Common basic module
CSA Rule Engine - Contingency Planning Builder

Common CSA Module

CSA Rule Engine - Contingency Planning Builder

Contingency plans can be incorporated in the CSA tool as pre-defined static document that correlate to certain pre-defined hazard scenarios. Yet it would make sense to develop interactive contingency plans. The interactivity can be applied to geographical data (as interactive maps) and to measures catalogue (interactive check-list) and to additional explanations of measures (extended measures' descriptions).

Maps (spatial data), measures catalogues and additional material can be sensibly connected in a CSA tool. A net can be built upon links between data from different data groups. CSA tool should enable different data queries.

A basis for the CSA module is a database that would contain various data. A general overview of the acquired data is given in Table 1.

Table 1: Database contents

SPATIAL DATA	CATALOGUES	ADDITIONAL MATERIAL
1. Hazard 2. Vulnerability 3. Additional hazard 4. Forces & resources 5. Intervention	1. Catalogue of general measures – (Standard) Operational Procedures → related to a category of a feature which is placed in the spatial data base 2. Catalogue of specific measures → related to a particular feature which is placed in the spatial data base 3. Catalogue of criteria → related to a general or to a specific measure • condition given with numerical values (trigger values, threshold values) • condition given in textual description (trigger situation)	1. General pictorial material → related to a category of a feature *or* related to a general measure • schemes; drawings; pictures 2. Specific pictorial material → related to a particular feature *or* related to a specific measure • snapshots; designs; schemes 3. General film material → related to a category of a feature *or* related to a general measure • instructional films 4. Specific film material → related to a particular feature *or* related to a specific measure • film documenting past events; computational simulation of a flood wave propagation

Spatial data

Further descriptions of all spatial data to be included in the CSA database are given in Table 2.

Table 2: Summary of spatial data needed for the CSA tool (an interactive intervention map)

HAZARD	VULNERABILITY	ADDITIONAL HAZARD	FORCES & RESOURCES	INTERVENTION
hazard area	vulnerable entities	indirect hazard sources	civil protection and rescue forces & resources	foreseen intervention measures
spatial extent of hazard area; intensity classes in the natural hazard zones	locations of vulnerable facilities and sites, indicating those of greater vulnerability	locations of facilities and sites that poses some hazard potential and might cause additional damage and danger	all human and material resources, facilities etc. that are at disposal for protection and rescuing in case of a hazardous event (also contractors)	needed measures that can be concluded in advance on the basis of hazard, vulnerability and additional hazard and should be executed by "forces"

Structures relevant for protection and rescue

Some structures are relevant for protection and rescue because of their high sensitivity respectively vulnerability (e.g.: kindergartens, schools, homes for the aged etc.). Some are relevant because of their active role in crisis management (e.g. civil protection headquarters, fire brigade, emergency shelter etc.). Hospital is an interesting example of a structure that is very vulnerable (if it had to be evacuated a lot of help would be needed) and at the same time it can be active by provision of medical care to wounded people.

Attributes of features in the database

To strengthen the informative role of the CSA tool it is wise to expand the spatial database by including several data – as additional attributes.

List of attributes for data group forces & resources (mainly these attributes will refer to an accountable institution or person):

- Type of institution (standardized classification should be used)
- Name of institution/name of responsible person
- Institution section
- Contact information
    - Contact person of the institution
    - Spare contact person (deputy)
    - Person's position, duty
    - Mobile phone
    - Pager number
    - Phone at work
    - Phone at home
    - E-mail

- Location (address)
- Quantity (quantities) – number of people (e.g. fire fighters) or items (e.g. dredging machine excavators) at disposal

Not always all of this attributes will be available, for some features they are even not reasonable or logical. In this case attributes should be left blank.

List of attributes for a structure:

- Category
- Short name
- Location (address)
- Contact information (when reasonable)

Extract reports

List of extract reports:

- List of all activities that are supposed to be carried out in the municipality or region
- Extract reports for structures, facilities and sites
- List of all activities that should be carried out for each responsible (individual or institution)

The contents to be included in the *extract report* for a structure:

- Name of intervention measure - general
- Intervention measure, warnings description – general for this type of structure; as a Standard Operational Procedure (SOP) [short / in detail]
- Intervention measure, warnings – specific for this structure [short / in detail]
- Threshold values respectively criteria that indicates when the measure should be initiated
    - Given with numerical values or
    - Given in textual description
- Picture of the structure
- Picture(s) with additional explanation on what has to be done
- Map containing crucial locations (the structure itself, location of responsible institution)
- Person or institution responsible for the measure
    - Name of the contact person
    - Phone number(s) or pager number of the contact person
    - Address of the responsible (person or institution)