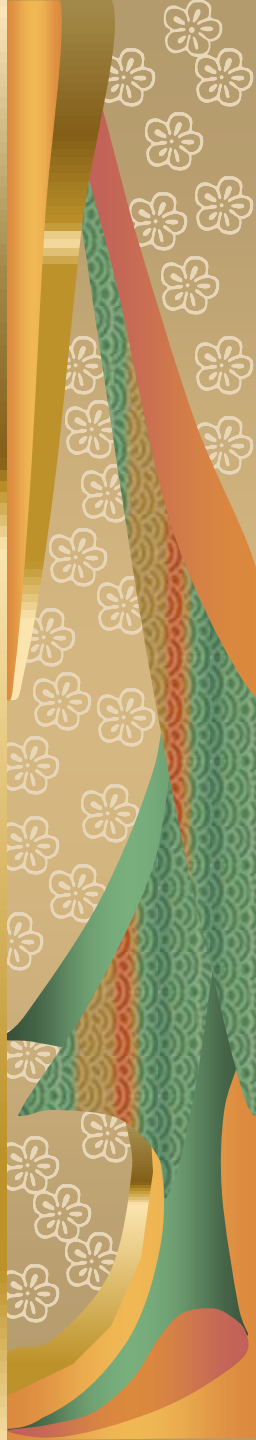
Methods and sources of data acquisition for auditing disaster-related aid

Mr. Denys Nikitin,

Deputy Director of the Department,

The Accounting Chamber of Ukraine



- **Audit methodology** is the set of techniques developed for data collection and analysis. When risks are assessed, audit questions are formulated.

- Answering these questions requires data and SAIs have to decide which data are needed to answer the questions and which is the best methodology for gathering these data from which of the available sources.

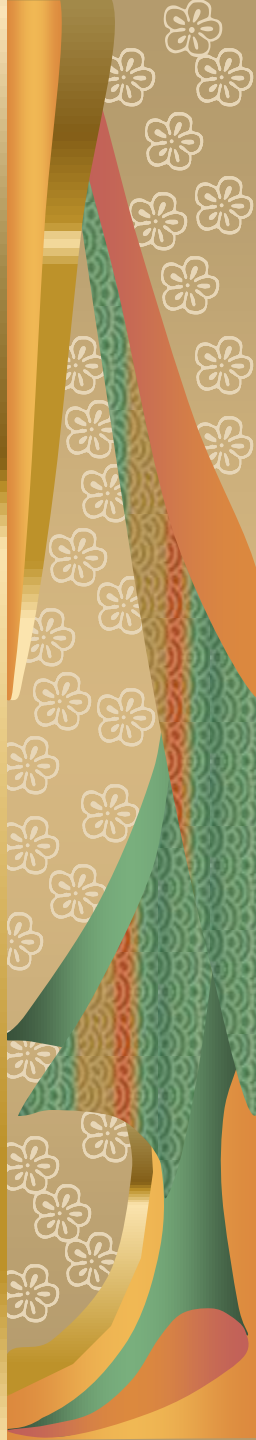
- INTOSAI Auditing Standards state that to support the auditor's judgment and conclusion regarding the activities under audit, competent, relevant and reasonable evidence should be obtained.

For assessing the risks relating to disasters the following information might be sought:

- which areas are most vulnerable to particular hazards?
- how vulnerable are people who live there/how vulnerable is the critical infrastructure in that area?
- what is the likelihood of an earthquake with epicentre X and strength Y / that a volcano will erupt with certain strength / that a cyclone with force Z will hit a certain location, etc?

