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## Security and resilience — Emergency management — Guidelines for public warning

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ISO/FDIS 22322

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 292, *Security and resilience*.

This second edition cancels and replaces the first edition (ISO 22322:2015), of which it constitutes a minor revision.

The changes are as follows:

- the title has been updated;
- references to guidance in other relevant standards have been added;
- the Bibliography has been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Disasters, terrorist attacks and other major incidents need an effective incident response in order to save lives, mitigate harm and damage. Emergency response organizations need to respond quickly to a developing emergency situation. Time to communicate is limited and often a specific message involving practical action is to be disseminated to a large group. Simple procedures that send the message efficiently and create the desired response can save lives, protect health and prevent major disruptions.

The protection of people at risk from harm is an important part of an incident response. Public warning enables response organizations to alert their responders and allows people at risk to take safety measures to reduce the impact of incidents. Effective public warning consisting of alert and notification can prevent panic reactions and support response organizations in optimizing their responses and mitigating the impact.

Effective incident response needs a structured and pre-planned public warning. Public warning is based on two functions: hazard monitoring and warning dissemination. It is also necessary to establish a mechanism for risk identification, hazard monitoring, decision-making and warning dissemination, and to evaluate and improve.

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# Security and resilience — Emergency management — Guidelines for public warning

## 1 Scope

This document gives guidance on developing, managing and implementing public warning before, during and after incidents.

This document is applicable to any organization responsible for public warning. It is applicable at all levels, from local up to international.

Before planning and implementing the public warning system, the risks and consequences of potential hazards are assessed. This process is not part of this document.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22300, *Security and resilience — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22300 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

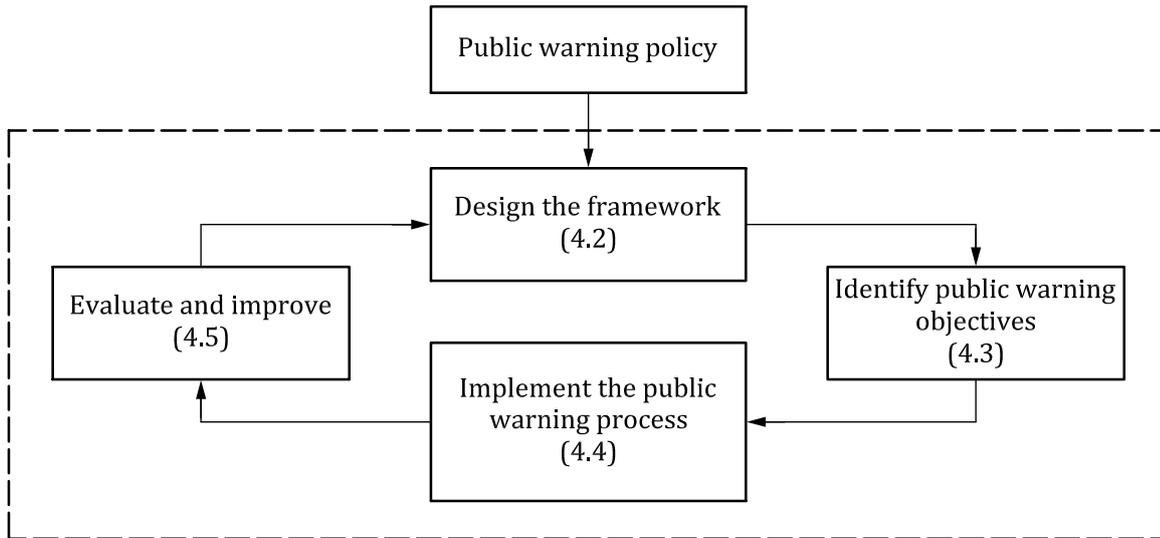
- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Public warning system

### 4.1 General

The organization should establish, document, implement, maintain and continually improve a public warning system (see [Figure 1](#)) based on a public warning policy.

NOTE 1 This document does not describe the public warning policy.



