



FLOOD GUIDE BY “LET’S TALK CLIMATE”

PREPAREDNESS AGAINST,
RESILIENCE TO,
PROTECTION FROM
FLOODS





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1 WHAT TO DO TO UNDERSTAND FLOOD RISKS?

LEARN ABOUT DIFFERENT FLOOD TYPES TO UNDERSTAND FLOOD RISKS AND THE SPECIFIC RISK AT CURRENT LOCATION.



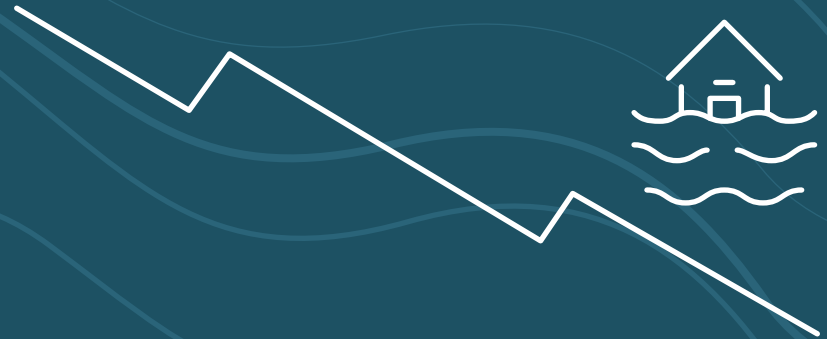
Flood-related terminology used by AFAD (Disaster and Emergency Management Presidency of Türkiye):

- Flood is the event of rising or overflowing of a body of water, covering what is generally dry land.
- Floods are grouped as slow onset flows, rapid onset flows and flash flows depending on their speed of development. On general terms, floods which develop in a week or a longer period of time are called slow onset floods, floods which develop in a couple of days are called rapid onset floods and floods which develop in hours are called flash floods. Depending on the place of onset, they are called coastal floods, urban floods, arroyo floods, dam/pond floods and river (creek and stream) floods (Annotated Dictionary of Disaster Management Terms, 2014).
- Note that short duration heavy rainfall causes flash flood and long duration rainfall causes overflowing of rivers.
- Learn about the specific flood risk at your location (e.g. past flood incidents and the presence of flood risk rivers nearby).
- Overflow is the event of a river overtopping its banks for various reasons and creating such a magnitude of flow to interrupt the normal socio-economic life in its area of impact by causing damage to surrounding lands, settlements, infrastructure and living creatures (Annotated Dictionary of Disaster Management Terms, 2014).
- Identify and follow competent authorities (e.g. General Directorate of Meteorology) and sources (e.g. radio, TV) you can receive early warnings of flood.



2 WHAT TO DO TO REDUCE FLOOD RISK?

REDUCE FLOOD RISK IN NEW BUILDINGS



To reduce flood risk for a new building to be constructed:

- Do not construct buildings and settle in river beds.
- Do not buy or rent houses/ workplaces in buildings constructed in river beds and surroundings.
- If you cannot avoid settling at a place with a high flood risk, do not build a basement; keep the sub-basement concrete at a high level; build the building's spaces and installations in use above the flood level; make sure the spaces and foundations below the flood level have good waterproofing.

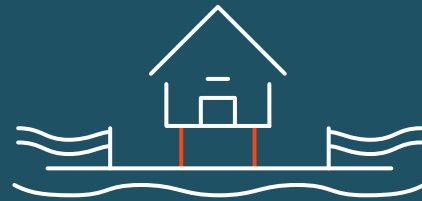
- Prefer ceramic flooring and avoid wall-to-wall carpet at basement and ground floors.
- Make sure the slope around the building and the rain water discharge lines are positioned to move the water away from the building.
- Clean your building's rain grooves regularly.
- Clear if the rain water drainage points around the building are blocked with leaves, rubbish etc.

INCREASE RESILIENCE IN CURRENT BUILDINGS



To increase flood-resilience of a current building:

- Elevate the building above the predicted flood level, if possible, and structurally reinforce.
- Build the electric installation of the building (e.g. switchboard and sockets) min. 1.5 m above the ground level (or min. 30 cm above the predicted flood level) under the expertise of an electrician.
- Move the heating and ventilation systems to upper floors, if possible, or higher from the ground level.
- Make sure basement windows are waterproof.
- Install water pumps and backflow prevention valves at the basement.



INCREASE TANGIBLE and INTANGIBLE RESILIENCE

- Insure your building against disasters including flood.
- Keep your important papers and valuables in waterproof boxes in upper floors.

