# **Risk Unseen**

A game about preparedness and sitting ducks

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Photo credit: Anticipation Hub, 2024

### Goal of the game:

- 1. To open a discussion about why we choose to prepare for extreme events, and what motivates our decisions and trade-offs.
- 2. To illustrate the concept of a "sitting duck": a place that has a high risk of an extreme event, but might underestimate their risk because they have not had recent experience of an extreme event.
- 3. Discuss how recent experience shapes our willingness to prepare for disaster. Discuss where sitting ducks might be in the real world and how to enhance preparedness to unseen or unprecedented events.

**Duration**: Meant to be playable in 25 minutes + a 20 minute debrief conversation.

**Players**: Between 5 and 100, noting that a large number (>15) is better for the statistics.

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## Materials:

- Prepared dice
- Rainmakers
- Tracking sheet
- Powerpoint presentation

For running the game in person, dice will be given to the participants to roll. If you have 20 participants, you need the following materials (scale the numbers according to the number of participants you have):

Dice	<ul> <li>For round 1, 20 dice, one per player.</li> <li>Each die should have one sticker on one of its faces.</li> <li>For round 2, 20 dice, one per player.</li> <li>10 die should have a sticker on two of their faces</li> <li>8 die should have a sticker on one face</li> <li>2 die should have no stickers at all.</li> </ul>
Rainmakers	20 rainmakers: small containers where you can put one die each. When these are shaken, the die should be able to rotate around, and when they are still, you should only be able to see the top face of the die. Players should not be able to tell how many stickers are on their die.
Game sheet	20 printed sheets for tracking points (one per player)
Instructions	Powerpoint presentation

# For running the game online, the facilitator will roll all dice and show the results on the camera. Everything else is the same; materials for 20 players would be:

Dice	<ul> <li>For round 1, 20 dice, one per player.</li> <li>Each die should have one sticker on one of its faces.</li> <li>For round 2, 20 dice, one per player.</li> <li>10 die should have a sticker on two of their faces</li> <li>8 die should have a sticker on one face</li> <li>2 die should have no stickers at all.</li> </ul>
Rainmakers	One rainmaker: A box with dividers so you can shake and roll all of the dice at once in their individual compartments, and when you show the top of the box on a camera, only one side of the dice should be visible
Game sheet	Google sheets link in which participants can record their outcomes
Instructions	Powerpoint presentation

### How to prepare the dice

Start with regular dice. Put one or two colored stickers on one or two faces, based on the distribution in the table above.

Each dice will live permanently in a rainmaker (see below). Put the dice in the rainmaker before handing it to participants and do not let them look at their dice.



Two types of rainmakers. Left photo credit - Anticipation Hub, 2024. Right photo ECdP

### Options for making a rainmaker

The goal of the rainmaker is for participants to be able to roll the dice but not see all the sides. They should not be able to see whether they have 0, 1, or 2 stickers. Therefore, the rainmaker should have enough space for the dice to be rolled, but have opaque sides so that only the top face of the die is visible. Here are two methods:

Construction paper rainmaker:

- A rectangular piece of malleable cardboard
- A square or other shape piece of malleable cardboard
- Tape

Roll the rectangle cardboard into a cylinder. Make sure that the opening is wide enough to allow your dice to roll around comfortably. Tape the bottom, making sure it's solid. Et voilà, you have a rainmaker!

Cup rainmaker:

- Cups that are small enough that it is not easy to see the sides of a die when it is sitting in the bottom of the cup
- Transparent plastic
- Rubber band

Place one die in the bottom of the cup. Place the transparent plastic cover on top and secure with a rubber band.

## Narrative:

As humanitarians, we are used to responding to extreme weather events that drive large-scale disasters. But are we well prepared? What determines our level of response preparedness? Why do we decide to prepare for some disasters and not others?



Participants play the Sitting Ducks game at the 12th Dialogue Platform on Anticipatory Action. Photo Credit - Anticipation Hub, 2024

We would like to invite you to play a short game with us today where you will be asked to make a series of preparedness decisions, note them down, and then we'll have a conversation about why you made the decisions you did.

The way the game works is quite simple. You are all responsible for the disaster management planning of a town called Madeupsville during a tropical cyclone season. Every month, you will decide whether to invest your time and resources to clear the drainage systems in your town to protect the health and safety of your neighbours or to install smoke detectors in homes to prevent home fires. You will then roll the dice that you have been allocated. This dice will tell you whether a storm will occur (sticker dot) or not (no dot).

