

Paying for Predictions: Rules of Play

This game was designed by Pablo Suarez and Janot Mendler de Suarez, originally intended to be played by a live audience. As a participatory activity, this game aims to support experiential learning and dialogue on the concept of climate-based disaster risk reduction, which is becoming more salient in the face of climate change. Players become Red Cross Red Crescent workers, who face changing risks. Rich discussions emerge, and there will be winners and losers. This game has been played on five continents with hundreds of participants, and has led to dialogue on how to design forecast-based strategies for the Red Cross Red Crescent. The game is freely available for not-for-profit use through a creative commons license.

This competition will allow participants to enter “strategies” for how to play Paying for Predictions, and the strategies will then compete against each other in computer-simulated gameplay to determine the winners. More information on the competition available [here](#)[link to webpage].

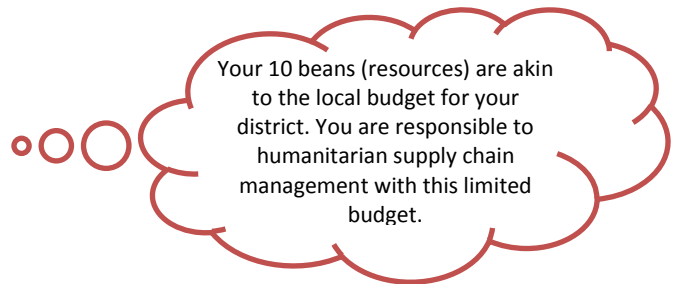
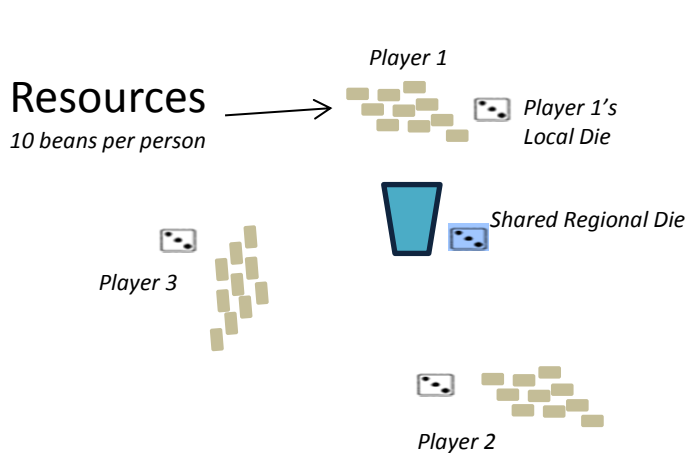
The basic parameters of how the game will be simulated by computers for this competition:

- 10 teams of 3 people are playing this game (30 people total)
- Players are unable to communicate with each other, but they are able to see what other players on their team are doing. They are not able to see what players are doing who are not on their team.
- There are 10 rounds in this game.

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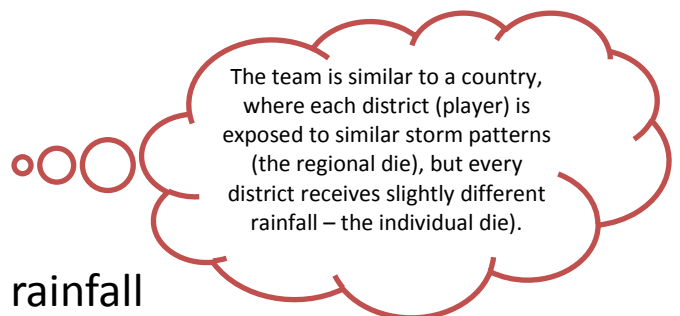


Game setup: Each player receives 10 beans (resources), and one six-sided die which represent the local rainfall of his/her area. Each team receives a cup and one six-sided die which represents the regional rainfall of their zone.



Each player is taking the roll of Red Cross Red Crescent disaster manager in his/her location. These locations are prone to flooding, when they receive lots of rain. The dice represent rain.