BE PREPARED AGAINST FLOODS

- Be informed about the flood response policies in your country, region and settlement.
- Follow institutions which are in charge of responding to floods and offer information about risks.
- Attend flood response training and drills.
- Attend first aid training.
- Develop an emergency action plan with your family (if you are a workplace owner, with your employees) about what to do in the event of a flood. **Make sure your plan covers actions for your dependents such as your children, elder persons and pets in your house and what to do and how to communicate if you are separated in the event of a disaster.**
- If you are at a place known to have flood risk, learn about safe evacuation points and routes beforehand. Get acquainted with these routes by making evacuation drills with your family.



- Prepare an emergency bag to meet your needs for 72 hours during and after the disaster. Especially if you have family members with a chronic health problem, keep at least five days of medication available in your bag. If you have pets, cater to their needs too. Regularly control the expiry dates and sterility of the materials in your bag and replace them as necessary.
 - Learn how to shut down power, natural gas etc. installation connections of your building and make sure your family also knows about these.
 - If you are at a location with a probability of frequent floods, keep construction materials such as sand, sand bags, nylon, nails, plywood, wood etc. and a tool kit ready to be used when necessary.
- Keep protective equipment, hand torches (with batteries), battery powered radio and first aid materials in reach. Regularly control the expiry dates and sterility of the first aid materials and replace them as necessary.



- Make sure all family members (including children) know important emergency communication information and when and how to contact authorities through these numbers.

3 WHAT TO DO DURING FLOOD?

THERE ARE THREE MAIN ACTIONS DEPENDING ON THE FLOOD SITUATION:



1. Leave/evacuate your location
2. Head for higher ground
3. Stay where you are



If there is a flash flood, go for higher ground on foot immediately without waiting to be instructed.

When you receive a flood or overflow warning:

- Keep calm. As individuals have lower capacity of decision making in panic, you can take a deep breath or count back from ten to calm down before doing anything.
- Follow announcements of public institutions (e.g. AFAD, municipalities, governorships) in charge of the area to obtain information about the impact of the disaster on your location and the requirements of evacuation.
- Stay away from places with a high risk of flash flood such as river beds, drainage channels, valleys and canyons.
- Stay away from the safety and sustaining walls around your house assuming they may collapse.
- Prevent water ingress in the building using obstacles such as sand bags. Remember this takes time and cooperation of multiple persons. Evaluate if you have enough time.
- Keep clean water available at home against the mishap of contamination of mains water.
- Shut down all installations (e.g. power and natural gas) from the master switch or vanes. If you have enough time for preparation, do so by consulting to service provider entities.
- Plug out electrical home appliance.
- Disconnect water to your electrical appliance which uses water.

- Plug points where wastewater can pump back such as basins, baths and toilets and put a weight on them if possible (e.g. sand bag).
- Move your important papers, valuables and portable electrical home appliance to upper floors.
- Move in your outdoor furniture if you have time.
- Remove substances such as pesticides and herbicides that may be toxic from areas where the flood water can reach.
- Make sure your vehicle has enough fuel.
- Park your vehicle at a safe place.



If the water rises and starts to enter the building

- If your location is in a river bed or a low land or there is any threat to the building, immediately evacuate the building.
- **Stay away from power sources.**
- Go to upper floors where the water cannot reach. Help those who cannot go to upper floors alone such as children, elder persons and pets and make sure they are safe.
- Do not go to the roof unless the water level requires so or you need to send a signal.
- Do not take shelter in lofts/ penthouses without an exit.
- Do not use any kind of electrical tools and lamps as there can be gas leak in the building. Use battery powered torches if you need light.
- Be ready to evacuate any time.

If you have not shut down the power installation and the place you are in is wet or you are standing in water, do not attempt to shut it down. Doing so may have fatal consequences.

If you need to leave/evacuate your location

- If the authorities instruct you to evacuate, immediately act on it. It will be safer if you evacuate before the flood water rises.
- Plug off all power sockets before leaving the building, if you have not done so yet. Never touch electrical appliance if you are wet or in water.
- Take your emergency bag with you.
- Comply with the instructions of competent authorities and road signs.
- Be more careful if you evacuate at night as it is harder to distinguish the dangers of flood at night.
- Do not use roads tagged “do not enter” by authorities even if you think it will make a short cut.
- Only use safe evacuation roads which have been designated or you have been instructed.
- Pay attention to wild animals escaping flood, they can approach human beings closer than usual.

Do not try to walk, swim or drive in flood water. **15 cm deep rapid-flowing flood water can knock over an adult. 60 cm deep rapid-flowing flood water can move a vehicle.**

If you have to go through an area where there is flood water:

- Stay away from moving water.
- Act with caution as the roads you already know may have changed due to the damage and erosion caused by flood.
- Remember the water can be deeper than it seems and there may be obstacles or pits on the ground.

