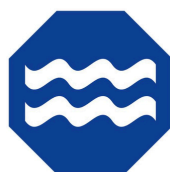




# FLOOD STOPPING



## Game Leaflet

This AR game has been created in the frame of Flood Stopping project, “Innovative methodologies for localising flood management strategies for climate change adaptation through storytelling, mapping and gaming tools”, a strategic collaboration project co-funded by the European Union under the Erasmus+KA220-SCH - Cooperation partnerships in school education

[FLOODSTOPPING.EU](https://floodstopping.eu)



# FLOOD STOPPING

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# FLOOD STOPPING

## THE GAME

**Welcome to the Flood Stopping AR game!**

The goal of Flood stopping game is to enhance student's active and committed citizenship and knowledge about flooding risk and management. Players are taking part in different flood - related simulation scenarios. Having different roles in each location of the city, they practice critical thinking along with collaboration skills. Each challenge merges physical activity with virtual elements in order to create intrinsically motivating learning experiences and enhance digital literacy.

This fun, participatory game can be integrated to any kind of formal and non-formal educational session. It allows players of all ages to interact with each other in any kind of context. It is played in max. 70 minutes, followed by a 20min. discussion.

Each simulation scenario of this game is linked with the traditional learning content produced during KA2 Flood Stopping project "Innovative methodologies for localising flood management strategies for climate change adaptation through storytelling, mapping and gaming tools", funded by the EU.

**FOR PLAYERS: TAKE SOME TIME AT HOME  
TO DIVE INTO THE LEARNING MATERIAL  
BEFORE JUMPING INTO THE GAME! JUST SCAN THIS QR CODE.**



**FOR GAME MASTERS: HEY THERE! MAKE SURE TO TEST OUT THE CHALLENGES ON  
YOUR OWN BEFORE THE GAME STARTS. BEING PREPARED WILL MAKE THE  
EXPERIENCE SMOOTHER FOR EVERYONE!**

# Game materials

**01**

**Board panel**

**02**

**Six challenge cards**

**03**

**Game leaflet for facilitators  
(this document)**

**04**

**One printable or  
physical dice**

**05**

**One score sheet**



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# FLOOD STOPPING

## Instructions

01

Divide the students into numerically equal groups. Each team needs a smartphone connected to the internet (a cardboard enabled app is optional). Make sure there is Wi-Fi in the classroom.

02

Decide on the duration of the game according to the available educational session slot. The game can be played in max. 90 minutes [70 min. playing & 20 min debriefing]. There is an option to shorten the duration of the game in 45 min. using three challenges. Decide which cards you will include to the game considering the age and the skills of your students.

03

Print one board panel [A3 paper] and one dice. Glue the dice. Print the materials needed per each team in A4 paper [(up to) six challenge cards, one score sheet]. In case you include the Youth Center Challenge (No6), each team will need also markers, coloring pencils, glue and one blank A3 paper. In case you include the City Hall Challenge, each team may need one set of cardboard glasses.

04

Hand each team the printed materials. Chose small items to use as pawns (one per each team).

05

Explain the mechanism of the game. Their objective is to navigate the game board using the pawn. They face six flood – related challenges at a certain time frame. For each challenge they achieve, according to the guidelines, they get 30 points.



# FLOOD STOPPING

## Instructions

06

The game starts! You can use a countdown timer to control the time! Each team throws their dice, picks up the card with the same number and moves the pawn to the building that has that number.

07

How each challenge is being achieved? The players write the answer on their score sheet. Then, the facilitator/teacher make sure it has been completed correctly according to the answer sheet. They note down the points on the score sheet and let the team throw the dice again and move to another challenge.

08

To challenge the players more, you can add one extra rule! When two pawns are on the same challenge, the building is locked. If the other teams step on it, they have to wait until this building is unlocked to continue playing on it. Choose this rule only if you want to enhance the competitive vibe of the game.

09

The game stops when the countdown stops [after 70 min. or 35 min. in the shortned version] or when all players have achieved their challenges. The team who had completed faster all challenges gets 20 points extra!

10

The teacher announces the scores. A 20 min. debriefing session follows.



## FLOOD STOPPING



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# 1

## Cinema Challenge

### HOW TO ACT DURING A FLOODING EVENT [30 points]

After the flood, you meet at the cinema, Nicola, a flood survivor from a nearby area. Listen to the podcast [from 04.13 to 09.54] to understand his experience. While listening to the advice of the experts, note down on your score sheet three things that you would have done differently if you were in his shoes facing that flooding event.