Rainfall

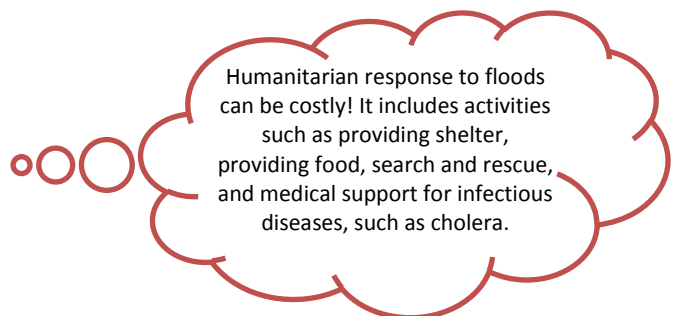


If sum of the regional rainfall + the local rainfall (team die + player die) is equal or more than 10, FLOOD!

(In the above picture, the sum is 6, therefore no flood)



If you are FLOODED you will need to Pay 4 beans!



If the sum of both dice is less than 10 you are not flooded, so you don't need to pay your area has No problem!

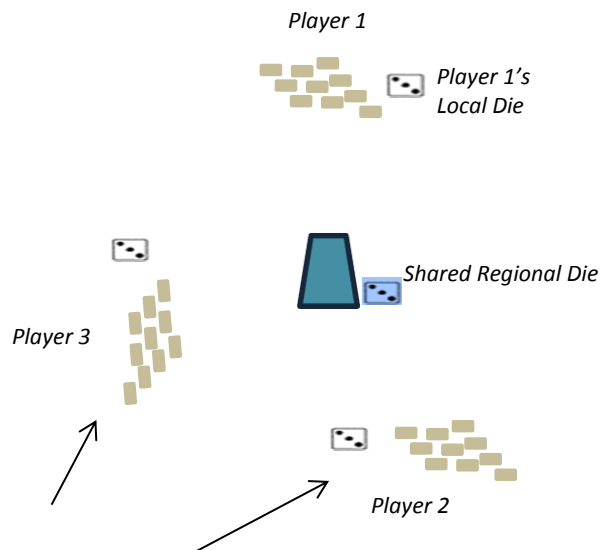


In the game, as in real life, you can choose to prepare for the flood (paying one bean)
Then, because you are prepared, you do not have to pay anything, no matter what the rainfall is (no matter how much the sum of both dice is).

What can the Red Cross Red Crescent do to prepare for a flood? Activities range from evacuating vulnerable people to prepositioning tents to storing harvests in water-tight containers. Read more in this Early Warning Early action [booklet](#).

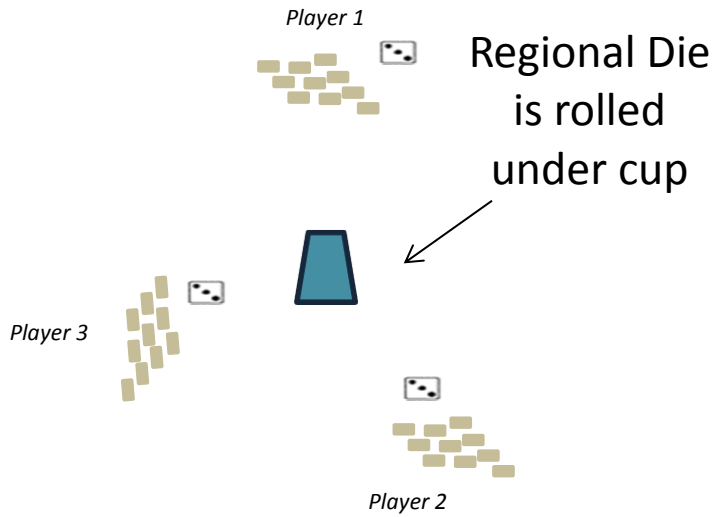
Setup of gameplay:

You are Player 1



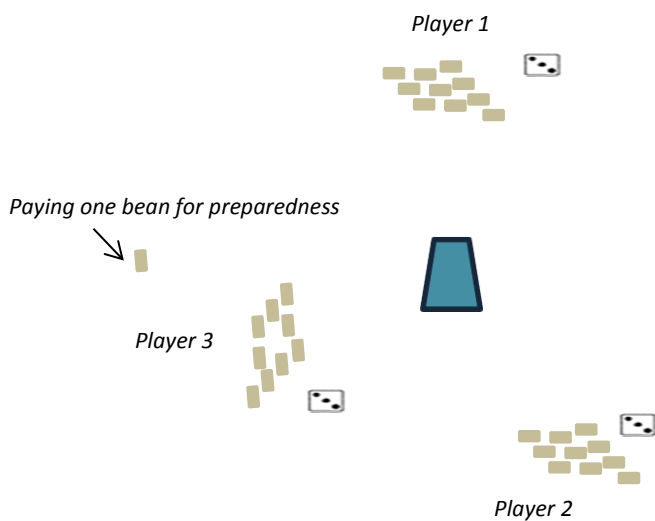
Players 2 and 3 are on your team,
but they make their own decisions

First step of gameplay:



Next...

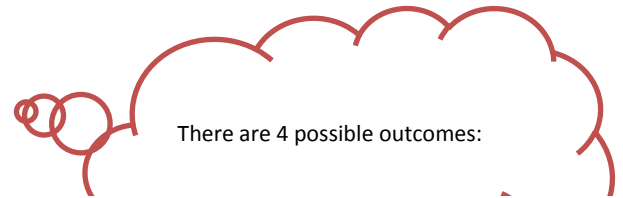
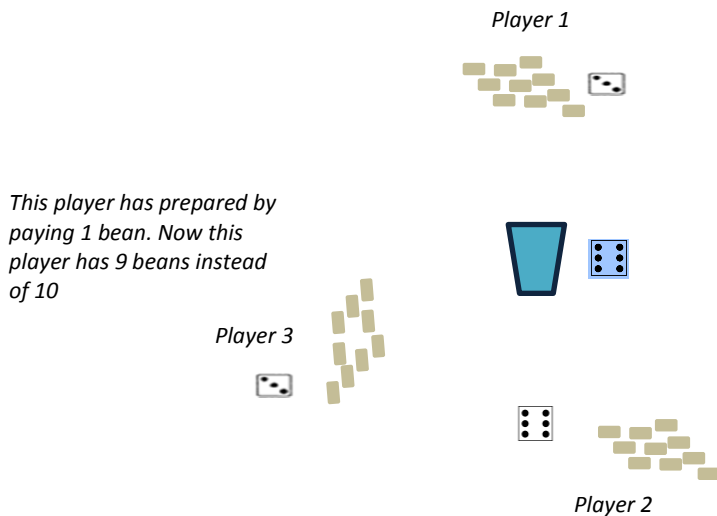
Everyone decides individually whether to prepare for a flood by paying one bean.



Now, find out the consequences: what was the rainfall?

Regional rainfall die is revealed.

Then everyone rolls their local die



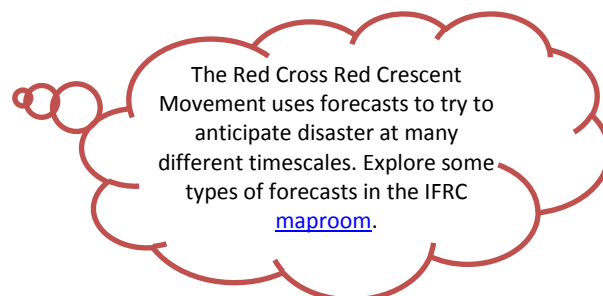
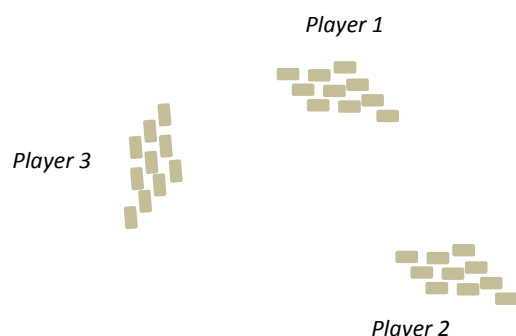
	Flood	No flood
Prepared (paid 1)	"Worthy Action" <i>You're a hero!</i>	"Act in Vain" <i>Perceived as wasteful.</i>
Not prepared	"Fail to Act" <i>Avoidable losses – pay 4</i>	"Worthy Inaction" <i>No problem.</i>

In this example, players 1 and 3 were not flooded, because the sum of their individual dice (3) and the team die (6) is 9, which is less than 10. Player 2 was flooded (the sum is 12) so he/she has to pay 4 beans because he/she was not prepared.

