

What to know and what to do RIGHT AWAY



What do you need to know?

Knowing if the area where you live, work or stay is exposed to flood risk helps to prevent and better deal with emergency situations. Remember:

- it is important to know what are the typical floods in your territory
- if floods have affected your territory in the past, they are likely to occur also in the future
- in some cases it is difficult to determine precisely when and where floods will occur and you may not be alerted in time
- water can rise suddenly, even of one or two meters in a few minutes
- some places get flooded before others. At home, the most dangerous areas are cellars, basements and ground floors
- outdoors, underpasses, areas close to banks and bridges, roads with steep slopes and in general all the lower areas are most at risk
- the force of water can also damage buildings and infrastructure (bridges, embankments, dikes) and the most vulnerable ones could fail or suddenly collapse.

What do you need to do?

You too, with simple actions, can help reduce the risk of flooding.

- Respect the environment and if you see bulky waste abandoned, clogged drains, water courses etc. partially obstructed, report it to the Municipality
- Ask your Municipality about the emergency plan to find out which areas may get flooded, escape routes and safe areas of your city: if there is not, ask for it to be prepared, in order to know how to behave
- Pinpoint the tools that the Municipality and the Region uses to send out the alert and stay constantly informed
- Make sure that your school or workplace receives the alert and has an emergency plan for flood risk
- If people of your family need special assistance, verify that the local emergency plan provides for specific measures
- Avoid storing valuables in the cellar or in the basement
- Make sure that in case of need the highest floors of your building are easily accessible
- Keep copies of important documents, a first aid kit, a flashlight, a battery-operated radio at home and make sure everyone knows where they are





WHAT IS A FLOOD?

A flood is the overflowing of an area where normally there is no water. A flood originates mainly from heavy or prolonged rains. Rainfalls, in fact, can have significant effects on the water load of rivers, streams, canals and sewers.

A stream can swell up and overflow, i.e., break the banks, flooding the surrounding areas. Not all of the streams, however, appear and behave in the same way. Torrents, for example — widespread in southern Italy — become rivers only when it rains a lot. With decreasing rainfalls, water level can go down and leave the riverbed dry. Other rivers cannot be seen as they are artificially covered for long stretches. In this case, as for sewers, the inability to contain excess rainwater can cause flooding.

In general, heavy rainfalls have more serious effects in urban centres. Not only because of the concentration of people, facilities and infrastructure, but because in these environments the action of man has often changed the territory without complying with building regulations.

HOW DO I KNOW WHICH AREAS ARE AT RISK?

The risk of flooding is widespread in Italy. The areas likely to be affected by the overflowing of rivers are large, identified by the Pai — Hydrogeological Structure Plan — created by the Authorities responsible for the Basin or by the Region. The Municipality shall prepare the emergency plan taking into account the information of Pai and of other possible studies on areas at risk. The Municipal Plan must also indicate which areas may get flooded because of small rivers, artificially covered streams, rivers and sewers, including potentially critical situations in correspondence of embankments, bridges, underpasses and narrowing of watercourses.

CAN FLOODS BE EXPECTED?

The bigger the stream, the greater the ability to forecast. The raising of the water level in a large river – like the Arno River, the Tiber or the Po-is in fact a phenomenon that occurs slowly, taking from several hours to several days. This allows a constant monitoring and especially preventive actions. In contrast, the level of the water of small rivers or streams

can grow very quickly, with reduced intervention times. In these cases — as for the rivers, artificially covered streams and sewerage — it is not always possible to predict flooding, let alone when and where they will occur. Weather forecast, on which flood forecasting depend, indicate only the likelihood of precipitation in a large area, not the certain of occurrence in one place or another. Even the flooding caused by broken banks are difficult to predict.

WHAT CAN BE DONE TO REDUCE THE RISK OF FLOODING?

In addition to the regular maintenance of waterways and sewerage systems, it is possible to carry out works to decrease the likelihood of a flood or to reduce its impact (for example, the construction of banks). However, the effects of flooding are reduced primarily by measures that prevent or restrict the urban expansion in areas subject to floods. Other tools are the early warning systems that allow the activation of the local civil protection, emergency planning and simulation exercises. Finally, the activities of public awareness: to be aware and prepared is the best way to live with the risk.

HOW DOES THE WARNING WORK?

The forecasts of weather phenomena and their effects on the ground are collected and shared by the network of Functional Centres, cornerstone of the national early warning system operated by the Department of Civil Protection, the Regions and Autonomous Provinces. Based on this information, each Region and Autonomous Province assesses the critical situations that may occur within its own territory and, if necessary, send the alerts to local systems of civil protection. It is then up to the Mayors to activate the emergency plan, inform citizens on situations of risk and deciding what actions to undertake to protect the population. For further information visit the "Hydro-meteorological Alert" on www.protezionecivile.gov.it