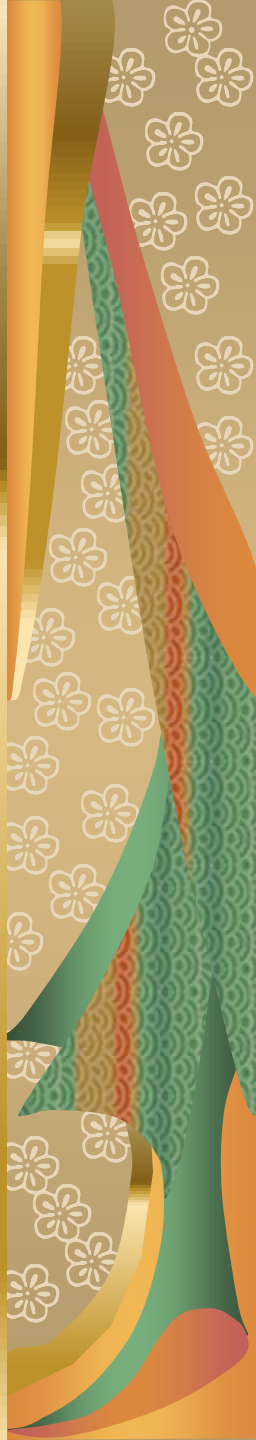
To assess the risks associated with the operational management/ implementation of disaster management, the following information might be sought:

- who should be responsible for what?
- who should cooperate with whom?
- what information is needed to plan and coordinate?



The objectives of gathering information and data are as follows:

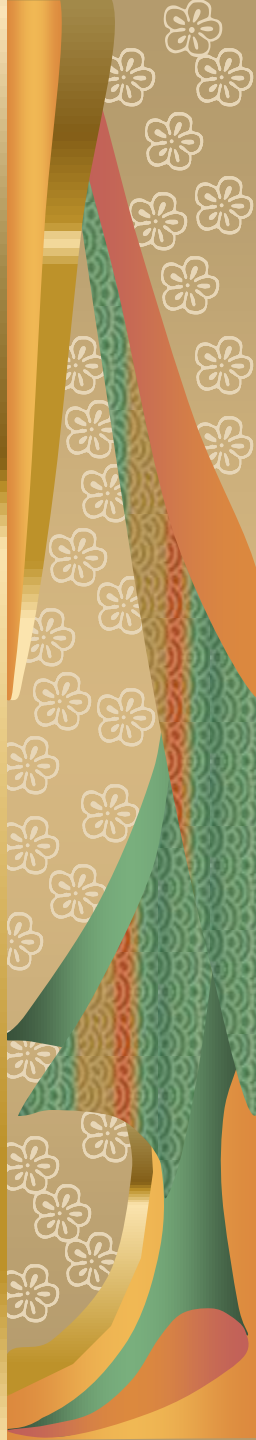
1. • to understand the government's response to the disaster;
2. • to identify potential weaknesses in the government’s response – to be investigated further during the audit;
3. • to collect documentation on the legal and regularity framework;
4. • to document disaster-related aid flows and collect other relevant information which can be used to make choices regarding which approach to follow.



Some of the methods used for collecting and analysing data in performance auditing are:

- ***File examination.*** Auditors should gather and analyse relevant guidance, protocols, legislation, disaster planning documents and post-event reports at all levels of government, especially those of the bodies responsible for disaster management.

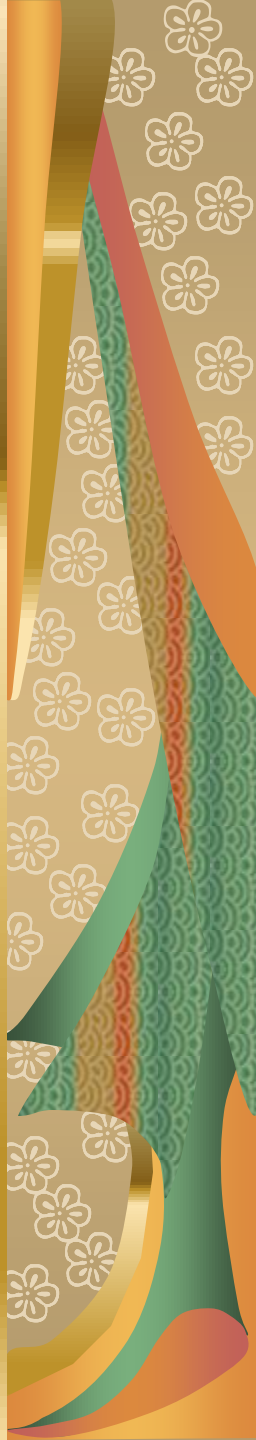
- ***Site Visit.*** Auditors may make site visits to observe and evaluate the work of relevant institutions included in the audit scope and interview key local individuals.



