, instructions or internal procedures on the handling of resources received and delivered?			
3	Are there specific policies, instructions or internal procedures on the handling of resources received and delivered in disaster situations?			
4	Do the internal procedures include a segregation of functions in the Finance and Treasury Unit? (payment authorization and authorized signatories) Are these modified in cases of emergency?			
5	Are there defined procedures for the distribution of resources or goods to beneficiaries? Are these modified in cases of emergency?			
6	Is there an organizational structure in place to face an emergency, which has the necessary powers?			
7	Is there a system of registering beneficiaries that is relevant to the situation?			
8	Is there a record of the resources delivered to beneficiaries?			
9	Is there any donation contract, arrangement or agreement?			
10	Does the contract, arrangement or agreement expressly specify the intention of the donation?			
11	Has the donor imposed any restrictions on the handling of the donated resources?			
12	Is there any coordination with other public or private bodies that have to do with emergencies? (Type of coordination and objectives are to be specified).			
13	Is there adequate protection for the donated goods?			
14	Are there procedures in place to prove the delivery of resources or goods to beneficiaries?			
15	Is there a separate record for donated resources?			
16	If advisable, are there controls to make it possible to comply with health regulations or their equivalent in the storing of the goods?			

**INFORMATION ANALYSIS:** This refers to the stage of obtaining and reviewing the information gleaned from the consultation in the previous control environment stage, in order to validate the information and achieve a preliminary view of how the Institution functions in the area of emergencies.

INFORMATION ANALYSIS STAGE		
N°	Test	Procedure
1	To validate the consistency of the policies, instructions or procedures on donations received.	Check whether such rules are clear, up-to-date and relevant to the intentions of the donation.
2	Analyse contracts	Check whether the contracts, arrangements or agreements stipulate clearly the intentions of the donation.
3	Verify the competence of the Emergency Response Officer	Find out whether the Emergency Response Officer is familiar with the aforementioned documents and whether he/she has been trained to carry out the tasks entrusted to him/her (including the procedures for distributing the resources).
4	Check the basic contents of the universe of beneficiaries database	If the database is to be analysed correctly, this must contain the following information as a minimum: a) Beneficiary's forenames and surnames; b) Address and region where he/she received the benefit; c) Financial and physical resources delivered to him/her; d) Date when benefits were delivered; e) The beneficiary's single identification number. f) Donor of the resources; and, g) Intention of the donation.
5	Corroborate the existence of a system for recording and administering the delivery of benefits	Verify that beneficiaries' data, and the administration of the resources are kept in a record that meets the following conditions at least: • It does NOT allow benefit to be delivered more than once to the same beneficiary. • It does NOT allow the beneficiary's single identification number to be entered.
6	Verify coordination with other entities	Check the existence of details to prove coordination with other entities concerned in dealing with emergencies. (Protocols, arrangements or agreements)
7	Investigate the administration of the resources	Verify whether there is an adequate system for administering the goods and resources donated. (For goods, consider: reception, storage, protection and delivery)
8	Verify evidence of the delivery of resources to beneficiaries	Check that the corresponding record has complied with the formal procedure that proves delivery, whoever may have carried it out.
9	Examine the donations register	Find out whether the register provides clear, precise information about the resources and/or goods received in donations, to allow them to be matched with the resources delivered.
10	Check compliance with health regulations	Analyse and validate if necessary the existence of adequate safeguards in the warehouses containing physical resources, to comply with any health regulations or equivalent stipulated for that purpose.

**SELECTION AND ACCEPTANCE:** This corresponds to the stage of selecting and accepting the beneficiaries on the basis of the procedures defined by the entity and the intentions specified by the donor Institution.

SELECTION AND ACCEPTANCE STAGE		
N°	Test	Procedure
1	To decide on the selection of the sample	To decide on a representative simple of the accepted beneficiaries, on the basis of the criteria approved by each institution.
2	Check compliance with procedures	On the basis of the sample chosen, carry out a range test for certain operations in order to evaluate compliance with the selection and acceptance procedures defined by the organization. .
3	Analyse the beneficiary's entry in the registration system	Verify that a control is kept for each beneficiary of the donation, to contain at least the following data: a) Forenames and surnames of beneficiary; b) Address and region where he/she received the benefit; c) Financial and physical resources that were delivered to him/her; d) Date when benefits were delivered; e) Beneficiary's single identification number; f) Donor of the resources; and, g) Intention of the donation.
4	Corroborate that there is no duplication of benefit	Verify on the register of resources delivered that there is no duplication in the delivery of benefit to the same person or institution. This can be analysed using tools such as ACL, Excel, or some other.
5	Check the consistency of the intentions stipulated by the donor and the beneficiaries that have been accepted.	Match the intentions defined by the donor with the characteristics of the beneficiaries that have been accepted, to check that these coincide.

**RECEPTION AND DELIVERY OF RESOURCES:** This includes the process of receiving the resources by the receiving agency and subsequently delivering them to the beneficiaries, including the control that must be exercised by the entity that receives and channels the aid, with regard to the instances involved in the process.

STAGE OF RECEPTION AND DELIVERY OF RESOURCES			
	Nº	Test	Procedure
Concerning the resources received	1	Verify that the funds are entered	Verify that the resources received are controlled by means of an accounting record, depending on the nature of the donation, and that the funds are entered in an exclusive current bank account, or, in the case of donations in goods, that there is adequate physical protection for them. Likewise check that there are such controls in place as are necessary to safeguard such resources.
	2	Verify that the donation is certified	Check that the receiving agency issues the donor organization with a receipt.
Concerning the resources delivered	3	Review the dates when resources are delivered	Check that the resources are granted to each of the beneficiaries at the correct time, on the basis of criteria fixed by each institution.
	4	Review the control of the resources	Check that the delivery of the resources is recorded in a system that allows them to be effectively controlled.
	5	Verify the formal procedure for delivering resources	Check that the reception of the resources is duly signed by the beneficiary, except in special situations where written evidence must be provided in the form of certification of the benefit's delivery issued by the Receiving Agency.

**RENDERING OF ACCOUNTS:** The stage of the audit when the rendering of accounts is requested, reviewed and validated, to ensure that the resources have been used for the purposes intended.

