

Stocks

- Keep sufficient drinking water and process water in stock
- Food supply and other commodities for several days
- Candles, matches and torches
- Have a battery-driven radio available (auxiliary batteries)
- Consider alternative cooking and heating possibilities (barbecue or camping cooker/ heating device and fuel)

Grounds

- Monitoring of close trees (windfall)
- Cut off branches from dense treetops
- Storm protection of sunblinds, roof covers, etc.

Heating

- Flood-proof arrangement of the heating system; if necessary, to be moved to the ground floor
- Protection against floating of tank systems in the house and the outdoor areas
- Connection of the control to enable emergency power supply

Considerations For The Planning Process

- Exposed areas in wind direction may require special safety measures
- Consideration of flood or flooding areas on nearby brooks and rivers
- Consideration of possible stream waters in the event of extreme precipitation on slopes and in depressions
- Provide for “white tub” or/and preventative flood protection measures
- Secured shelter areas within buildings
- Planning of surfaces or rooms for emergency stock
- Assessment of the regional situation and threat situation (earthquake zone, flood risk area, exposed wind direction)



Nothing must be left to chance when structural safety is at stake.



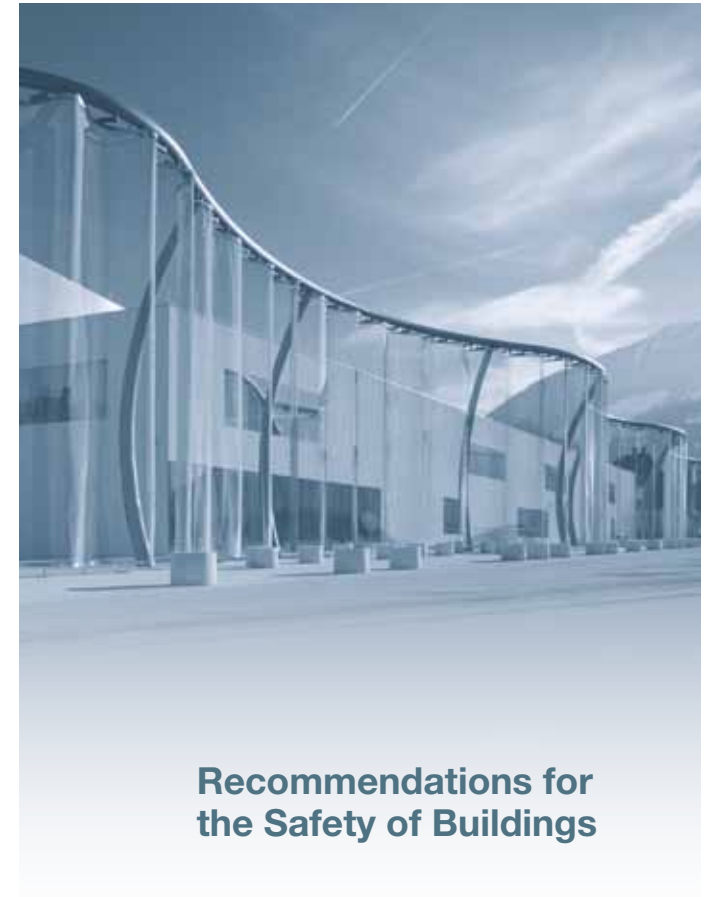
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Federal Office
of Civil Protection and
Disaster Assistance



**Recommendations for
the Safety of Buildings**

The Title Picture

shows how a building can technically but also decoratively be protected by a “protection curtain” of metal ring mesh against the impact of explosions (air pressure and splinter throw).

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Performance Potentials in Civil Protection



„My home is my castle...“

In a figurative sense, this English proverb means that one's own home provides protection and shelter against the adversities of nature or other negative influences. This is normally the case.

The highest degree of protection for people and animals, but also for all kinds of property, can only be found in buildings. People have confidence in the stability of buildings. They can hardly imagine that this protection suddenly does not exist any more. Whether the protection concerns residential houses, shopping centres, factory and office buildings or structural Critical Infrastructure plants such as, e.g., station buildings, power plants and water works, laboratories and research centres – the same principle applies to them all: "better safe than sorry!"

What Additional Stress Can Make A Building Insecure?

Not only more frequent extreme weather conditions due to climate change but also the longer-lasting break-down of the power, water and energy supply as well as of information and telecommunication systems can impair the safety of and in buildings.

Two examples illustrate this fact: actually, snow fall in winter should not be a problem. However, if, due to chaotic weather conditions for weeks on end, the breakdown of power supply and the collapse of supply structures, a house is permanently without electricity, water, light and heating, is it then still a "safe" home?

Rain is actually no problem either. However, without special preventative measures the building is unsecured, if due to extreme precipitation, suddenly massive flash floods are flooding garage, cellar, heating area, the power distribution system and the whole control network; not to mention the immense damage to household goods and subsequent damage.

Examples which stimulate to think about the actual safety of buildings.



Preventative Protection Of New And Old Buildings

Preventative planning and additional building measures can considerably increase the safety level. Through sustainable planning, the safety of new buildings is greatly improving. As old buildings are concerned, additional safety aspects can be taken into consideration, when energetically effective sanitation, rebuilding or modernisation measures are planned anyway. In the following, some aspects will be mentioned to which particular attention should be paid during the planning and execution process.

The list must never be seen as complete and can be extended by additional aspects, depending on the situation.

Regular monitoring of existing technical safety standards for buildings can reveal possible security holes and deficiencies. It is also important, however, to consider new and so far neglected dangers, such as, e.g., extreme precipitation and quick flood situations, tornados, heat and droughts and in some places also earthquakes. With regard to new buildings, possible future safety risks should be assessed and actively considered early enough, i.e. in the planning phase.

The "familiar" safety of a building or of an entire property can suddenly be subjected to a hard test – then there will be no time to make up for lost ground.

Roofing

- Safety of roofing through wind hooks and sufficient nailing
- In the event of storms, overlapping underlays provide additional protection against precipitation and flying snow
- Fastening, weighing and securing of the roof cladding against suction effect (flat roof)
- Securing through snow guards against roof avalanches
- Heated entries if there are pipes inside
- Securing of chimney covers

Roof structure

- Securing and additional fastening to prevent the roof from being taken off (ring beam)
- Continuous nailing and crosswise arrangement of wind braces

Sewage

- Double backwater valves on deeper floors
- Lifting system as an option in the event of flooding
- Pump sump on the lowest floor; if necessary, also in the outside door area of the ground floor
- Efficient submersible pump
- Sloping screed with ceramic tiles on all jeopardised floors

Electricity supply

- Continuous protection against overvoltage
- Sufficiently dimensioned lightning protection
- Consistent protection against false tensions (FI-protection)
- Complete separation of the circuit on jeopardised floors
- House connection, metre box and sub-distribution units flood-proof, if necessary to be moved to the ground floor
- Efficient small emergency power supply system with its own circuit (perhaps also accessible via a mobile device)
- Sufficient fuel supply

Insurance

- Review your insurance cover; there are many diverse choices available