Some of the methods used for collecting and analysing data in performance auditing are:

- ***Interview.*** Auditors may envisage direct interviews with individuals designated to play a key role in minimizing risks in the event of a disaster.

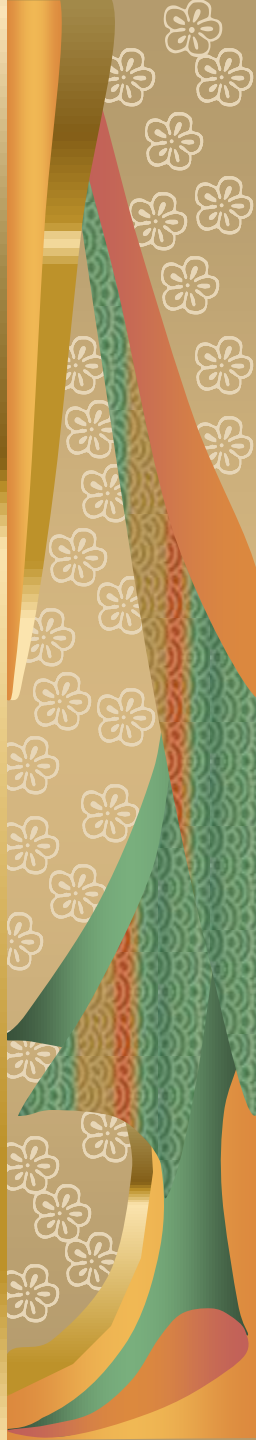
- ***Before & After Analysis.*** The adequacy and success of disaster risk reduction activities can be evaluated by auditors by visiting the site of the most recent major disaster and looking at the results of disaster risk reduction.



Some of the methods used for collecting and analysing data in performance auditing are:

- ***Surveys/Questionnaire.*** Auditors may employ the use of surveys for evaluating the activities of community preparedness and training and to collect similar data from a large number of different institutions, such as ministries, municipalities, fire brigades and provinces

- ***Literature Review.*** Reviewing articles, studies, other audits reports and evaluations concerning disaster risk reduction



Some of the methods used for collecting and analysing data in performance auditing are:

- **Assessment of the adequacy of management tools.**

- **Risk assessments**, including hazard maps, disaster loss databases, vulnerability assessments and exposure calculations

- **Sampling.** Since it is rarely feasible to test the whole of the disaster risk reduction audit area, sampling methods should be used. GIS and/or other similar tools help the auditor to select samples.

Governments use **Geographic Information Systems** (GIS) as a source of information. These can be used to integrate, store, analyse, manage and present data that are linked to locations.

Geographical Information System (GIS) is a system of data collection, storage, analysis and visualizing of spatial (geo-referenced) data and related information about respective objects.

Main sources of geospatial information are:

- statistics and databases of public entities;
- remote sensing (including, **GOOGLE EARTH**);
- voluntary geospatial information;
- Global Positioning System (GPS).