RENDERING STAGE		
N°	Test	Procedure
1	Rendering report	Check that there exists on the part of the receiving agency a rendering report on the use and destination of the resources received.
2	Details of rendering	Check that there is a rendering-of-accounts format that includes income, expenditure and the unused balance of the resources. It must also contain at least: 1) Identification of the back-up documents. 2) List of the contributions paid by the donor institution and the deductions made under the heading of delivery to beneficiaries. 3) The unused balance which must coincide with that appearing in the accounting records in that same period. 4) The signatures and approvals of responsible officials.
3	Confirmations of amounts given by the donor	Confirm with the institutions that gave the resources, in order to validate the amounts entered at the receiving agency.
4	Carry out a review of the rendering file	Check: 1) That the date of the renderings coincides with the period stipulated in the agreement. 2) That the supporting documentation is original (physical or electronic support documents). 3) That the receipts coincide with the nature and intention of the fund. 4) That all back-up documents of the rendering of accounts have a control to avoid their being reused. 5) That the rendering of accounts is authorised or initialled by the official responsible, as established in the agreement.
5	Review of expenditure receipts	With regard to these, check: 1) That the sheets are pre-numbered and correlative. 2) That the name of the creditor or receiver corresponds to the one mentioned in the back-up documents. 4) That the date when the cheque was issued or the electronic transfer made coincides with the back-up documentation. Also ensure that each cheque delivered to the supplier appears as charged in the following bank statement. 5) That the currently applicable tax rules with regard to donations have been complied with.
6	Physical validation	Carry out inspections on site, or in some other relevant way, in order to verify: 1) The identity of the beneficiary. 2) That the resources delivered to the target group correspond to those promised. (including specialist support, if necessary).
7	Review of goods storage	If necessary, check that there is a control of the custody and accumulation of goods, to ensure that they are correctly protected.
8	Analyse the existence of surplus resources	Find out whether the entity had surplus resources and if these were reported; used later; returned to the donor Institution or redistributed (as agreed with the donor).

9	Validate other commitments stipulated in the agreement	Check that any other commitments stipulated in the donation agreement that have not been dealt with, are fulfilled.
10	Verify purchasing procedures	If necessary, check that there are procedures to cover the purchase of goods and/or services.

**CONTROL AND FOLLOW-UP:** This stage involves verifying that the receiving agency has internal controls in place that will enable it to meet the targets in terms of the use of resources.

CONTROL AND FOLLOW-UP STAGE	
Test	Procedure
Analyse whether there are follow-up control procedures in place with regard to the transfers made.	Verify, if necessary, whether the receiving agency has monitoring and control procedures in place in terms of the use of the resources delivered.

GLOSSARY FOR USE WITH THE DISASTER AUDITING GUIDELINES FOR PRIVATE SECTOR AUDITORS DEALING WITH DISASTERS, WHETHER NATURAL OR CAUSED BY MAN		
N°		
1	Beneficiary	A person or group of people who are granted resources of any kind to alleviate the consequences of the disaster that has affected him/her/them.
2	Goods	These correspond to the physical resources available for distribution to the beneficiaries.
3	Warehouse	Place where the physical resources are accumulated, pending delivery to the beneficiaries.
4	Benefit Delivery Certificate	A document constituting proof that the resources have been delivered to each beneficiary, It must be signed by him/her and, if this is not possible, by the organization delivering such resources.
5	Expenditure Receipt	A document used in the organization's accounting to record information related with payments made.
6	Confirmation	Proof by which the donor is asked to confirm the information concerning the resources delivered to the receiving agency within a given period.
7	Donation contract, arrangement or agreement	Document by which the donor organization delivers resources to a receiving agency, so that the latter may channel the contributions donated to each target beneficiary or group, in accordance with the terms stipulated.
8	Accounting register	Register that enables an economic element or action taken by a company to be identified and classified.

<b>9</b>	Disaster	A serious alteration in the living conditions of individuals or a community, or damage to property, caused by a natural phenomenon or by human intervention, whether intentional or unintentional, which is impossible to control using the means and resources provided or reinforced locally, and requires the assistance and coordination of public and private bodies, both national and international, with human, operational and material means to initiate and implement a response to gain control of the situation.
<b>10</b>	Tax rules	Rules that state the tax obligations related with the operations being examined.
<b>11</b>	Supporting or back-up documentation	A sequenced series of paper or electronic support documents, that serves as back-up for the operations carried out by the organization.
<b>12</b>	Donation	Resources of any kind given in a non-refundable manner by a donor in order to help those affected by an emergency or disaster.
<b>13</b>	Donor	A local or international body which provides non-refundable resources to a receiving agency so that help is delivered through that agency to those affected by any type of emergency or disaster.
<b>14</b>	Receiving Agency	The body that receives resources from the donor, whose mission is to channel aid to those affected by any type of emergency or disaster.
<b>15</b>	Duplication in the granting of benefits	This refers to a risk that may occur if there are internal control weaknesses in the receiving agency: namely that a benefit is given more than once to the same beneficiary.
<b>16</b>	Emergency	A serious alteration in the conditions of risk for people's lives or damage to property, caused by a natural phenomenon or human intervention, whether intentional or unintentional, that affects them but can be controlled using the means and resources available in the locality, space or community affected, if reinforced by means and resources from outside it.
<b>17</b>	Emergency Response Officer	Person within the receiving agency with responsibility for the work of direction, coordination and control in the face of situations of emergency or disaster.
<b>18</b>	Specialist	Person with technical knowledge and experience in a specific field of action.
<b>19</b>	Control and Follow-up Stage	This corresponds to verification that the receiving agency has internal controls in place to meet the targets for the use of resources.
<b>20</b>	Surplus resources or unused balances	Balance of resources remaining after the corresponding delivery of these has been made to the target group of beneficiaries.
<b>21</b>	Rendering of Accounts File	Details of the receiving agency, originating from its information systems, consisting of income, expenditure and transference receipts, - accompanied by back-up documentation - which reflect the transactions carried out in the course of its work during a given period.
<b>22</b>	Single beneficiary identification number	This is a single numerical series by which every inhabitant of a given country is identified, e.g. Passport number, national ID number, etc.
<b>23</b>	Rendering report	Instrument by which the receiving agency informs the donor by document about the administration of the resources received.
<b>24</b>	Entering the funds	Corresponds to the reception process for donated funds.
<b>25</b>	Representative sample of beneficiaries	This is the number of beneficiaries on whom the inquiry will concentrate, selected from the universe of beneficiary records or files which the receiving agency has available.
<b>26</b>	Donation intention	Corresponds to the purpose stipulated by the donor for the donated resources.
<b>27</b>	Purchasing procedures	Procedures used by the receiving agency for making purchases.
<b>28</b>	Resources	This includes contributions of all kinds, which can be monetary or financial, physical or material, services, or others, given to provide aid in a situation of emergency or disaster.
<b>29</b>	Delivered resources	Corresponds to the resources delivered by the receiving agency to the beneficiaries.

