



Gender and Climate Game

Preparation Time

10 to 15 minutes

Game Play:

The game is played in turns that represent planting seasons. For most turns, a large die is used to represent the probability of rainfall extremes. If a “6” is rolled, there’s flooding (probability = 1/6); if a “1” is rolled, there’s a drought (probability also equals 1/6). A roll of “2” to “5” means normal rains, so no disaster. For some turns there can be a different forecast with a known and unusually high risk of disaster such as an “El Niño” forecast determined by the toss of a coin or a Frisbee: “tails” means no disaster, and “heads” represents a flood - 50% chance of disaster).

FARMERS AT RISK: in the role of subsistence farmers organized in ‘village’ teams, players make decisions that lead to collective patterns of choice and risk. Each farmer must make an individual decision about crop selection for the coming rainy season. Players make disaster risk reduction choices ‘with their feet’ by walking to the area marked with an umbrella at one end of the ‘village’ or to a bucket on the opposite side of the play area:

To invest in Flood risk reduction (in this game, the choice to plant rice – which performs well under excessive or normal rains), a farmer must walk to the ‘seed rice sales’ area near the umbrella

To choose Drought risk reduction (in this game the decision to plant cassava – which performs well under dry or normal conditions), a farmer must walk to the ‘cassava cultivar sales’ area near the bucket

No risk reduction, represented by planting maize – the ‘status quo’ which performs very well under normal conditions, but fails when either too much or too little rain, is indicated by standing in the center of the village

Drought and flood risk reduction (‘buying’ rice or cassava) involve an upfront payment of one bean; no risk reduction has no cost (farmers ‘save their seed’ from prior years).

Planting decisions result in harvest or disaster - gaining or losing beans – depending on the roll of a die to represent rainfall. Players who do not have enough beans remaining to pay for response to a disaster must ‘migrate to the city to find work’ (leave the game).

INTRODUCING THE GENDER DIMENSION: After 3 rounds of game play, by randomly distributing bracelets, gender roles are randomly assigned:

Men are those wearing bracelets. They begin with **2 beans**, representing advantages

Women do not wear bracelets. They begin with **1 bean**

If there is **no disaster** those that have planted a resilient crop **gain 2 beans** if they are playing men, but **only earn 1 bean if they are women** (due to their many other duties).

After a few turns playing with dice then introducing the 'El Niño' forecast (each clearly conveys the sense of probability of disaster occurrence), a *variation representing climate change uncertainty* is introduced: the die is replaced by a truncated cone (of the kind used by veterinarians on wounded dogs or cats). Players find themselves at a loss estimating the new probability of flood or drought, which is determined by different ways in which the cone may land after spinning in the air: big base on floor = "flood"; small base on floor = "drought", rolling on edge = "normal rains". Note that it is very important to spin the cone horizontally to increase chance of disaster.



Because of the counterintuitive probability of different outcomes under conditions of climate change, many players may find themselves wiped out after only a few rounds. Players experience the uncertainty of changing probabilities as well as the consequences of their decisions. This powerfully conveys to participants the need to anticipate and manage changing risks when designing and implementing humanitarian and development work.

These are the basic game mechanics:

0. Explain rules (powerpoint not necessary but file is available)

- Players should *expect* to be confused, both by the rules and throughout gameplay. Like in the real world, in this game the relationship between decisions and consequences can be complex... Being confused is a natural condition

(which should dissipate as gameplay evolves and people figure out the implications of the various rules).

- The game is a simplified representation of reality. It is designed to amplify certain aspects that matter for the purpose of learning about resilience, while excluding other aspects of reality that, while relevant, would make the game too complicated. Players join the game accepting the rules – no challenging the rules during gameplay.
- While consultation with team members is encouraged, each player's decisions are individual (nobody can force someone else to act in a certain way). There will be some "practice" rounds, and then six rounds "for real" (with losers, winners, and prizes).
- Farmers cannot share beans – in this game farmers simply may not give away beans (otherwise players tend to behave in unrealistically altruistic and cooperative ways).

1. Practice rounds: play 1 or 2 depending on how quickly players 'get the hang of it'
SHOW THE DIE, which represents the probability distribution of precipitation, based on the past record of rainfall (1 = "drought"; 6 = "flood"; normal rains otherwise)
REMIND FARMERS OF THEIR CHOICES: Go towards umbrella side for rice, towards bucket for cassava, and to center if planting maize. Risk reduction has a cost: if they choose to plant rice or cassava they must pay one bean upfront
INDICATE SHORT TIME AVAILABLE for consultation before deadline for individual decisions: rice and cassava sales will be closing!
START COUNTDOWN FOR DEADLINE: "10, 9, 8..." After end of countdown players may not change decision.
END COUNTDOWN WITH A LOUD "STOP!" Farmers must stay where they are – the location of their feet expresses their choice.
COLLECT PROTECTION PAYMENTS: Farmers who chose flood or drought risk reduction must pay one bean to the game assistant ('to plant their rice or cassava'). Facilitator should make and invite observations about decision patterns, such as risk aversion, similarity or difference across teams, etc).
ROLL THE RAINFALL DIE
GIVE & TAKE HARVEST OR DISASTER PAYMENTS
If there is no disaster, all players 'harvest': game assistants give 2 beans to every farmer
If a flood happens, game assistants give 2 beans to those who are harvesting in the "rice planting" area, and ask 4 beans to all other farmers 'whose crops were

washed away'

If a drought happens, game assistants give 2 beans to those who are harvesting in the "cassava planting area", and ask 4 beans to all other farmers whose crops withered

If a farmer cannot pay the 4 beans, she must leave the village 'for the city to find work' and is out of the game (narrative: farmer's family will not have enough food to survive the full year, and must seek survival in the capital city). Note that a farmer who pays 4 beans is safe and can stay, even if she is left with no beans: explain that she has no options to invest in risk reduction next planting season.