Geospatial information is successfully used in such spheres as:

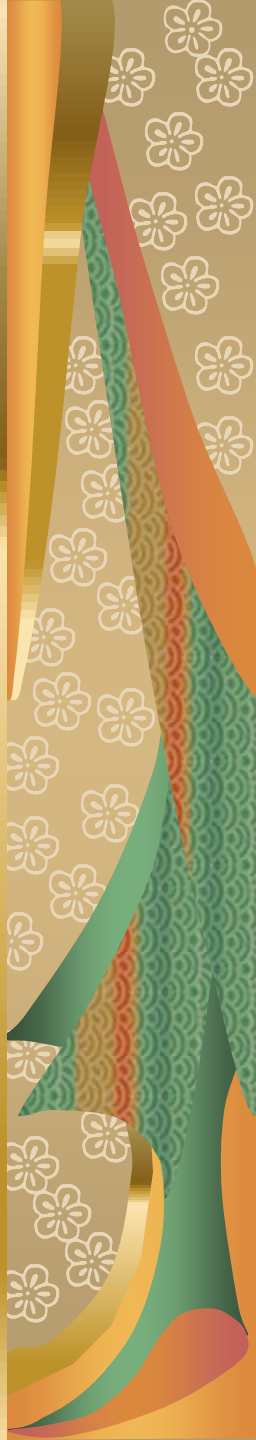
- natural resource management;
- environmental protection;
- education;
- healthcare;
- evidence in judicial and administrative proceedings.

Geospatial information is used in all the activities and stages of disaster management:

- assessing disaster risks;
- taking measures to reduce disaster risks;
- predicting and early warning;
- assessing damage and needs;
- executing relief and rescue operations.

The Accounting Chamber of Ukraine testing draft standards 5500 in our audit activity, as well as taking part in international audits, began to use geo-spatial information in conducting national audits **with the aim to**:

- obtain additional audit evidences;
- increase visualization of presenting audit findings.



With the aim of obtaining additional audit evidences we used GIS during next audits:

- utilization of budgetary funds allocated to prevention and consequences elimination of wildfires;
- utilization of budgetary funds allocated to establishment and development of national parks.

So, to obtain **additional audit evidences** the **Google Earth-Earth Planet platform** was used in conducting abovementioned audits.

Potentialities of **this software was successfully applied** during:**monitoring and assessment.**

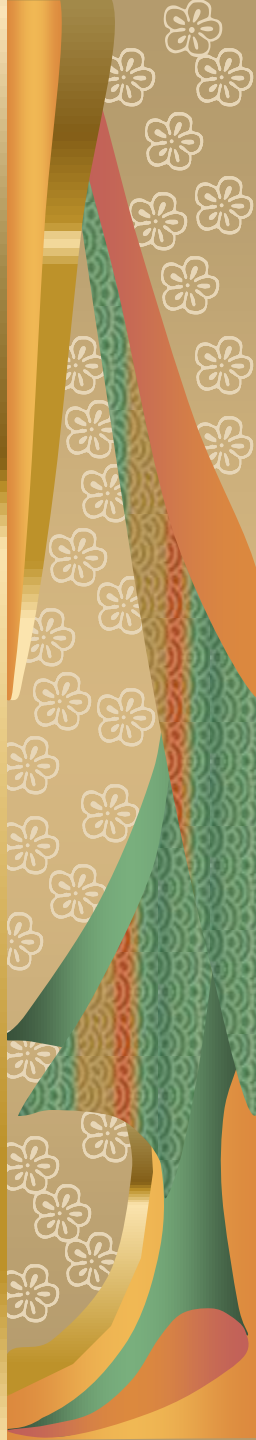
There are some difficulties in application of this approach for presentation of the audit findings caused by availability of necessary resources, particularly:

- high-quality maps;
- skills in working with large databases;
- skills in working with graphic editors;
- accessibility and availability of the necessary information; etc.

Summing up, it should be noted that the ISSAI 5540 describes in detail the possibility of use geospatial information at all stages of the audit.

At the same time, this document has recommendatory character and summarizes the possibilities and cases of usage geospatial information in the audit activity.

Generally, the accumulation of experience of the use of such information by SAIs will allow to test the standard in more detail and make suggestions to improve it.



Thank you for attention!