### GUIDELINES

#### While he was at the Studios

- Do not use the phone if it's not necessary [ie as a flash light to save the hard disc] to avoid run out of battery
- Do not move for any reason out of the house , remember the water can grow fast.
- Go upstairs and wait for rescue.
- Remember that the basement and garage are the first areas of the house to be flooded, even when you do not expect it at all, so estimate if it's worth spending time plugging the entrances with bags.
- Do not sleep on lower floors and avoid staying there.
- Do not put yourself in danger trying to secure your of your friend's possessions.
- Do not run away to reach the car while in danger.
- Leave the building only if the flooding threat is serious but first wear clothes and footwear that protect you from water in case you have to stay out overnight.

#### When he was outdoors

- Use your car only if really necessary and do not drive on roads that are already flooded.
- Reach the nearest elevated area quickly.



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## 2

## School Challenge

### FLOOD SAFETY INFOGRAPHIC [30 points]

You are attending a morning school class for flood awareness. You are encouraged to create an infographic poster with tips on what to do during or after a flood. Ask your teacher to provide you with A3 paper, drawing and coloring materials. Scan the QR code on the board to find the relevant info.

When you finish, hang the poster on the classroom's walls.

### GUIDELINES

Students are asked to choose for their poster some of the following pieces of advice given on the YouTube Video "What to do During and After a Flood" which has been created in the frame of "Flood Stopping" Erasmus + project.

*\*If you feel proud of your student's work tag us to see using #FloodStopping. Or send it to us! <https://floodstopping.eu/contact/>. We will post it on our social media!*

### During the Flood

- Stay indoors to minimize risks.
- Move to higher floors and wait for help.
- Avoid going outside to secure your vehicle.
- Use the telephone only if necessary.
- If you have to leave the house due to a serious threat, turn off the gas and electricity.
- If you are outdoors seek higher ground.
- If you are at school, follow evacuation procedures and stay with teachers.

### After a Flood

- Be cautious when driving on flooded roads.
- Do not use electrical equipment.
- Do not use tap water until its declared safe to drink and avoid food exposed to the flood.
- Clean and disinfect surfaces to reduce contamination risks.

*To give your students more info about how to create infographics, you can get prepared reading tips on our website.*

Scan here:



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### 3

## City Hall Challenge

### EVACUATION [30 points]

You are working on the Emergency Line at the City Hall. You receive a call from a citizen asking for instructions. The person calling is a second floor apartment, but can see that the street in front of the building is flooded.

Scan the QR code A on the board to see the interior of the apartment. If you have Cardboard glasses, access the VR mode by pressing the cardboard icon.

Watch this YouTube video [[What to do during a flood](#)] scanning the QR code B before noting down on the score sheet three pieces of safety advice.

### GUIDELINES

Students are asked to choose the right answers practicing critical thinking skills. They explore the apartment on the YouTube Video "What to do During and After a Flood" which has been created in the frame of "Flood Stopping" Erasmus + project.

#### During the Flood

- Stay indoors to minimize risks
- Move to higher floors and wait help.
- Avoid going outside to secure your vehicle.
- Use the telephone only if necessary.
- If you must leave the house due to a serious threat turn off the gas and electricity.
- If you are outdoors seek higher ground.
- If at school, follow evacuation procedures and stay with teachers.

#### After a Flood

- Be cautious when driving on flooded roads.
- Do not use electrical equipment.
- Do not use tap water until its declared safe to drink and avoid food exposed to the flood.
- Clean and disinfect surfaces to reduce contamination risks.

*To power the VR experience, make sure students are equipped with cardboard glasses and a smartphone running cardboard - enabled app.*



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### 4

## Appartment Challenge

### AFTER THE FLOOD [30 points]

You come back home after the evacuation. After you have disinfected everything, your father switches on the electricity and opens the kitchen to fill the pot with tap water. Pasta was in the highest drawer, and it is the only food which was not exposed to the flood, so it is safe to eat. You are in your room trying to charge the phone to talk with your friends that are living next door. You just need someone to chat to kill time.

Read that scenario and spot what is wrong. Which of these actions could put you in danger. Discuss it with your team. Write down on your score sheet two of them and explain why.