**Figure 1 — Overview of the public warning system**

The organization should assess the potential hazards that can occur within a defined area and the level of potential risk each presents. The results of this assessment should determine the type of public warning that can be required and should be documented for future reference. The public warning system developed by the organization should:

- a) provide the framework for setting and reviewing public warning objectives;
- b) be planned in advance;
- c) be documented, implemented and maintained;
- d) have the human and technical resources to plan, implement, maintain and improve the public warning system;
- e) be communicated to all persons working for or on behalf of the organization;
- f) provide suitable training for responders;
- g) be available and communicated to the public generally and especially to the people at potential risk;
- h) involve appropriate consultation with community representatives (this may include, but not be limited to, community groups, mutual aid networks, political representatives, charities and non-governmental organizations (NGOs), trade, and business associations) or bodies concerned with public interests;
- i) include a commitment to continual improvement.

NOTE 2 ISO 22320 provides guideline for incident management to any organization involved in responding to incidents of any type and scale.

## 4.2 Design the framework

### 4.2.1 General

The organization should design a framework based on two functions: hazard monitoring and warning dissemination. The responsibility for issuing public warning should be assigned to the interested



parties who are individual experts, groups of experts, or organizations in the private or public sectors at the local up to the international level. Those who contribute to both functions should:

- a) be familiar with the capabilities and capacities of the public warning system so that relevant, accurate, reliable and timely warnings will be disseminated;
- b) make continuous effort to raise and maintain public awareness (see [Annex B](#));
- c) specify safety actions within the warning.

#### 4.2.2 Hazard monitoring function

Hazard monitoring is based on the risk assessment conducted to determine the hazards to be monitored.

Those involved in the hazard monitoring function are responsible for the following:

- a) understanding hazard monitoring operations from local up to international agencies and having channels to communicate with them;
- b) ongoing monitoring of identified risks within a defined area and within their range of expertise;
- c) providing early information on emerging risks;
- d) providing information about changes to the risk level;
- e) defining the emergency measures to be taken;
- f) notifying the warning dissemination function;
- g) cooperating with public authorities to enhance public awareness.

The monitoring should be based on scientific data and/or credible evidence.

NOTE The hazard monitoring function monitors potential risks that the hazards present.

#### 4.2.3 Warning dissemination function

The warning dissemination function is responsible for the following:

- a) promptly activating procedures for disseminating public warnings;
- b) transforming evidence-based information into notification and alert messages;
- c) specifying procedures for disseminating warning messages;
- d) considering the information needs of the people at risk and the diverse range of vulnerable groups;
- e) coordinating with other organizations accountable for public warning;
- f) promptly disseminating public warnings.

#### 4.2.4 Responsibility for authorizing public warning

The organization should identify the individual or group responsible for authorizing public warning as determined by national or local regulations or the organization's own responsibility structure. Authorization should be based on the requirements of the public warning policy and objectives, and the input from the hazard monitoring function and warning dissemination function, as well as other relevant sources. A trained and nominated individual or group of individuals should be assigned to use hazard monitoring information to make timely, relevant and accurate decisions about public warning dissemination.

### 4.3 Identify public warning objectives

The organization should identify objectives for the public warning system based on the public warning policy. These objectives should be considered when using the information from the hazard monitoring function to identify the people at risk and the potential impact of an incident on an area.

### 4.4 Implement the public warning process

The organization should implement a public warning process in accordance with [Clause 5](#).

The organization should establish effective inter-organizational cooperation and coordination between the hazard monitoring function and warning dissemination function, as well as among other relevant interested parties including community groups.

All operational activities within the public warning process should be logged in a retrievable format.

### 4.5 Evaluate and improve

The organization should evaluate the performance of hazard monitoring and warning dissemination functions on a regular basis. The findings from the evaluation should be used to identify potential improvements.

Evaluation processes should be conducted at regular intervals not exceeding five years.

