

# Paying for Predictions

“Linking Early Warning to Early Action”  
#110



## Why this game?

In the past decades, there has been a sharp increase in weather-related disasters.



There is an **urgent need** to better manage the rising risk.

However, there are **barriers**:



Lack of understanding forecast/action



Fear of “Acting in vain” (Being prepared, but no disaster)



Money only available after disaster

Playing this game helps understand the potential value of forecasts and helps break down some of these barriers.

### Link with Climate Change

When humanitarians understand and use forecasts they can take more meaningful action before a disaster happens.

Climate change will increasingly influence how, when and where many extreme events will occur.

This means forecasts become increasingly important!

## Game overview

**Description:** In this participatory activity, players become humanitarian workers, who are facing changing risks. They must make individual and collective decisions, with consequences.

**Learning outcomes:** To experience the impacts of climate change, to understand the value of forecasts and to enhance the understanding of climate smart disaster risk reduction.

**Facilitator skill level:** ★★★ Challenging, needs skilled facilitation, are the most adventurous, can be challenging for some groups and individuals

**Intended audience:** Disaster managers, volunteers, meteorological service authorities, donors, etc.

**Number of players:** 6-100

**Time needed for gameplay/discussion:** 45 - 60 minutes

**Playspace Requirements:** Large room with tables and chairs

**Materials** (for 36 players):



1. 360 large dry beans (10 per player)



2. 48 six-sided dice (4 per 3 players)



3. 12 eight-sided dice (1 per 3 players)



4. 20 red stones or other tokens



5. 12 non-transparent cups (1 per 3 players)



6. 6 transparent cups (1 per 6 players)



7. *Optional - prizes for winners*



8. *Optional - projector/audio*

### Want to know more?



See video link



See link to more resources

All Climate Centre games can be found on: [www.climatecentre.org/games](http://www.climatecentre.org/games)

# Facilitation guide

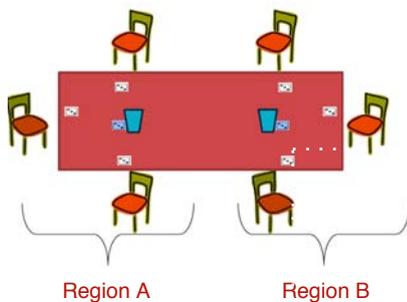


## Rules and game play:

### Explain setting and ground rules:

1. Players should expect to be confused at the start of the game. The relationship between decisions and consequences can be complex, like in the real world. The confusion should dissipate as gameplay evolves and people figure out the implications of the rules.
2. The game is a simplified representation of reality, focusing only on those aspects that contribute to the learning outcome.
3. Players join the game accepting the rules; there is no challenging the rules during gameplay.
4. While consultation with team members is encouraged, each player's decisions are individual.
5. Players cannot share or give away beans, otherwise players tend to behave in unrealistically altruistic and cooperative ways.
6. There will be some "practice" rounds, and then 10 rounds "for real" (with winners and losers).

### Set up and basics:



Participants will sit in teams of 3 players, see image.

- Each **player** receives: 1 six-sided die and 10 beans. A player represents a humanitarian aid worker, responsible for community disaster management funds and receives.
- Each **team** receives: 1 six-sided die and 1 cup. A team represents a region.
- Beans represent resources available to each player. Everyone starts with 10 and players can only lose resources.

### How to win this game:

- The individual winner is the player with the most resources (beans) at the end of the game.
- The group winner is the team with the fewest 'humanitarian crises' (red stones) at the end of the game.
- If there is a tie, the team with the highest number of resources (beans) wins.

### Practice Round 1:

1. Explain that the dice represent the historical probability distribution function of precipitation (or in plain English): "the historical amount of rainfall". 1 is not very much, 6 is a lot.
2. Ask each team to pick up the coloured die, representing their 'regional rainfall'. Ask them to place it in the cup, shake it and place it on the table, without looking what is under the cup.
3. Now ask each player to roll their white die, representing 'local rainfall'.
4. Ask the teams to reveal what is under their cup.
5. Now mention that if the sum of the two dice (representing regional and local rainfall) is 10 or greater, there is too much rain and the area is flooded.
6. Ask if there are any floods in the room and demonstrate what happens to those players.

(Note: if there are no floods, you can pretend that you are a player and that you had a flood):

- a. They stand up, throw their hands in the air and loudly say: "Oh No!".
- b. They need to pay 4 beans in disaster relief. Ask what flood relief could mean in their reality and explain why it is expensive (e.g. the roads have become unpassable, so it is expensive to send tents to provide temporary shelter).