<b>30</b>	Received resources	Refers to the resources delivered by the donor to the receiving agency.
<b>31</b>	Beneficiary register	A system in which the universe of beneficiaries is entered and stored and which has the information necessary for appropriate identification of every individual.
<b>32</b>	Physical protection or custody of goods	Storage of physical resources in conditions appropriate to their nature, to comply with sanitary or health standards or their equivalent if applicable.
<b>33</b>	Selection of the sample	Procedure whereby a representative group of entries is extracted from the universe of beneficiaries, using statistical or other pertinent methods, to be the object of review.
<b>34</b>	Universe of beneficiaries	This corresponds to all the people affected by an emergency or disaster who qualify as eligible to receive resources to mitigate the situation that affects them.
<b>35</b>	Physical validation	This is the act of corroborating the actual delivery of the resources by checking the identity of the beneficiary and the goods that he/she has received.



## Appendix 5

### Examples of audits of disaster-related aid

The following table lists examples of disaster-related aid audits by SAIs of emergency recovery and relief, rehabilitation and reconstruction activities.

Year	Country	Theme
2006	Australia	Arrangements to Manage and Account for Aid Funds Provided Under the Australia-Indonesia Partnership for Reconstruction and Development
2004	Czech Republic	The state support implemented by the form of anti-flood programmes for the revitalization of the regions affected by the 2002 floods <sup>4</sup>
2006	ECA	Special Report concerning the European Commission Humanitarian Aid Response to the Tsunami (SR 3/2006) <sup>5</sup>
2007	Indonesia	Nias and Nias Selatan District (Kabupaten) Road at Rehabilitation and Reconstruction Agency (BRR) in Nias Islands <sup>6</sup>
2007	Japan	Execution status of Official Development Assistance (ODA) <sup>7</sup>
2006	Korea	Establishment and Operation of National Disaster Management Support System (NDMSS) <sup>8</sup>
2009	Kyrgyz	Audit of handling of public funds and special means and analysis of functional activity of the Ministry of Emergency Situation of the Kyrgyz Republic and its structural subdivisions.
2000	Lesotho	The Distribution of Food Relief Aid
2006	Norway	Audit of the Norwegian support from Ministry of foreign affairs in accordance with the tsunami disaster
2000	Papua New Guinea	Resettlement and restoration of communities, services and public infrastructure after the Rabaul Volcanic Eruption of 1994 – Gazelle Restoration Authority.
2009	Poland	Assistance to Victims of Tornado of the 15th August 2008 and the

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<sup>4</sup> <http://www.nku.cz/scripts/detail.asp?id=948>

<sup>5</sup> [http://www.eca.europa.eu/audit\\_reports/special\\_reports/docs/2006/rs03\\_06en.pdf](http://www.eca.europa.eu/audit_reports/special_reports/docs/2006/rs03_06en.pdf)

<sup>6</sup> Contact [asosai@bpk.go.id](mailto:asosai@bpk.go.id) for more details

<sup>7</sup> <http://report.jbaudit.go.jp/org/h19/2007-h19-1069-0.htm>

<sup>8</sup> <http://www.bai.go.kr/>

		Liquidation of Its Consequences in Opole and Silesia Regions
2006	USA	HURRICANE KATRINA: Comprehensive Policies and Procedures Are Needed to Ensure Appropriate Use of and Accountability for International Assistance. <sup>9</sup>
2009	Indonesia	Assess disaster preparedness and disaster management by government and disaster management agencies following the West Java earthquake. <sup>10</sup>
2009/10	Hungary	Evaluate the regulatory and institutional system for managing disasters
2011	France	Funds of the tsunami victims' associations <sup>11</sup>
2012	France	Lessons of the 2010 floods on the Atlantic Coast (Xynthia) and in the Var <sup>12</sup>
2013	France	French aid to Haiti following the 12 January 2010 earthquake <sup>13</sup>
2012	The Netherlands	Accounting for Haiti aid funds 2011 <sup>14</sup>
2008-2011	China	Financial audit of recovery and reconstruction following the Wenchuan earthquake in China - <u>real time audit</u> <sup>15</sup>
2012	Japan	Performance audit of Provision of emergency temporary houses following the Great East Japan Earthquake <sup>16</sup>
2012	Japan	Disposal of disaster waste generated by the Great East Japan Earthquake <sup>17</sup>
2006	India	Performance audit of relief and rehabilitation after the 2004 tsunami <sup>18</sup>
2011	Indonesia	Audit report on disaster-related aid management and accountability in the rehabilitation and reconstruction phase <sup>19</sup>

<sup>9</sup> <http://www.gao.gov/new.items/d06460.pdf>

<sup>10</sup> Contact [asosai@bpk.go.id](mailto:asosai@bpk.go.id) for more details

<sup>11</sup> <http://www.ccomptes.fr/fr../Publications/Publications/Fonds-des-associations-pour-les-victimes-du-tsunami>

<sup>12</sup> <http://www.ccomptes.fr/fr../Publications/Publications/Les-enseignements-des-inondations-de-2010-sur-le-littoral-atlantique-Xynthia-et-dans-le-Var>

<sup>13</sup> <http://www.ccomptes.fr/fr../Publications/Publications/L-aide-francaise-a-Haiti-apres-le-seisme-du-12-janvier-2010>

<sup>14</sup> [http://www.courtofaudit.nl/english/Publications/Audits/Introductions/2012/11/Accounting\\_for\\_Haiti\\_aid\\_funds\\_2011](http://www.courtofaudit.nl/english/Publications/Audits/Introductions/2012/11/Accounting_for_Haiti_aid_funds_2011)

<sup>15</sup> [www.cnao.gov.cn/main/articleshow\\_ArtID\\_1253.htm](http://www.cnao.gov.cn/main/articleshow_ArtID_1253.htm)

<sup>16</sup> <http://report.jbaudit.go.jp/org/h23/2011-h23-1031-0.htm>

<sup>17</sup> <http://report.jbaudit.go.jp/org/h23/2011-h23-1268-0.htm>

<sup>18</sup> [http://www.cag.gov.in/html/reports/civil/2006\\_20\\_peraud/20%20OF%202006/introduction.htm](http://www.cag.gov.in/html/reports/civil/2006_20_peraud/20%20OF%202006/introduction.htm)