- Move on by using solid grounds knowing that drain covers and loopholes may have detached due to water pressure during flood.
 - Stay away from accumulated flood water in contact with toppled or torn power lines. Note that it can cause electric shock risk.
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While evacuating by vehicle

- Immediately change your direction away from the area of flood.
- Avoid using underpasses and bridges in the area impacted by flood.



- Be careful while driving through an area where flood water has receded. If roads have been structurally damaged, they can collapse due to the weight of vehicles.

If you are caught in flood in your vehicle

- If your vehicle has any malfunction, immediately leave your vehicle and head for higher ground on foot. **If you cannot get away from the vehicle, get on top of it but remember your vehicle can be dragged by water.**
- If you are stuck inside the vehicle, unfasten your seatbelts, open your windows (in case your door does not open) and leave the vehicle. Do not hold on to the vehicle, look for a higher ground than the flow of the flood water and climb there.
- If you are stuck inside the vehicle and cannot open the window, **try to break the glass with a pointed object (e.g. an umbrella, hammer, headrest that can be removed and used as a tool to break the window) or kick close to the connection point. Do not try to break the wind shield!**
- If you are stuck inside the vehicle and the vehicle starts to immerse in water, as a last resort, unlock the doors, take deep and slow breaths trying to keep your head above water, after waiting for the water pressure to balance inside and outside the vehicle, open the doors and go to the surface pushing yourself away from the vehicle.

To protect your health

- Flood water can be mixed with sewer, chemicals (e.g. heavy metals, pesticides, herbicides), gas and fuel. Avoid contact with flood water.
- Remember that there can be volatile petroleum products, air-borne or vector-borne viruses and infections, fire smoke and fungi in the air.
- Avoid indoor spaces where there are gasoline engines impacted by flood water as carbon monoxide can accumulate in these spaces.
- If you contact flood water, wash the contact area with soap and clean water as soon as you can. If there is no soap and water, use alcohol-soaked clothes or disinfectant.
- In case of any injury, especially in contact with flood water, immediately consult to healthcare units.

If you have to contact flood water, use protective equipment such as rubber/plastic boots and gloves, goggles and mask.



If you are not in a flood area

When you are informed about the flood:

- Confirm the accuracy and source of information.
- As false information can spread quickly at times of disaster, do not share any information without confirming to avoid contributing to misinformation.
- Know that information about the disaster situation, needs etc. can be time sensitive and do not share it without confirming it is still applicable.
- Follow notifications of public institutions in charge of the area (e.g. AFAD, municipalities, governorships).

If you will take part in disaster response:

- Confirm that a help coordination centre has been established in the area.
- If you do not have protective equipment and you are not technically knowledgeable about flood response, do not enter the flood area. Otherwise, you can risk the work and safety of response teams.
- Comply with the instructions of authorities responding to flood, do not prevent them from fulfilling their responsibilities or pose a risk by engaging in an argument.

Before sending/offering help:

- Follow the announcements of public institutions and non-governmental organizations for current lists of requirements to offer necessary material/equipment support to those affected by flood or in flood response. Contact authorized contact persons in collection points to learn about the current situation.
- Make sure the help you send meets the needs. Do not send anything other than what is needed or excessive help. Do not send products which require a cold chain and can deteriorate without confirming there is necessary supply and storage infrastructure.
- If you want to offer help in the form of transport and accommodation, look for platforms of coordination in this area and contact authorities.

To protect mental health in aid teams:

- Take breaks from following the news throughout the day.
- Care for your nutrition, liquid intake and sleep order.
- Do not hesitate sharing your concerns and seeking professional psychological support if necessary.

5 WHAT TO DO AFTER FLOOD?

While returning to the area affected by flood:

- Stay away from areas affected by flood until allowed by authorities.
- Comply with the traffic signs and warnings on roads.
- Help others in need (elder persons, children, persons with disabilities etc.).

Before entering the building affected by flood:

- Do not return to your building until allowed by authorities and making damage control. There may be damage to the foundation of the building even if it cannot be seen from the outside.
- Control if there is any damage to the foundation, walls, floors or other places in your building.
- Use suitable personal protective equipment (e.g. waterproof boots, plastic or latex gloves, masks) and battery operated hand torches while controlling your building.
- Do not enter any damaged building.
- Photograph the damage in your building from the outside (without entering in) without risking yourself.
- Inform competent bodies to evaluate damage in your building and your insurance representatives if your building has insurance.
- If you did not shut off the power installation before the flood, do not enter the building without obtaining clearance from a reliable authority about the electric shock.