Depending on the decision you've or and the occurrence of the storm, people will be affected by floods in your town. Your goal is to have the fewest flood-affected people at the end of the game. In the case of a tie, the town that was able to install the most smoke detectors will be the winner. Table of costs:

	Clear drainage	Install smoke detectors
Storm	1 flood-affected person	6 flood-affected people
No storm	No people affected by floods	No people affected by floods

But there's a catch - you do not know how often storms will happen. You do not know how many storm stickers are on your individual dice. It is up to you to figure out what your real risk is.

[Facilitator shows participants an example of a die with one sticker, and explains that the numbers on the die don't matter. If they roll the sticker, it means a flood happens. We suggest to distribute the rainmakers after this introduction, with clear instructions not to take out the die and look at it.]

Note down your decisions and your outcome on your sheet. Online, the points will calculate automatically.

### [Share notepad]

At the end of the season, the player with the fewest flood-affected people wins.

Got it? Ok let's go.

Decide whether or not you want to prepare. Note down your decision. Now roll your dice and see if you got a flood. Note it on the paper/excel and calculate your new budget.

### [Play round 1 - 5 rolls/decisions]

Great! We're curious to hear from you, how did you decide whether or not to clear your drainage systems?

[Allow for 2-3 mins of discussion between players about their experience shaping risk perception and therefore preparedness].

[Reveal: Allow people to look at their dice (if in person) and if online, show people that their dice is all the same. Find someone with no flood, and ask whether they are surprised to see that they have the same risk as their neighbor who flooded a lot.]

Ok, now let's play a second round. Who here has heard of climate change? You will receive a new die, which might or might not be different from your old die. Your risk of flooding might have changed.

[If in person, collect all the rainmakers, and replace half of the dice with dice that have two stickers, and replace one or two with dice that have no stickers. Note that if you have a large group, you might want to simply have a new set of rainmakers with the new dice ready and distribute that instead of changing out the dice one by one. If online, change the dice in the facilitator's giant rainmaker].

### [Play round 2 - 5 rolls/decisions]

[Ask everyone how many flood-affected people they have. In the case of a tie, the person who has the most check marks in the column for "smoke detectors" wins. Give a chocolate to the winner.]

Great! Now, without looking at your die, we would like to offer your town of Madeupsville a permanent flood resilience upgrade. Depending on what you think your flood risk is, you should decide whether it is worth investing in one of three choices.

- 1. If you think that you have no stickers on your die, then you should choose not to invest, given the costs of the resilience decision.
- 2. If you think that you have one sticker on your die, then you should invest in upgrading your sewer systems.
- 3. If you think that you have two stickers on your die, then you should invest in both sewers and in elevated parks around the city.

[Ask everyone to report their decision by moving around the room - which resilience investment will they choose?]

[Now, reveal what is actually on your dice: did you have the number of stickers that you thought you did? How did you feel if you chose option 2, but you actually had 2 stickers on your die? Discuss how recent experience affected your perception of your risk and the type of resilience investment you were willing to make.]

### **Optional extension packs**

- Give participants the option to "pay a scientist" to see their dice.
- Ask participants to write a short story about the two seasons they just "experienced" and the decisions they made (or did not make).
- Add one dice that has a mega event (three dots) that if rolled, wipes the player out completely. This works only if there is a big group of participants.
- Add some buzz by making teams and getting participants to roll for the other team!
- Offer prizes.



Left: Participants play the Risk Unseen game at the 12th Dialogue Platform on Anticipatory Action. Photo Credit - Anticipation Hub, 2024. Right: Worksheet from the Risk Unseen game at an American Red Cross meeting in Texas, 2025.

# Debriefing

The debrief is the most important part of the game, and it should take 15-20 minutes. You want to draw in the conversation around the major themes and experiences that participants will have had.

- 1. Ask people to discuss whether they were surprised to see how many stickers on their dice. Why were they surprised? How did this compare to their neighbors?
- 2. Explain the definition of "sitting ducks": places that have a high risk of an extreme event, but who have gotten lucky recently and therefore might not realize how high their risk is.
  - Places that did not have an extreme event in recent memory (rolled lucky!)
  - Among those, places whose underlying probability of this event has increased places that now have 2 stickers instead of one, but might not realize that their risk increased.
- 3. Most disaster preparedness systems are designed based on experience with past events. This makes us very vulnerable when something new happens. How do we prepare for these?
- 4. Ask who thinks they were a sitting duck in each round? And why?
- 5. Show some research: places that could be sitting ducks and why this matters (and how science can help)
- 6. How can we enhance imagination about unseen but plausible events to then better prepare for them?
- 7. How do we make decisions about preparedness?

### Credits:

Pablo Suarez envisioned this game, many of the gameplay elements, and initiated game design before his passing. He is dearly missed.

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