<sup>19</sup> For more information contact [asosai@bpk.go.id](mailto:asosai@bpk.go.id)

2012	New Zealand	Roles, responsibilities, and funding of public entities after the Canterbury earthquakes <sup>20</sup>
2008	European Commission	European Commission rehabilitation aid following the tsunami and hurricane Mitch <sup>21</sup>
2005	Sri Lanka	Interim report on the Rehabilitation of the losses and Damages caused to Sri Lanka by the Tsunami Disaster <sup>22</sup>

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<sup>20</sup> <http://www.oag.govt.nz/2012/canterbury>

<sup>21</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SRCA:2008:06:FIN:EN:PDF>

<sup>22</sup> <http://eca.europa.eu/portal/pls/portal/docs/1/1881964.PDF>

## Appendix 6

### Financial audit of the emergency response following the earthquake in Pisco, Peru<sup>23</sup>

1. On August 15th, 2007, there was an earthquake in southern Peru affecting seven provinces, causing 596 deaths, injuring 1.289 people, leaving 431.313 homeless and destroying 91.240 homes.
2. The Comptroller General of the Republic appointed an ad hoc committee (the Crisis Committee) to direct and monitor a team of auditors sent to the disaster-affected zone. The assignment of the team was to:
  - audit disaster related aid;
  - identify risks which might adversely affect the entities involved in managing disaster;
  - provide timely warning to the entities involved in managing disaster.

The team was instructed to not hamper emergency activities. One of the purposes of the presence of the team at the site of the disaster was to act as a deterrent to the possible occurrence of fraud and corruption.

3. The team was instructed to observe:
  - the collection and storage of goods;
  - the distribution of goods to the victims; and
  - the verification of the damage to physical infrastructure.
4. To do this the team carried out the following:
  - identified the agencies responsible for managing the disaster and their roles and responsibilities;
  - observed the collection and storage of receipt of goods which had been donated;
  - checked the source of donations, funds transfers, and storage and distribution mechanisms;
  - noted risks associated with activities carried out, and the way in which information was prepared;
  - made a site visit to the stores to document possible risks to security, control and the preservation of the donated goods received; and
  - examined the distribution of goods from warehouses to the victims to document possible risks related to the transportation of aid to its destination.
5. The team also followed up complaints and denunciations from the affected population.
6. The findings were presented in a Consolidated Report and submitted to the Crisis Committee. The Crisis Committee then submitted the Consolidated Report to the President, the National Institute of Civil Defence, the Ministry of Education and Regional Local Government to implement the recommendations.

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<sup>23</sup> [www.contraloria.gob.pe/cgr/publicaciones/informes\\_cgr](http://www.contraloria.gob.pe/cgr/publicaciones/informes_cgr)

7. The summary of the Consolidated Report is presented below.

Part I, Introduction covered the objective, scope and history of the disaster, the legal and governmental framework, information on cash and in-kind donations, including bank account details where transfers of donations were made from overseas.

Part II, Findings. This part covered the findings of the audit.

- a. Not all of the public bodies forming the Civil Defence system in the country took immediate action to include other governmental authorities acting independently and without coordination.
- b. The Committee of Civil Defence did not provide basic information on damage assessment and analyses of needs, as a result of which, aid was not delivered as quickly as it should have been.
- c. The administration of the Province of Ica did not have enough human resources to monitor, coordinate and advise the executive bodies, which caused confusion in distributing goods.
- d. There was a delay of up to three days in transporting 3.000 tons of donations from the port in the city of Pisco due to the lack logistical support.
- e. Food was damaged because it was badly stored and exposed to the weather.
- f. There was no government representative monitoring the distribution of aid to the victims.

Part III, Conclusions. This contained a professional opinion based on the objectives and results of the audit. The audit concluded that the regulatory framework was not adapted to the requirements of the disaster. This was because the roles of the principal agencies and what to do to take care of the victims were not clearly defined.

Part IV, Recommendation. This part recommended the implementation of specific measures to help manage the disaster. The recommendations to the Presidency of the Council of Ministers were:

- a. to promote a revision of the existing legal framework related to the National Civil Defence System;
- b. to strengthen and facilitate the participation of the entities making up this system (particularly the National Institute for Civil Defence); and
- c. to establish clearly roles and responsibilities for the different aspects of emergencies resulting from natural disasters or catastrophes.

## Appendix 7

# Financial audit of recovery and reconstruction following the Wenchuan earthquake in China<sup>24</sup>

## Prepared by the SAI of China

1. On 12 May 2008, a 7.9 magnitude earthquake hit Wenchuan in Sichuan Province, a mountainous region in Western China. The disaster affected more than 45 million people and caused more than USD 127 billion in economic damage. Over 90,000 people were left dead or missing and some 370,000 people were injured. The Chinese Government decided to raise USD 159 billion for post-earthquake rehabilitation and reconstruction projects.

2. The SAI of China, the National Audit Office of the People's Republic of China (CNAO) carried out a real-time audit of the Wenchuan Post-Earthquake Recovery and Reconstruction Projects (PERR). The work began in July 2008, two months after the disaster and continued until September 2011 when most of the reconstruction work had been completed and involved more than 11,648 auditors.

3. A lead team was set up at the CNAO with responsibility for planning, reporting, coordination, guidance and special investigations of major issues and cases. The audit work was divided between CNAO offices in the disaster-stricken areas and provincial audit institutions and offices.

4. The CNAO's objectives for the real-time audit were to:

- promote the successful execution of the PERR and to make sure there were no significant faults in the post-earthquake reconstruction,
- to discover and report on institutional barriers and weak links in funds or project management,
- identify violations and urge timely corrections and
- help improve policies and institutions by making constructive recommendations for improvements in systems when problems are detected.

5. The audit did not only examine the implementation of the budget and the final accounting results, it also covered:

- implementation of the PERR and its effects;
- how funds and materials for the PERR were collected, distributed, managed and used;
- implementation of PERR policies and measures (e.g. on tax incentives, targeted aid, employment assistance, resettlement);
- construction management, especially project quality management;
- land expropriation, environmental protection and prevention of geological disaster.