This basic gameplay constitutes one round and is played 10 times during the game.

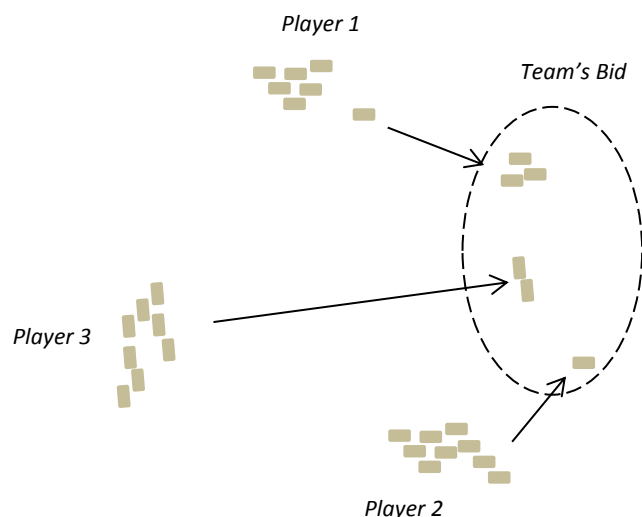
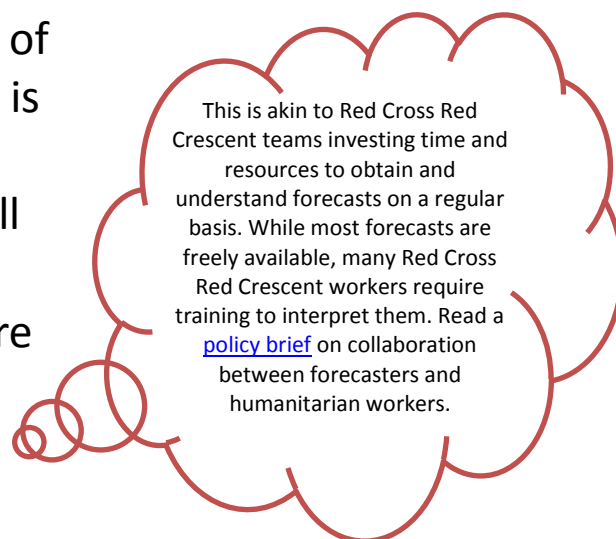
Wouldn't you like to know the result of the regional rainfall dice under the cup before deciding whether to pay one bean for preparedness? This is like having a "forecast".

Before the game begins, each person can take part in a bid to be able to see the regional die before having to decide whether or not to prepare for flooding. This is like knowing the forecast of your region in real life.