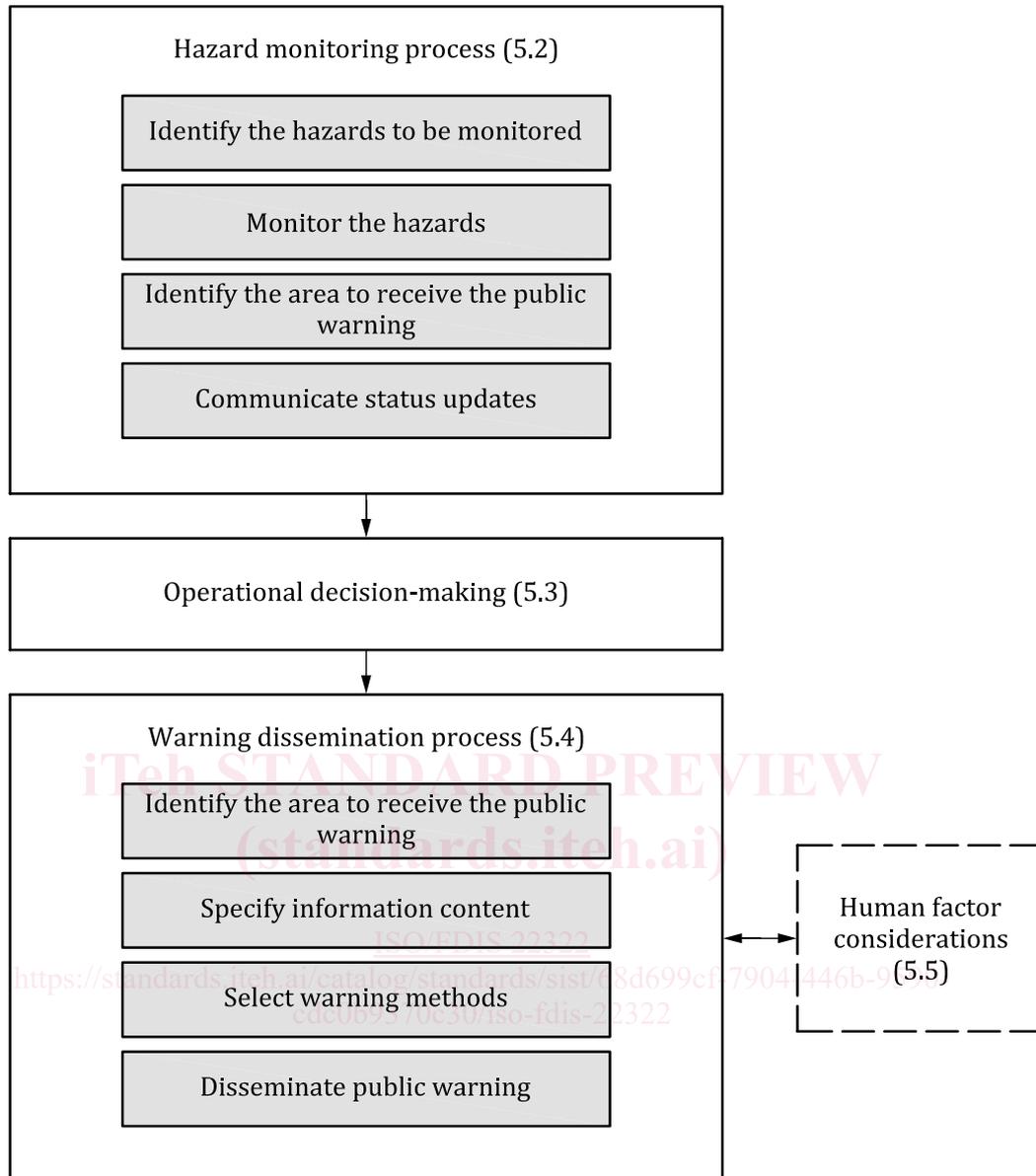
The warning dissemination function should evaluate the content and timeliness of notifications and alerts, as well as the choice of communication channels.

Evaluation processes should be activated whenever the people at risk have not taken the expected safety actions.

## 5 Public warning process

### 5.1 General

The public warning process should include all the elements shown in [Figure 2](#).



**Figure 2 — Overview of the public warning process**

## 5.2 Hazard monitoring process

### 5.2.1 Identify the hazards to be monitored

The hazard monitoring function should:

- a) identify and list relevant hazards;
- b) establish indicators to be used to monitor the status of a hazard;
- c) determine the science-based or credible evidence-based criteria for issuing a public warning;
- d) identify the criteria for issuing a notification, an alert and an all clear;
- e) determine the criteria for each area(s) of risk.