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<sup>24</sup> The National Audit Office of the People's Republic of China (CNAO) see [http://www.cnao.gov.cn/main/articleshow\\_ArtID\\_1253.htm](http://www.cnao.gov.cn/main/articleshow_ArtID_1253.htm)

6. According to the CNAO, the real-time audit facilitated the implementation of the Wenchuan post-earthquake recovery and reconstruction projects and provided assurance for major problems prevention. Some of the audit's concrete outputs and achievements included:

- 4 377 audit reports issued and 4 159 pieces of audit information submitted;
- 19 640 audit opinions and recommendations provided resulting in 2 700 rules and regulations created or improved;
- 4 000 projects' construction management improved;
- USD 2 billion saved through greater efficiency and acceleration of project implementation;
- dozens of cases referred to disciplinary inspection authorities.

7. The experience gained from carrying out this real-time audit of PERR allowed the CNAO to identify some key points to be considered in future cases:

- the need to select priorities and to be sure of the cost-benefit ratio before embarking on the audit, given the large resources requirement of a real-time audit ;
- the importance of the correct timing of the audit – in this case as soon as possible after the earthquake;
- the need for strong management and organisation, because of the greater complexity of a real-time audit due to a wider scope of work and involvement of many auditors and auditees.

## Appendix 8

# Performance audits of recovery and reconstruction after the Great East Japan Earthquake

## Prepared by the SAI of Japan

### 1. Background

Following the Great East Japan Earthquake in March 2011, the Board of Audit of Japan carried out audits of recovery and reconstruction expenditure and reported the results in the annual Audit Report relating to the 2011 financial year. The following performance audits were carried out on-site and looked at the provision of temporary emergency housing to earthquake victims and the removal of disaster-generated waste.

### 2. Provision of emergency temporary houses following the Great East Japan Earthquake<sup>25</sup>

The Japanese government paid subsidies amounting to USD 4.76 billion up to the end of March 2012 to seven disaster-affected prefectures for the provision of 116,170 emergency temporary houses for the victims of the earthquake and for other related purposes.

The *objective* of the audit was to ascertain whether or not emergency temporary houses are properly provided and there are any matters to be improved.

The auditors found that 52,858 of the houses had been constructed by the local authorities at a cost of USD 69,778 per dwelling. Another 57,697 houses were rented from the private sector for a two-year cost of USD 20,333 per dwelling. It was revealed that the rented houses were available more quickly than those constructed and more economically in terms of cost.

In the case of the rented houses, the local authorities first rent the houses from the owners and then provide them to the victims. This principle of Japanese government is called “benefit in-kind”, which relates to the provision of non-cash goods or services to people at the point of delivery. However, this measure proved to have caused delay in the provision of rented houses. As such, the Board concluded that, in the case of major disasters such as the Great East Japan Earthquake, in order to respond quickly and precisely to the needs of victims, the government should take measures flexibly according to circumstances. The Board recommended that to improve this situation, it is necessary to consider for future cases the possibility of partly deviating from the benefit in-kind principle by letting victims contract with house owners themselves. The local authorities would then pay the rent to the house-owners. Despite the position of the government not to deviate from the benefit in-kind principle, the Board reported and published the above situation in its audit report in the interest of providing information to the public.

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<sup>25</sup> <http://report.jbaudit.go.jp/org/h23/2011-h23-1031-0.htm>



### **3. Disposal of disaster waste generated by the Great East Japan Earthquake<sup>26</sup>**

In the aftermath of the Great East Japan Earthquake, an estimated total of 31.21 million tons of disaster-generated waste and tsunami deposit had to be disposed of in local municipalities in 13 prefectures. USD 8.5 billion was budgeted for FY 2011 by the Japanese government to subsidise this disposal which was to be completed by March 2014.

The *objective* of the audit was to report the situation in which the different prefectures were progressing with disposal.

According to the result of field audits conducted by the Board, in the three disaster-affected prefectures (Iwate, Miyagi and Fukushima) where the 95.3% of the total waste existed, the percentage of disposed waste compared to the total was 17.7% on average. However, this does not necessarily mean there was delay in the progress of the project, but this is because the major part of the work done in the financial year 2011 was dedicated to the preliminary works such as transporting waste from the disaster-affected areas to temporary-placing sites. In view of the necessity of providing information to the public toward the completion of disposal by the target date at the end of March 2014, the Board reported and published its audit results on the current progress in its audit report, mentioning its concern regarding the uncertainty recognised during audits about securing final disposal sites and using the waste as building materials for reconstruction, etc.

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<sup>26</sup> <http://report.jbaudit.go.jp/org/h23/2011-h23-1268-0.htm>

## Appendix 9

### Performance audit of the European Commission response to the South East Asian tsunami.<sup>27</sup>

#### Prepared by the SAI of the European Union

1. On 26 December 2004 an earthquake off the west coast of Northern Sumatra triggered a massive tsunami causing widespread destruction in many countries of the Indian Ocean, killing over 200 000 people.
2. The European Commission has a specific Directorate General, DG ECHO,<sup>28</sup> which has the task of responding to humanitarian crises. DG ECHO does not implement relief activities directly, but through partners which consist of NGOs and international organisations, including United Nations and the Red Cross. Following the tsunami, DG ECHO granted funding of 123 million euro of humanitarian aid.

#### Audit Observations

3. The Court carried out a performance audit of the Commission's humanitarian aid response to the tsunami. This included the **emergency response and some short-term rehabilitation** work consistent with DG ECHO's mandate, but did not include longer term reconstruction. The main questions addressed were:
  - (a) was the Commission's response to the tsunami sufficiently **rapid and appropriate**?
  - (b) were DG ECHO's actions effectively **coordinated** with those of other Commission services, international organisations and other countries?
  - (c) were DG ECHO's monitoring and control procedures designed to ensure that projects implemented by partners were **relevant, timely and efficiently implemented**?
  - (d) did projects implemented by DG ECHO's partners achieve their expected **results** and were short-term rehabilitation actions adequately **sustainable**?

#### Audit findings

4. Commission procedures enabled a rapid response to the tsunami, granting 3 million euro the same day as the disaster, followed by a further 20 million euro within five days. An additional amount of 80 million euro was granted in February 2005, followed by 20 million euro in December 2005, making a total of 123 million euro. The high level of funding proved appropriate particularly due to the longer than expected transition from the relief phase to the reconstruction phase.
5. DG ECHO had already been working in Sri Lanka prior to the tsunami on projects with the conflict affected population. Following the tsunami, DG ECHO chose to work with existing partners in Sri Lanka who knew the situation well. In this way it found relevant projects to fund despite the huge influx of

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<sup>27</sup> Published in the Official Journal of the European Union C 170 of 21 June 2006

<sup>28</sup> European Community's Humanitarian Office See [http://ec.europa.eu/echo/about/presentation\\_en.htm](http://ec.europa.eu/echo/about/presentation_en.htm)

funding and NGOs which arrived immediately following the disaster. In Aceh DG ECHO did not have a presence in the field before the tsunami. Due to problems of access and lack of reliable information some early project proposals were based on a standard response to emergency situations. From February 2005 onwards, project proposals were based on more reliable needs assessments.