\*Before answering this challenge watch the YouTube Video [What to Do After a Flood](#)

### GUIDELINES

Students are asked to assess what is potentially dangerous in the scenario described. They should use as a reference the guidelines presented in the Youtube Video "What to do After a Flood" which has been created in the frame of "Flood Stopping" Erasmus + project.

Actions referred to the scenario

- Disinfect everything [good practice]
- Switch on the electricity [potentially dangerous]
- Fill the pot with tap water [potentially dangerous]
- Eat pasta [good practice]
- Charge the phone [potentially dangerous]
- Talk with friends on the phone for unnecessary chat - keeping the phone line busy at an emergency situation [potentially dangerous]



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### FLOOD RISK ASSESSMENT [30 points]

You are at home when the heavy rain starts to fall. Is your neighborhood a flood – prone area? Look for your area on the European map, scanning the [QR code](#). Is it a place of Potential Significant Flood Risk or not? And why? Choose at least two of the variables below that affect the flooding risk of your area. Note them down on your score sheet.

1. Topography of the area (including height and slope)
2. Land use patterns
3. Existence of water bodies (ex: rivers)
4. Percentage of soil sealing (ex: asphalt)
- Types of buildings (ex: hospitals and schools)

\*To understand better, choose the topographic view of the map and observe the terrain of your area.

### GUIDELINES

The aim of this challenge is to intrigue students' attention on understanding how many factors contribute to a flooding event.

- All answers given are relevant for flood risk assessment.
- The teacher/facilitator is called to assess the critical thinking skills of the students who make an estimation using arguments.
- The teacher/facilitator regards the challenge accomplished if each answer written on the score sheet is well justified with arguments - not if it is right or wrong.
- The variables that contribute to Flood Risk of their area will be explained at the debriefing stage.



**FLOOD  
STOPPING**



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**6**

## Youth Center Challenge

### TOPOGRAPHY RISK ASSESSMENT 30 points]

You are called at a Youth Center meeting, to discuss with other youngsters the future flooding risk in your country. Click on the [QR code](#) on the board to see the two flood risk maps of your country that are connected to sea levels [1] and temperature rise [2]. Write down three big cities that are at higher risk according to the water levels and temperature map.

### GUIDELINES

The aim of this challenge is raise awareness about the impact of climate change to floods.

- The teacher/facilitator is called to assess the critical thinking skills of the students who point out three areas combining data from two maps.
- The teacher/facilitator regards the challenge accomplished if the students have written on the score sheet three places on their country that are in flood danger due to rise of temperature and water levels.



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# FLOOD STOPPING

## Debriefing questions

### 1. Reflection questions

- How did you feel playing this game?
- Did the time pressure affect your ability to take the right choices?
- How the collaboration with your playmates affected the decisions you made?
- What was interesting about playing this game?

### 2. Generalization questions

- After looking at the flood maps of your country, what is the flood risk of your area?
- After this task, how prepared you think you are to face a flooding event?

### 3. Transfer-knowledge questions

- From now on, how would you explain to your parents/friends the flood risk situation of your area?
- Would you do something differently now that you have this kind of knowledge about floods?

### Tips for the teacher/facilitator

- Conduct the discussion in circle. Ask some or all of the open-ended questions with the proposed order.
- Avoid one by one questions.
- Ask the whole group and not force any answer.
- Let the players answer if they want to.
- Avoid expressing your point of view on the reflection questions and give neutral feedback to their answers.
- Contribute to the discussion to present the facts about the Flood Risk Level of your area after you listen carefully to their opinions.





# Additional information

## The AR QR codes

The game presents some QR codes (e.g. at the top left and one at the top right part of the board) that activate Augmented Reality experiences.

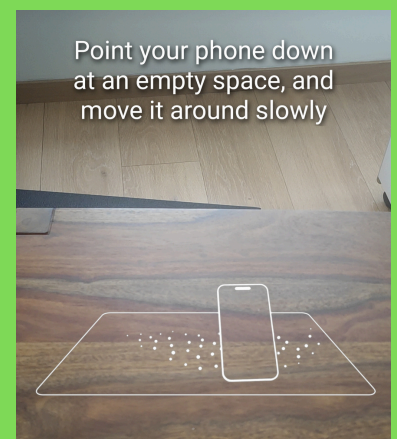
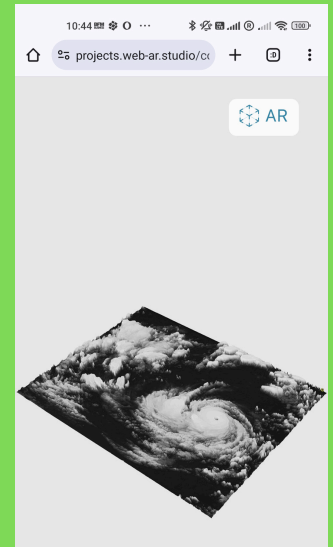


These AR experiences can be opened only on a mobile phone device. In order to open these experiences, you will need to scan these QR codes, using a QR code scanner app on your mobile phone.

