Game of Futures

Goal of Game: Determine if adaptation strategies are robust under different climate scenarios.

Materials
- Dice (1 / group)
- Pieces of candy/trinkets (represents agency and community resources)
- 4 future scenario narratives developed by experts/stakeholders describing potential impacts
- Several adaptation strategies that are seriously being considered as part of a planning process
  - Game is most useful when applying the scenarios to actual management approaches being considered by a community, making the outcome of the game more tangible.
- Prizes for winners (optional)

Set-up
Forming groups that represent individual agencies
- Break the room into groups of approximately 5 people
- Each group represents an agency with a specific mission (e.g., stormwater management agency, natural resource management agency). The groups can represent actual agencies in the room (e.g., each group made up of representatives from a specific agency or department) or it can be hypothetical (e.g., facilitator assigns people to random agencies).
- Each individual in a group will then choose an adaptation strategy to implement (either actual strategies being considered for implementation or hypothetical strategies assigned by the facilitator). Each individual in each group should have a different strategy. The more specific diverse the strategies the better.

Reconfiguring groups that represent diverse communities
- Then have the people in each group count-off 1-5. The room is then broken into new groups based on their numbers- all the ones form a group, all the twos form a group, and so on. The new groups should be made up of at least one person from each different agency (e.g., one individual from the stormwater agency, one individual from resource management agency…).
- The new group represents a community of different agencies/ organizations with different missions and values. Each individual in the group is a representative of a different agency.
- Have individuals introduce themselves to the new group, outlining what agency they represent, and the adaptation strategy they have chosen to implement.

Providing each community with resources
- It is assumed that each agency (individual) had the funding and capacity to initially implement the strategy.
- Each person (agency) is given 5 pieces of candy/ trinkets. This represents the total money an individual/ agency has to repair, maintain, or modify the adaptation strategy as climate change is experienced.

How to win the game
- There will be one **individual winner** within each group that is the agency with the most resources remaining (i.e, pieces of candy/ trinkets). This means this agency chose a strategy that required the least maintenance and modification over the long-term, proving to be resilient in multiple scenarios.
- There will be one **group winner** out of all groups that is the community with the most resources remaining (i.e, pieces of candy/ trinkets). This means this community chose strategies that required the least maintenance and modification over the long-term, proving to be resilient in multiple scenarios.

Let the game begin…

Step 1: What is our future?

Handout the scenario narratives now. *Facilitator note: Don't hand these out before now as it confuses people if they get these too early in the process.*
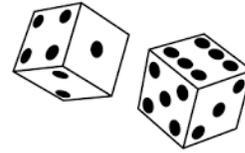
- **One person roll the dice 5 times**
- **Write down what number is rolled each time**

Each roll of the dice represents an event that causes our current state to be pushed towards a specific scenario.

One event will likely not push you into a new scenario but cumulative effects overtime may alter the "state" in which we manage. So:

- **Add up what you rolled for your final score**
  - Ex. Participant 1 rolled 1+2+3+4+5+6 = 21
- **Determine what scenario you are in using the table below**

	Current State Maintained	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Total	5 - 9	10 - 14	15 - 19	20 - 24	25 - 30

Step 2: Is my agency's strategy still effective?
If your community moves into a new scenario, reflect on the changes outlined in that scenario (refer to scenario narratives). Is each individual's strategy still effective in light of changes within the scenario?
- What strategies are successful in the new scenario? Why or why not?
- If not successful, can it be altered to be effective in the scenario?
- Or can it be combined with another strategy to be more effective?

Fill out your **worksheet**, as you discuss what the new scenario means for your chosen strategy.

Step 3: Do I need to pay to modify my strategy?
The group will decide what strategies are successful and which ones are not based on their knowledge of the community and best-available science.
- If the group decides a strategy works then the participant does not have to pay for modifications.
- If the group decides a strategy does not work and needs to be altered in some way then the participant has to pay one of its pieces of candy to the bank (center of the table).
- If the group is undecided that participant has to roll the dice.
  - Roll an even number and your strategy works
  - Roll an odd number and your strategy does not work, and you owe the bank one piece of candy.

Repeat with each participant. Keep repeating until all four scenarios have been explored by the group.

Wrap-up and reflections

Begin by determining who the individual and group "winners" are. If multiple people or groups seem to have been successful, begin a discussion around why those individuals/ groups were successful. Then the facilitator continues to guide a discussion amongst all participants to elicit what lessons were learned throughout the process. Sample prompting questions below:

- What strategies seemed to be the most resilient?
- Community vs. individual (agency) successes?
- How many rounds did your group complete? Why fast or slow?
- What did you struggle with throughout the game?
- Was there one scenario that seemed to be particularly difficult for your agency or community?

The following climate adaptation games guided the development of this:

- *Game of Floods.* County of Marin Community Development Agency. http://www.marincounty.org/depts/cd/divisions/planning/sea-level-rise/game-of-floods
- *Decisions for the Decade Game.* Rand Corporation, Robert Lempert and USC Sea Grant, Juliette Hart. Session at the California Adaptation Forum- *Decisions for the Decade: Serious Games for Gnarly Problems (*Sept 7, 2016)

Worksheet: *Climate Scenarios Game of Futures*
Topic, agency or community:

Strategy	Solves a current problem?	Successfully addresses changes outlined in …				Are there ways to adjust the strategy, so that it does work in every scenario? • Combine with another strategy?	Knowledge gaps/ research needs
		Scenario A?	Scenario B?	Scenario C?	Scenario D?		
	☐ Yes ☐ No ☐ Unsure	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?		
	☐ Yes ☐ No ☐ Unsure	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?	☐ Yes ☐ No ☐ Unsure Why?		