6. DG ECHO supported the coordination role of the United Nations and provided funding to address the lack of reliable and accurate information on needs. The arrival of a large number of humanitarian organisations, often with large amounts of private funding, added to the difficulties of coordination resulting in variations in the level and quality of aid provided. There was good coordination with other Commission services, which helped to ensure a smooth link between short-term relief efforts and longer term reconstruction. In both Indonesia and Sri Lanka, however, coordination remained problematic.

7. To monitor and check projects, DG ECHO used field experts and desk officers to carry out on-the-spot checks, reports by its partners, checks prior to final payment and later external audits. Procedures generally enabled projects to be modified to meet evolving needs. However, there was scope to develop comparative cost information, to provide more details on organisational arrangements and to quantify the achievement of project outputs.

8. In some cases project output was lower than planned due to inflation and to difficulties in obtaining goods and recruiting qualified staff. The projects managed by DG ECHO partners contributed to covering the basic needs of the population in terms of shelter, food, water and sanitation, health, psychosocial support, child and family care and telecommunications. The Commission also financed projects to support disaster preparedness.

9. In terms of reaching beneficiaries, the success of Commission projects was sometimes less than initially planned, mainly due to inaccurate needs assessments. For example, the water and sanitation component of a UN agency project in Aceh reached 100 000 people, representing only 5 % of the 2 million beneficiaries originally planned.

**Recommendations**10. Based on its observations and conclusions, the Court made the following recommendations:

- (a) the Commission should consider the role it could play in helping affected governments to manage donor coordination more effectively;
- (b) the roles of DG ECHO and DG Environment (Civil Protection Mechanism) should be clarified to ensure a coherent approach;
- (c) a longer timeframe for emergency operations should be considered in order to provide sufficient time for implementation;
- (d) DG ECHO should strengthen its monitoring system in order to include written feedback to partners following monitoring visits, the development of comparative cost information, an explanation of the implementing arrangements and information on what has been done where;
- (e) the difficulties of access to documentation of projects implemented by UN agencies should be taken into account in the context of the Financial and Administrative Framework Agreement.

## Appendix 10

### Performance audit of relief and rehabilitation after the 2004 tsunami Prepared by the SAI of India<sup>29</sup>

The objectives of the performance audit were to verify whether:

- the lessons learnt from earlier disasters had been used for the formulation of effective policies for disaster management;
- the institutional mechanisms set up by the Union and the State governments for disaster management including pre-disaster risk assessment, mitigation, prevention and preparedness, monitoring of feedback on implementation of orders/instructions issued by the Ministry from time to time were adequate and functioning effectively;
- the special assistance through National Calamity Contingency Fund (NCCF), Calamity Relief Fund (CRF), Prime Minister's National Relief Fund (PMNRF) and external assistance were adequate and reached the affected families promptly;
- the system of identification of beneficiaries, needs assessment, flows of immediate assistance to the beneficiaries and planning of rehabilitation activities was robust and effective, and
- the post disaster activities relating to immediate assistance, which provided arrangements for procurement and delivery of relief and rehabilitation, restoration of infrastructural services and economic and social recovery of productive sectors such as fishing, tourism and so on were planned and executed efficiently and economically.

The audit involved examination of records at the Ministry of Home Affairs (MHA), Ministry of Finance (MoF), Planning Commission, Ministry of Environment and Forests (MoEF), Indian Meteorological Department (IMD) and Department of Ocean Development (DOD) at the Union level. At the state and district levels, records were checked in the corresponding disaster management authorities and different units of the departments of Animal Husbandry, Agriculture, Education, Fisheries and Public Works. Reconstruction was not been covered in this audit.

The criteria used for assessing the efforts of relief and rehabilitation were:

- the extent of compliance with the system of assessment of the requirements of funds and their phasing,
- the promptness of the release of funds by MHA/State Governments in view of the magnitude of the disaster,

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<sup>29</sup> Report No. 20 of 2006

- the performance of disaster response and post disaster activities,
- the system devised for the identification of beneficiaries,
- the status of monitoring the outcome and impact of the assistance provided at the Union and State levels,
- the status of training of the people associated with the relief work,
- the completeness and accuracy of accounting for relief material and stores, and
- the quality of stores management, machinery and equipment procured and the extent of their utilisation.

The audit revealed there to be:

- inadequate institutional mechanisms for disaster management and the monitoring of the implementation of orders and instructions,
- no clear criteria for general application adopted to enable the States affected by disaster to create a realistic assessment of expected financial assistance,
- financial irregularities due to non-utilisation, irregular disbursement, etc.,
- improper identification of beneficiaries, which resulted in irregularities in three states,
- ineffective construction of temporary shelters since they were not occupied by the victims,
- ineffective construction of permanent housing, since the houses were not completed nor handed over, and
- delays in construction and administrative irregularities in the restoration of basic infrastructure.

Based on these findings, the SAI of India concluded that the institutional mechanism for disaster management was inadequate and resulted in a lack of coordination of measures for preparedness and vulnerability reduction.

The SAI of India recommended that the National Disaster Management Authority (NDMA) should review policies regarding relief and reconstruction activities and follow up measures to remedy the weaknesses reported.

## Appendix 11

# Performance audit of disaster-related aid following hurricane Katrina<sup>30</sup>

## Prepared by the SAI of the United States of America<sup>31</sup>

### 1. Background

Hurricane Katrina struck in August 2005, devastating the Gulf coast of the United States (US), causing billions of dollars in damage, and dislocating thousands of residents. Government at all levels—local, state, and federal—struggled to respond to the magnitude of the event. As the storm’s devastation and destruction were viewed around the world, many foreign countries offered both cash and in-kind donations including foreign military donations to the United States. For the first time in its history the US government welcomed international offers of assistance to this degree. The National Response Plan established that the Department of State (DOS) is the coordinator of all offers of international assistance. The Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS) was responsible for accepting the assistance and coordinating its distribution.