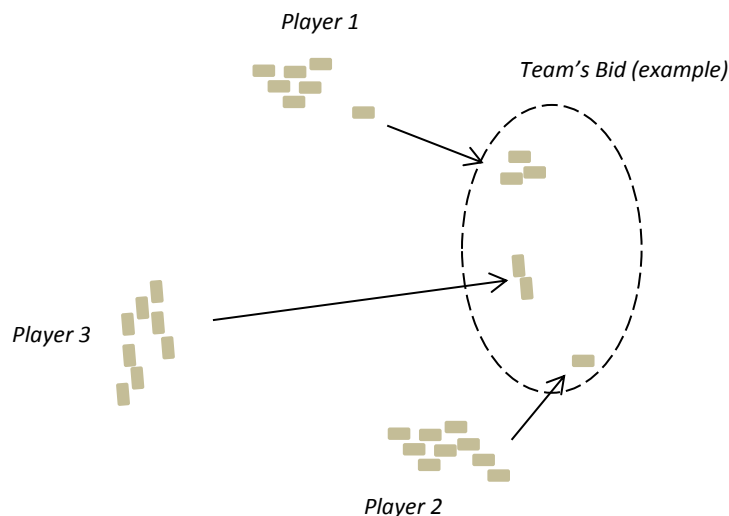
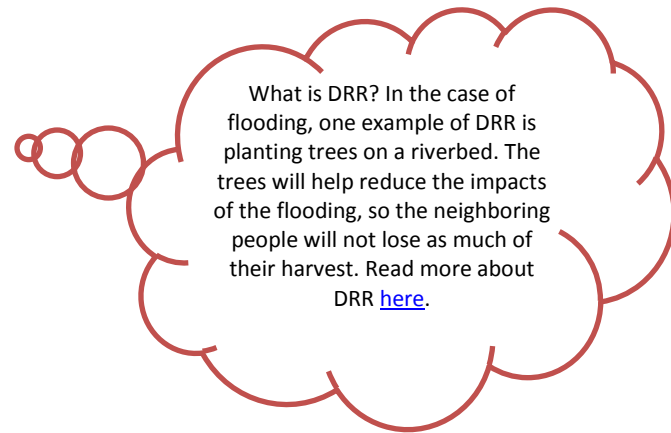


Each player makes his/her own individual contribution of beans to the bid. The sum of the three individual contributions (beans) is the team's bid.

The 5 teams that have the highest bids will be able to see the regional die before having to decide whether or not to prepare for flooding for the rest of the game. The winning teams will pay their bid.

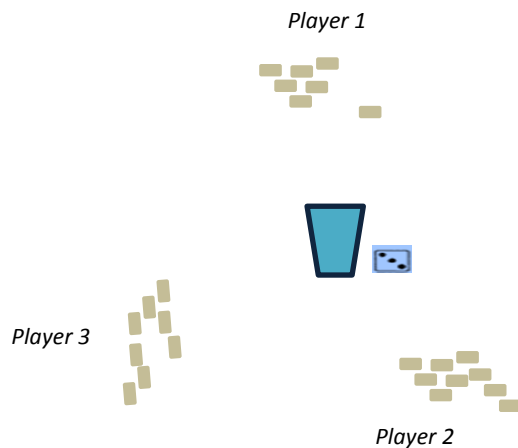


Each team can also decide to reduce the impacts of flooding, called Disaster Risk Reduction (DRR). This is a long-term intervention; the team that wins will have the impacts of flooding reduced in round 3 and onwards (rounds 1 and 2 are normal). Instead of paying 4 beans if they get flooded they will only pay 2. To get the DRR, a similar process to the forecast bid takes place, but in this case only the two highest team bids will win the DRR.



With these new conditions the game begins:

If your team won the forecast,
decide whether to pay one bean for
preparedness based on knowing
the roll of the regional die.



For example, if a player sees that the regional die is a 6, he/she knows that a roll of 4, 5, or 6 on the local die would result in a flood. This is a 50% chance! Read about what the Red Cross Red Crescent in [West Africa](#) did to prepare for a 50% chance of heavy rainfall in 2008.

If a player is flooded and has fewer beans than he/she needs to respond to a flood, then that person pays all of his/her beans and receives a penalty: a *humanitarian crisis*!

The player keeps playing until the end of the 10 rounds, and every time he/she gets flooded accumulates another humanitarian crisis.

In round seven the last TWIST is introduced: to represent climate change, the regional (blue) die is replaced with a special 8-sided die and gameplay continues as normal for the rest of the rounds.



What does climate change mean for the Red Cross Red Crescent? While every part of the world is expected to see different results, basic rainfall probabilities are changing from what we could expect in the past. In many places, the risk of heavy rainfall events is expected to increase. Read more [here](#).

WINNING:

- **The individual WINNER is the person with the most beans.**
- **The team WINNER is the team with fewest total humanitarian crises. If there is a tie the team with most total beans combined is the team winner.**