

Number	AD6
Indicator name	Proportion of the number of critical objects in the risk area endangered by torrential rains from the total number of critical objects
Area	A
Indicator definition	The share of the number of critical objects (energy, telecommunications, transport – bridges, underpasses –, public administration, cultural monuments, etc.) in the risk area endangered by torrential rains in the total number of these objects. The risk area is determined on the basis of rainfall runoff models with higher intensities in the area.
Indicator unit	%
Key words	critical infrastructure, flash floods
Reason for tracking and usability	Damage to any building indicates potential socio-economic damage, but also endangers human lives. However, some types of buildings are of special importance from the point of view of flood protection due to the nature of the construction or the function of the building or operation in it. Critical infrastructure facilities are those parts of the infrastructure whose disruption or destruction would, according to sectoral and cross-cutting criteria, have serious adverse consequences for the realization of the economic and social function of the city/city district/municipality, and thus for the quality of life of the inhabitants in terms of protection of their lives, health, safety, property and environment, while being particularly vulnerable to heavy rainfall and their impacts.

Completeness, representativeness, validity

From the point of view of the threat of the area by torrential precipitation, the data represent the whole indicator, but it depends on the availability and quality of the input data. If the area is also endangered by river floods, it is appropriate to supplement the indicator with the share of the number of critical infrastructure objects in the risk area (flood area Q100 or Q1000) endangered by torrential rainfall in the total number of these objects (see method sheet AD10).

The risk area, endangered by torrential rainfall, is obtained under ideal conditions by means of hydrological GIS modelling, the quality of which depends on the input data and on the accuracy of the model used. The limit may be the absence of a precipitation-runoff model. Then it is necessary to select the risk area by expert estimation, in which there is a risk that not all potentially endangered (flooded) places will be identified.

Description of data processing

Penetration of rainfall runoff maps and objects of critical infrastructure (CI) – it is necessary to create a map and analysis in GIS.

Data source

Critical infrastructure objects – Spatial plan of the city, map layers of the city/city district/municipality; rainfall runoff map – based on hydrological modelling.

Tracking frequency

Depending on changes in the physical structure of the area (new construction, etc.) – 1 x 2 years (or according to the frequency of monitoring Klimasken).

Urban influence

By its decisions, the city/city district/municipality can support, favour and apply adaptation measures to capture and slow down the outflow of extreme precipitation in its territory. The city/city district/municipality is able to restrict or prohibit the construction of critical objects in the area endangered by flash floods through a zoning plan or through its generally binding regulation (GBR). The city/city district/municipality can also implement flood protection measures outside the watercourse, which can help protect critical infrastructure from flash floods.

Presentation method

The results will be presented in a uniform Klimasken framework through a five-point scale:

Responsibility

Processor Klimasken, city/city district/municipality