### 2. Audit objectives

This audit was intended to determine:

- the amount of cash that was donated by foreign countries and the extent to which it had been used to assist in the relief efforts;
- the extent to which those federal agencies with responsibilities regarding the international assistance offered to the United States had policies and procedures in place to ensure the appropriate accountability for the acceptance and distribution of in-kind donations, including foreign military donations.

### 3. Methodology

To answer the objectives, GAO reviewed US legislation and other guidance, including the National Response Plan, and met with key officials from the Departments of State, Homeland Security, Defense, Treasury, and Agriculture, as well as the US Agency for International Development and the Food and Drug Administration. In addition, GAO collected and reviewed relevant data, including lists of items offered and received, and letters of acceptance from the agencies.

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<sup>30</sup> GAO-06-460, April 6, 2006

<sup>31</sup> The United States Government Accountability Office

#### 4. Findings

The audit revealed that:

- in the absence of policies, procedures, and plans, the Department of State developed an ad hoc process to manage \$126 million in foreign cash donations to the U.S. government for Hurricane Katrina relief efforts;
- the Federal Emergency Management Agency (FEMA) and other agencies did not have policies and procedures in place to ensure the proper acceptance and distribution of in-kind assistance donated by foreign countries and militaries;
- although FEMA and other agencies did establish ad hoc policies and procedures, there was insufficient coordination of efforts.

#### 5. Recommendations

Based on the above findings, GAO made recommendations designed to improve the policies, procedures, planning, and oversight of international cash and in-kind donations to the US government in response to disasters.

For the complete audit report, visit: <http://www.gao.gov/new.items/d06460.pdf>

## **Appendix 12**

### **Compliance audits of emergency, rehabilitation and reconstruction disaster-related aid**

#### **Prepared by the SAI of Indonesia**

##### **1. AUDIT REPORT ON DISASTER-RELATED AID MANAGEMENT AND ACCOUNTABILITY IN THE REHABILITATION AND RECONSTRUCTION PHASE**

Pursuant to Law Number 15 of 2004 and Law Number 15 of 2006, the Audit Board of the Republic of Indonesia (BPK RI) has conducted a compliance audit on disaster-related aid management and accountability. This audit is intended to assess:

- whether or not the disaster-related aid management and accountability have complied the established law
- whether or not the disaster-related aid has reached its intended parties and met its purposes in timely manner to help disaster victims

The audit scope covers planning, management and distribution, monitoring and evaluation, and reporting and accountability of disaster-related aid in rehabilitation and reconstruction phase carried out by National Disaster Management Agency and some local governments receiving aid from National DMA including Provincial Government of J, SB, JB, JT, and KB in budget year 2009.

The compliance audit was carried out based on 2007 State Finance Audit Standards (SPKN) and 2008 Audit Management Manual (PMP) as guidelines.

The audit result by sampling in the five regions revealed that:

- 1) Disaster-related aid management in budget year 2009 has not been sufficient and the aid distributed to the local governments has not met its intended purpose and has not been used to reflect disaster management priorities.
- 2) Disaster-related aid management has not fully complied national budget mechanism.
- 3) Disaster-related aid, in the form of direct assistance for the community, in Provincial Government of JB is not distributed orderly.
- 4) Local governments receiving rehabilitation and reconstruction aid have not submitted accountability report of the use of the aid/fund in timely manner.

Based on those points, BPK RI concluded that disaster-related aid management and accountability in rehabilitation and reconstruction phase budget year 2009 covering planning, management and distribution, monitoring and evaluation, and reporting and accountability, have not fully complied stipulated law and regulation.

Due to the above conclusion, BPK RI recommends National Disaster Management Agency to review policies regarding rehabilitation and reconstruction activities and follow up measures on the weaknesses stated in the audit report.



## **2. AUDIT REPORT ON DISASTER-RELATED AID MANAGEMENT AND ACCOUNTABILITY IN EMERGENCY RESPONSE PHASE**

Pursuant to Law Number 15 of 2004 and Law Number 15 of 2006, the Audit Board of the Republic of Indonesia (BPK RI) has conducted audit on the management of the emergency response phase after earthquakes in Provincial Government of SB. This audit is intended to assess:

- whether or not disaster management and funding process during emergency response phase have complied stipulated regulation
- whether or not disaster management by Central Government and related parties was appropriate in the aftermath of earthquake
- whether or not the organization, task, function, coordination, receipt, and distribution of aid has been sufficient
- whether or not aid recording and reporting during emergency response have been sufficient and reflect updated condition

The audit scope covers Central Government's roles and efforts in managing disaster in the aftermath of earthquake in Provincial Government of SB, the management of aid/fund received, private sectors and NGOs/INGOs roles during emergency response phase and early recovery.

The compliance audit was carried out based on 2007 State Finance Audit Standards (SPKN) and 2008 Audit Management Manual (PMP) as guidelines.

The audit result by sampling in the Provincial Government of SB, City Government of Pad and Par, District Government of PP and A revealed that:

- 1) The existence of supporting regulation in disaster management has not been sufficient.
- 2) National Disaster Management Agency has not built sufficient coordination with related parties during emergency response phase.
- 3) Aid/fund collection, receipt, and distribution conducted by private collector units are not under control.
- 4) Provincial Government of SB, District Government of A and PP, and City Government of Par have not established local disaster management agency as ordered by law.
- 5) Need assessment process and aid/fund distribution are not conducted in timely manner and inaccurate.
- 6) Emergency infrastructure building for stalls in the City Government of Pad has not complied stipulated law.

Based on those points, BPK RI concluded that disaster-related aid management and accountability in emergency response phase in the aftermath of earthquake affected some regions in the Provincial Government of SB have not complied stipulated law and regulation.

Due to the above conclusion, BPK RI recommends National Disaster Management Agency to review policies regarding emergency response activities and build coordination with local governments to follow up measures on the weaknesses stated in the audit report.