By scanning the QR codes, a link will become available. By clicking on the link, a web browser will appear. The browser window that appears will normally show a 3D model inside a virtual space.

By clicking on the AR button inside the screen, your camera will be activated. If your mobile phone asks for camera permissions, please accept granting them.

Please find an empty flat space and slowly move your phone around the area. By doing so, the model will appear over this area. Sometimes it takes a while for your smartphone's camera to locate the flat surface to locate the flat area, so if the model doesn't appear, please change your position and try again. Additionally, depending on how close you are to the surface, some models may be bigger, so when they are introduced on the screen, you may need to change their size by pinching them (like when you zoom in and out on an image).

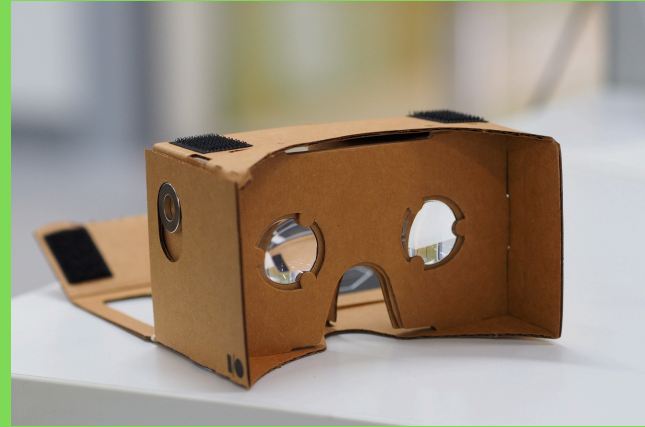




# Additional information

## The VR QR codes

The board game also presents VR experiences, that offer an additional AR layer, when combined with board game's QR codes. The board game's VR experiences can be accessed through the use of the any VR Cardboard device, like the one presented on the right. The original configuration of this technology is called Google Cardboard.

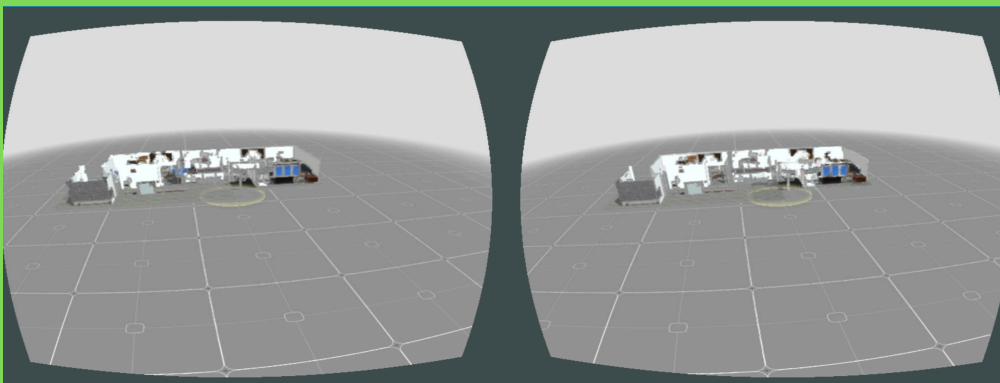


When scanning a VR QR code, using your mobile device's QR code scanner, you will be redirected to a new browser window, presenting one of the 3D models of the game.

You can always explore the model on the browser with your students.

If you want to explore the model using the VR Cardboard, please click on the "Open in Cardboard" button at the bottom of the screen. This will open the window in a special mode, making the game available in Cardboard view mode.

Upon entering in Cardboard View mode, insert your mobile device inside the cardboard and view the model.



Cardboard view mode



# FLOOD STOPPING

## Before you leave

**If you want to proceed on the Flood Stopping journey, use the Community App to immerse yourself in the world of flood risk management and climate change with our collaborative activity.**

**FOLLOW US:**



**[www.floodstopping.eu](http://www.floodstopping.eu)**



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