If needed, illustrate what would have been the consequences of a different roll of the die, so farmers become fully familiar with the rules of play

3. Explain new additional rules before starting game "for real"

The "real game" is about to start, with losers, winners and prizes (show what prize will be given to winning farmer and winning village). Before moving on:

Invite players to ask any questions to clarify rules. Answer all questions about game rules and mechanics, but refrain from answering any rules about strategy –let people learn through their own thinking and action.

Explain a minor tweak in the rules: If a farmer cannot pay the 4 beans, she migrates to the capital city, and spends one turn looking for a job... Survival is barely possible but life is miserable, so the following year the farmer decides to migrate back to the rural area... but to the other village, across the river. At the end of the game, the village which has lost the fewest farmers is the winning village

Mention that, like in the real world, throughout the game there may be surprises...

State clearly that the game will end after ten rounds, or after running out of time.

4. Begin game "for real"

- Start by giving sufficient time for farmers in each village to have a meaningful conversation (their last one) with each other. Then:
- Players make individual decisions
- Countdown
- "Stop!"

- Collection of upfront payment (1 bean) for those who sought flood or drought risk reduction
- Roll of the die
- Game assistants give or take beans according to farmers' planting choice and roll of the die
- Throughout the round facilitator may comment about observed behavior
- Next round begins

5. Introduce new conditions affecting player decisions

At the second or third turn it can be a good idea to introduce an external force that changes conditions for gameplay and therefore can influence decisions (see ppt file).

Other shocks: depending on interest of game session organizers, other types of shocks can be built into the game (e.g. civil unrest erupts and people cannot migrate to city and go to other village, economic crisis raises cost of rice & cassava, etc.)

At the third or fourth turn it is time to introduce climate change. Show truncated cone: “drought” if small base on the floor; “flood” if small base on the floor; normal rains and no disaster if it rolls on its side).

All other rules remain unchanged: Players must make decisions before countdown, there will be a toss of the cone, and outcomes still depend on player choices and random rains.

6. Adding Gender Dimension to Game

At the 4th or 5th turn where players have had a chance to become familiarized with the sequence of the game and its dynamics, introduce the Gender Dimension. To begin, the Facilitator hands out the bracelets to a mix of players (men and women alike). Only half of the players will have a bracelet to wear.

The Facilitator explains that those **players wearing a bracelet will now represent men** in this game. Those players not wearing a bracelet will represent women for the rest of the game. The Facilitator may note that, “We know that men and women are vulnerable to climate change in different ways. What is more, many of women’s daily responsibilities go beyond farming and also include raising children, collecting firewood and fetching water, taking care of the sick and elderly, and cooking food for the

household. These unremunerated tasks coupled with social and cultural norms can leave women confronting different challenges than men when disasters strike.”

The Facilitator explains that consequently, to represent cultural advantages that enable men to cope differently, and the differential vulnerability of men and women to climate variability and change, for the duration of the game:

Players representing women will begin with three beans and those wearing the bracelets representing men will begin with four. Explain that this increase represents advantages such as land ownership, access to inputs and credit.

If there is no disaster, those that have planted a resilient crop who are playing as men in the game gain 2 beans while those playing as women (no bracelets) who have planted a resilient crop only earn one bean.

At round 7 of the game, if desired, a change in family size due to teenage pregnancy can be introduced as an optional additional gendered dimension.

The facilitator announces that there are some necklaces, but not enough for everyone. Distribute necklaces randomly (toss in air and invite players to catch one if they like) then explain that each of the players who got a necklace to wear “just became a grandparent”. Now that their family size has increased, when there is a disaster, those wearing a necklace (whether playing as a man or a woman) must pay one more bean – 5 beans instead of 4 – to feed the family if the harvest fails.

7. Adding “Gender-smart Programming” Dimension to Game

Finally, introduce a version where females seemingly have an advantage: there is a new donor interested in promoting gender-smart programming. This donor provides support for female-managed home garden systems, recognizing the potential productive value as well as the contribution to poverty alleviation, food security and environmental sustainability that home gardens can offer.

For this final round, females begin with 2 beans and males begin with 1 bean. If there is no disaster, or if there is a disaster but the resilient crops were planted, females thanks to their home gardens’ productivity gain 2 beans while men gain 1 bean (with their traditional fields). If there is a disaster, females lose 4 beans and males lose 5 beans; the reason for this is that the womens’ home gardens are diversified and benefit from

diverse water conservation and irrigation techniques, so some crops may not have survived the disaster but a few will have, whereas men's fields have not.

After the end of the tenth round (or about 15 minutes before the end of the session), the game is over. Identify winning farmer, winning village, and give out prizes.

Discussion Questions:

After celebrations are over, invite players to form small groups (5-8 persons) to share insights and come up with 1-2 very brief comments to be shared with plenary about what they experienced and what they learned during the session. End by thanking all participants.

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