## **Appendix 13**

### **Acronyms and abbreviations**

**ADB** – Asian Development Bank

**CRED** - Centre for Research and the Epidemiology of Disasters

**EM-DAT** - International Emergency Disasters Database

**ICRC** – International Committee of the Red Cross

**IFRC** – International Federation of Red Cross and Red Crescent Societies

**IOM** – International Organization for Migration

**INGO** – International Non-Governmental Organisation

**NGO** – Non Governmental Organization

**OECD** – Organisation for Economic Cooperation and Development

**SAI** – Supreme Audit Institution

**UN** – United Nations

**UN DAC** - United Nations Disaster Assessment and Coordination

**UN ISDR** – United Nations International Strategy for Disaster Reduction

**UN OCHA** – United Nations Office for the Coordination of Humanitarian Affairs

**US FEMA** - United States Federal Emergency Management Agency

**WHO** – World Health Organisation

**WMO** – World Meteorological Organisation

## Appendix 14

### Glossary

*(This glossary does not repeat terms defined in the ISSAI 1003, Glossary of terms to the INTOSAI Financial Audit Guidelines).*

**Aid:** Voluntary transfer of resources from one country to another.

**Anti-fraud and corruption strategy:** Outlines the commitment to minimising the risk of loss to the organisation resulting from fraud and corruption.

**Audit procedures:** Techniques used by the auditor in gathering audit evidence to substantiate the conclusions of the audit. Examples of audit procedures in financial audit are observing assets to verify existence and amount, collecting independent confirmations from external parties and evaluating internal control. Audit procedures are indicated in the audit programme.

**Audit process:** An audit process is a review of an entity's operating mechanisms in line with the applicable laws, regulations and standards. It follows a sequential order of steps by the auditor in the examination of the records. The audit process may vary depending upon the nature of the engagement, its objectives, and type of audit assurance desired. The process includes understanding the environment, conducting auditing procedures and tests, appraising the audit results, and communicating the results to interested parties.

**Bilateral aid:** Aid provided directly by a donor to an aid recipient country.

**Building code:** A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

**Collusion:** A secret agreement between two or more individuals for a deceitful or fraudulent purpose. This is one of the most difficult types of fraud to expose.

**Contingency planning:** A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

**Co-ordinated audit:** A co-ordinated audit is either a joint audit with separate audit reports to the SAI's own hierarchy or legislature or a parallel audit with a single audit report in addition to the separate national reports.

**Corruption:** The abuse of entrusted power for private gain. Corruption usually comprises illegal activities, which mainly come to light only through audits, investigations, scandals or prosecutions.

**Deterrent:** Fraud and corruption deterrence is the proactive identification and removal of the causal and enabling factors of fraud and corruption. Visible activity by auditors can act as a deterrent to potential perpetrators of fraud and corruption.

**Development aid:** Official financing administered with the promotion of the economic development and welfare of developing countries as the main objective.

**Disaster:** A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

**Disaster-related aid:** Aid provided to help people, who are victims of a natural disaster or conflict, meet their basic needs and rights. The aid can be to fund disaster-preparedness measures or activities arising as a consequence of disasters.

**Disaster management:** The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies, and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards, and to bring back life (rehabilitation and reconstruction)

**Disaster management cycle:** Shows the sequence of events related to the organisation and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies in order to lessen the impact of disasters. It comprises a pre-disaster phase and a post-disaster phase, including activities of mitigation, preparedness, emergency response/relief, rehabilitation, and reconstruction.

**Disaster risk:** The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

**Disaster risk management:** The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

**Disaster risk reduction:** The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

**Donor:** Party which donates money, goods, or services voluntarily.

**Early warning system:** The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

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

**Emergency phase:** The phase immediately following the occurrence of a disaster. It covers emergency response and relief activities and the first rehabilitation activities. It can last from a few days to several months, depending on the nature of the disaster and on the circumstances and type of the disaster.

**Emergency relief:** Financial assistance, goods or services made available to individuals and communities that have experienced losses due to disasters.

**Emergency response:** The efforts made to mitigate the impact of a disaster on the population and the environment.

**Ex-post control:** The audit carried out by SAIs or other statutory external auditors of the accounting records, the underlying transactions and/or issues of economy, efficiency and effectiveness of the use of aid.

**Fraud investigation:** Process followed to determine whether fraud has taken place and to gather evidence if fraud has occurred.

**Geographical Information Systems (GIS):** a computerised system that facilitates data entry, storage, analysis and presentation especially for spatial (geo-referenced) data.

**Global Positioning System:** Global Navigation Satellite System (GNSS) developed by the United States Department of Defence

**Hazard:** A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property loss, loss of livelihoods and services, social and economic disruption or environmental damage.

**Humanitarian aid:** Humanitarian aid is aid and action designed to save lives, alleviate suffering and maintain and protect human dignity during and in the aftermath of emergencies. The characteristics that mark it out from other forms of foreign assistance and development aid are that it is intended to be governed by the principles of humanity, neutrality, impartiality and independence and it is intended to be short-term in nature.

**Individual disaster response:** The primary actions taken immediately by those on the ground following the disaster to secure the safety of individuals, including rescue, the administration of first aid and the provision of emergency supplies.

**Joint audit:** A coordinated audit in which key decisions are shared. The audit is conducted by one audit team composed of auditors from two or more autonomous auditing bodies who usually prepare a single joint audit report for presentation to the respective hierarchies or legislatures.

**Man-made disaster:** A disaster that is caused by man-made hazards, such as negligence, or failures in the system.

**Mitigation:** The lessening or limitation of the adverse impacts of hazards and related disasters.

**Multilateral aid:** Aid channelled via an international organisation active in development (e.g. World Bank, UNDP) to an aid recipient country.

**National Integrity System:** The sum of all our institutions, laws, and efforts in stopping corruption.

**Natural disaster:** A disaster that is caused by natural hazards, for example earthquakes, tsunamis, volcanic eruptions, flooding, crop failure, etc.

**Parallel audit:** A coordinated audit for which the decision is taken to carry out similar audits with shared methodology and audit approach. The audit is conducted more or less simultaneously by two or more autonomous auditing bodies, but with a separate audit team from each body, usually reporting only to its own hierarchy or legislature and only on matters within its own mandate.

**Preparedness:** The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

**Prevention:** The outright avoidance of adverse impacts of hazards and related disasters.

**Public awareness:** The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

**Reconstruction phase:** The phase during which populations work towards full resumption of services plus preventive measures.

**Recovery:** The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

**Red flags:** Indicators or warning signs of fraud and corruption.

**Rehabilitation phase:** The restoration of basic services and functions which begins shortly after disaster strikes and continues until the reconstruction phase is underway.

**Resilience:** The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

**Response:** The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

**Technological hazard:** A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Vulnerability:** The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

*Sources: This glossary was compiled from the following main sources:*

- ✓ *UNISDR Handbook on terminology:*  
[http://www.unisdr.org/files/7817\\_UNISDRTerminologyEnglish.pdf](http://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf)
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