If you are allowed to get in the building:

- Be careful and note that there may be gas leak and electrical installation and electrical appliance such as oven and furnace immersed in water. Such situations can lead to fire etc. defined as secondary disaster.



- Have sewer pits and wells, water tanks and wastewater systems checked by authorities after flood to prevent harm to human health.

- Do not touch any ruptured cable or electrical appliance, if there is such a situation, immediately inform authorities.
- As displaced propane tubes can cause fire or explosion in your building, do not try to move them by yourself and immediately ask for help from authorities like the fire brigade.
- Control the ceiling against the risk of falling plaster etc.
- Photograph the damage to your belongings without risking yourself.
- Act with caution knowing that dangerous animals such as snakes may have entered your building with flood.
- Leave doors and windows open to the extent allowed by the weather to dry your building. However, if you use a dehumidifier, keep doors and windows closed.
- Remove excess humidity from the building using fans and dehumidifying equipment. Place the fans on doors or windows to exhaust the air to the outside to prevent the spread of mould.
- If there is mud around walls, try to remove it in equal amounts on both sides. Otherwise, pressure can accumulate on one side and cause structural damage.
- You can use standard cleaning materials to clean and disinfect your building.
- Have your heating, ventilation and air-conditioning systems controlled and cleaned by authorized technicians before use. HVAC systems impacted by flood will accelerate the spread of mould indoors.
- Reduce humidity in the building using the heating, ventilation and air-conditioning systems you got controlled and cleaned.



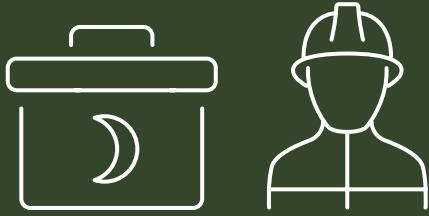
Building cleaning after disaster

- Do not enter spaces impacted by disaster without using suitable personal protective equipment (e.g. waterproof boots, plastic or latex gloves, masks).
- If your building has not been impacted by flood but remained shut down for a few days, quickly open doors and windows before returning to the building and make sure it is ventilated for at least 30 minutes.
- If your building has been impacted by flood and remained shut down for a few days, start cleaning assuming there is mould indoors and probability of contact with sewer water.
- Discharge flood water in the building if the outside water level is lower than the inside, otherwise the building can have further damage.
- Discharge water in your building slowly (one third of water a day) to prevent further damage to the building.
- If the authorities have declared your power system safe, discharge the water in your building using wet-dry charged vacuum cleaners or electrical water pumps.
- If the authorities have declared your power system not safe or your building does not have power, you can use a water pump to discharge the water with a generator to be placed at a safe distance at least six meters away from the building. Never operate generators indoors, you can cause carbon monoxide poisoning.



Object cleaning after flood

- Do not contact materials impacted by flood without using suitable personal protective equipment (e.g. plastic or latex gloves).
- Discard objects impacted by flood water according to the instructions of authorities. Especially throw away wooden kitchen tools (e.g. chopping board), infant products (e.g. pacifier and nursing bottle).
- Do not use any electrical appliance after cleaning and drying without being sure and obtaining clearance from authorities.
- If you have valuable papers impacted by flood water, keep them in the freezer.
- Wash all clothing in contact with flood water with hot water and detergent before using again.
- Follow these four steps to clean kitchen products in contact with food: (1) Wash with soap and clean water. (2) Rinse with clean water. (3) Disinfect in solution of 240 ml chlorine in 19 l clean water. (4) Leave to dry.



To protect your health after flood:

- Care for your personal hygiene measures considering epidemics can be common after floods.
- If you contact flood water, immediately wash the contact area with soap and clean water. If you do not have soap and water, use alcohol soaked clothes or disinfectant.
- If you have an open wound, avoid contact with flood water, use a waterproof band aid, frequently wash the wound with soap and clean water. If your wound has redness, discharge or swelling, immediately seek medical care.
- Do not use flood water, tap water or groundwater until approved by authorities, as the water distribution network may have been impacted by flood. Do not use water from an unknown source. Prefer bottled water. Drink boiled water only if you do not have access to bottled water.
- Do not consume any food products and medication left in the building during flood, including canned food, discard them.
- Prevent persons with asthma, respiratory or immune system disorders from indoors where there is mould seen or smelled.
- Do not allow children to play with flood water, toys which have contacted flood water and not have been disinfected, or attend cleaning works after the disaster.
- Do not take bath with flood water or water from rivers and lakes in the flood area.
- Do not hesitate receiving psychological support if you have been affected by the disaster, or help those affected receive support.
- Take part in aid campaigns for survivors of the disaster.
- Volunteer in relevant non-governmental organizations.