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## Practice Round 2:

1. Ask if anyone would like to be able to prepare themselves for a flood. Explain how at the start of each round, you will give them the choice to **stand up and pay 1 resource (bean) for preparedness**. Ask them what flood preparedness could look like in their reality. Provide an example, like: sending tents before the rainy season.
2. Ask all teams to roll their regional rainfall die in the cup, making sure it is not visible.
3. Remind players of the choice: a. Remain seated to wait and see; b. Stand up and invest 1 resource (bean) in preparedness.
4. Indicate short time available for consultation before deadline for individual decisions.
5. Start countdown for deadline (10, 9, 8...).
6. End countdown with a loud STOP! Players must stay where they are. If they are sitting or standing this indicates their choice.
7. Collect beans. Players who chose to take early action for flood preparedness must pay one bean. Facilitator can make or invite observations about decisions.
8. Players roll their local rainfall die.
9. Reveal the amount of regional rainfall as represented by the die under the cup. Players stay standing or sitting.
10. Resolve the round. If a player is:
  - a. Sitting and has a flood (sum of the dice 10 or more), they: stand up and loudly say: "Oh No!" AND pay 4 beans.
  - b. Standing and has a flood, they are a hero! You can congratulate them on their worthy action.
  - c. Sitting and has no flood (sum of the dice <10), nothing happens.
  - d. Standing and has no flood, they pay nothing, but have acted in vain and wasted resources.
11. Point out instances of worthy action and acting in vain, and ask players how they feel.
12. Repeat this practice round once more, and then refund everyone their resources (beans). Ask if clarifications are needed.

## The Forecast Twist:

1. Ask players who would like to see the result of the regional die roll before they have to make a decision about whether or not to prepare. (People should say yes.)
2. Explain that you can offer an "Early Warning pilot programme" to half of the teams. You can mention that donors do not have enough resources for everyone to benefit from this pilot programme. Show the transparent cup.
3. Explain that scientists produce forecasts that can indicate higher chances of above or below-average rainfall, which is similar to being able to see the regional die before making a decision. However, it costs resources to learn how to understand and act on such a forecast, and so it will take an initial investment from a team to be able to see the regional die.
4. Explain that to decide the teams, we will have a bidding process. Ask each person to contribute any number of beans to their team's bid for the forecast. The teams with the highest bids will be able to see their regional die all 10 rounds.
5. Indicate that there is little time for consultation. Each team will send someone up to the facilitator with the bid in their cup.
6. Start countdown for the deadline (10, 9, 8...) and end the countdown with a loud STOP!
7. Count each bid and determine which teams get the forecast. Note: now you reveal the real cost of the "Early Warning pilot programme", which is the equivalent of 2 beans per player. If a team has 3 players, their Early Warning System will cost 6 beans.

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## Optional: the Disaster Risk Reduction (DRR) Twist:

1. After round 2, before round 3, you can reveal that besides forecasts, a team can invest in DRR as well.

In this context, DRR represents planting mangroves to reduce the impact of flooding.

2. Explain how a bid, similar to the one for the forecast will be held, but now only 1 team can win. The team that wins the bid will plant mangroves, and its members only need to pay 2 resources (beans), not 4 if a flood happens and they are not prepared.

3. Ask each person to contribute a certain number of beans to their team's bid for the DRR programme. Indicate short time available for consultation before deadline for individual decisions (can discuss as teams). Each team will send someone up to the facilitator with the bid (in beans) in their cup.

4. Start countdown for deadline (10, 9, 8...). After the countdown players need to be standing with a cup and beans in their hand and cannot change their decision. End countdown with a loud STOP!

4. Count each bid and determine which team gets the DRR. Note: you can choose to accept the number of resources (beans) given, or 2 per player like in the Early Warning pilot programme.

## Game Play:

1. Mention how we will play 10 rounds, see box for the sequence of each round.

2. Remind players how they can win:

- The individual winner is the player with the most beans at the end of the game.
- The group winner is the team with the fewest 'humanitarian crises' at the end of the game. If there is a tie, the team with the highest number of resources (beans) wins.

**Note:** those who run out of beans will face a 'humanitarian crisis' in their community that they can not respond to, represented by a red stone. They must remain in their seat and continue rolling the dice.

### Sequence of a Round:

1. Each team rolls the regional rainfall die under their cup.
2. Decision time! Standing means preparing (cost 1 bean). Sitting means doing nothing. Give 30 seconds to strategise.
3. Countdown: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1: "Stop!"
4. Collection of payment (1 bean) from those who took early action.
5. Roll of the local rainfall die.
6. Teams with no forecast now reveal their regional rainfall die.
7. Resolve! No disaster? (<10) OR a disaster (10 or more) and prepared: No problem. However: Disaster (10 or more) and not prepared: stand up, loudly say: "Oh No!" and pay 4 beans.

## Debrief:

The debriefing is a crucial part of the game experience as this is where the shared learning takes place. Example questions:

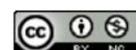
1. What did you experience during this game?
2. How does what you experienced link to your reality?
3. What happened when we introduced climate change? Do you think this is an accurate representation of climate change?
4. Share one insight you have gained from this game.

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