



Rules

3-5 Players

Goal

Each player is a different fishing company competing for the most money each fishing season. Be the first player to make \$100 to win! Be careful though, if all the fisheries run out, everyone goes out of business and no one wins...

Materials

- ❖ Player Hand Cards:
 - Number Cards (1-5)
 - Fish Species Cards (one card for each fishery in play)
- ❖ Event Deck
 - Event Card Breakdown Sheet
- ❖ Fish Tokens
 - 30 square Spotted Reef Crab tokens
 - 25 circular Tang tokens
 - 20 pentagonal Parrot Fish tokens
 - 10 rhombus-shaped Grouper tokens
- ❖ Initiative Token
- ❖ Score Card

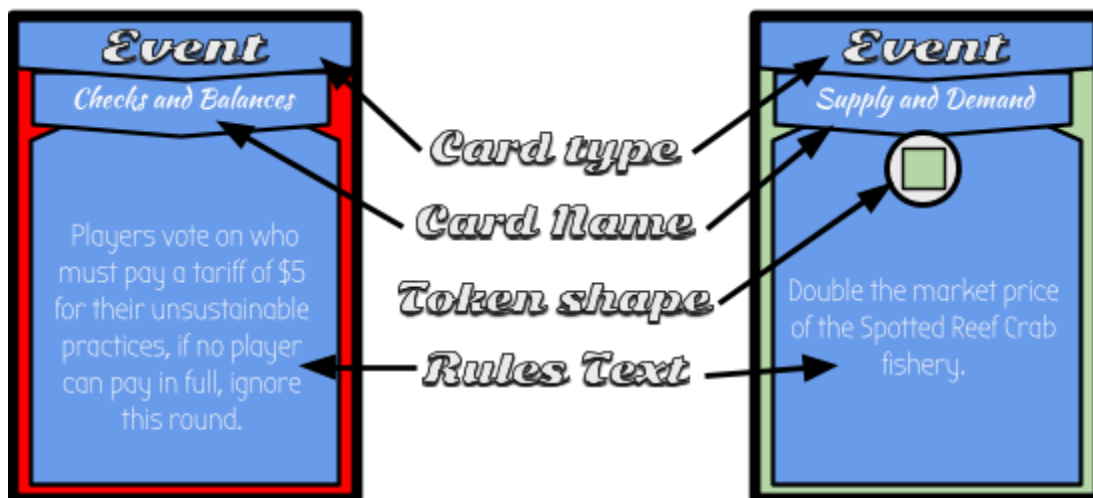
*If using modified playing card deck and materials, see below section, “Rules Variants”

Card Breakdown

Fishery Card



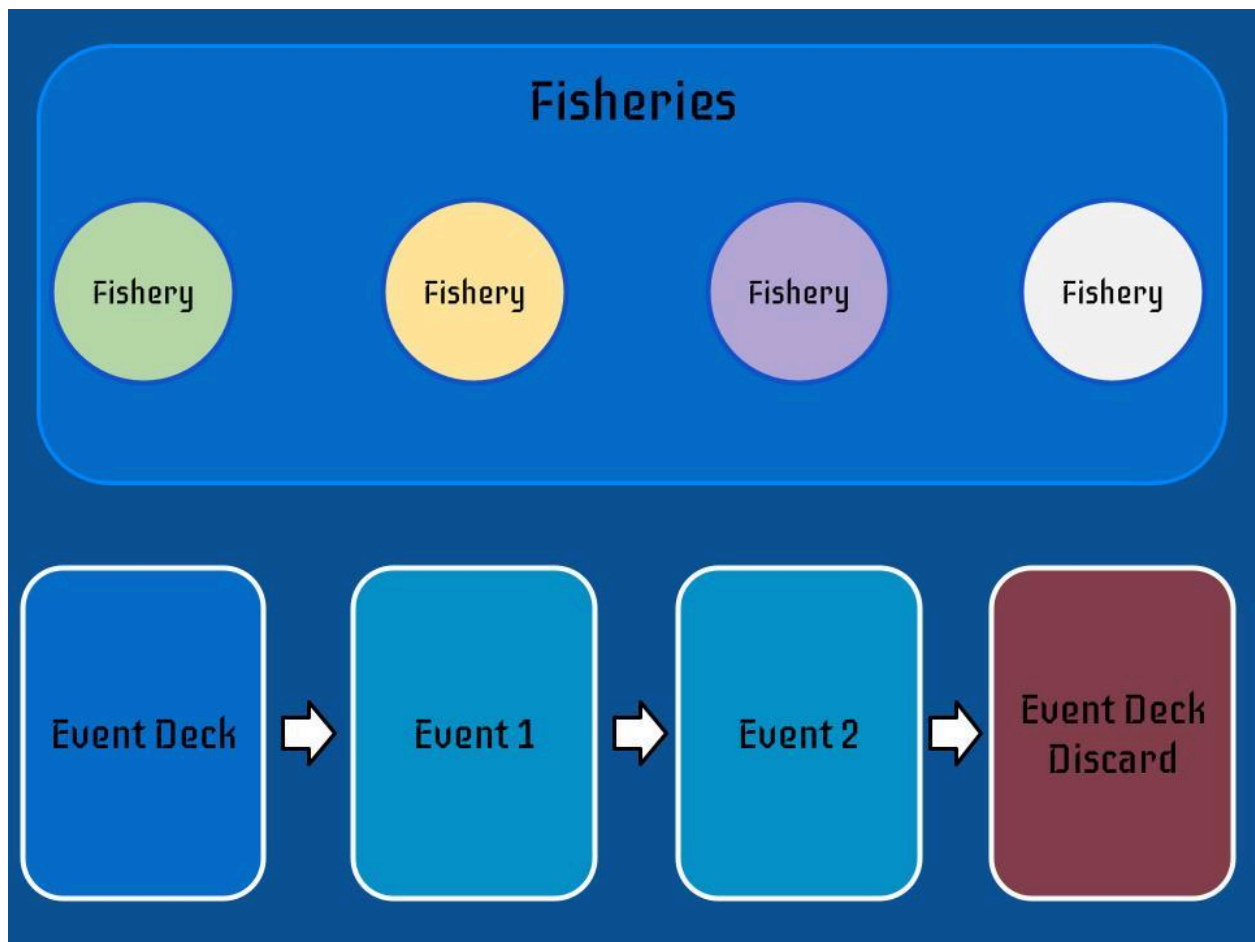
Event Cards



Some event cards affect only certain fisheries. These events have that fishery's token symbol and color on them for ease of reference.

Setup

Begin by setting up the table for play, using this setup guide.



1. Select the 4 fishery cards and line them up in their designated spots on the board.
2. “Fill the fisheries” with fish by placing the correct number of tokens in each fishery area, noted by the “starting population” on each fishery card.
3. Shuffle the event deck. Draw one card from the deck and place it in the Event 2 spot, then draw another card and place it in the Event 1 spot.
4. Pass out the player hand cards. Each player should receive their hand cards: number cards 1-5, and one corresponding fish card for each type of fishery in play.
5. To start, the player who last visited the beach or last caught a fish gets the initiative token.
6. Place the accounting sheet (scorecard) to the side.

Playing a Round

1. Resolve event cards starting with the card in the Event 1 spot.
2. Each player simultaneously places one number card and one species card from their hand face down to indicate which population of fish they want to harvest from and how many fish they want to harvest.
 - a. Players are allowed to discuss their plans (and lie) but cannot explicitly say the number or species card they have placed.
3. When all players have chosen the cards they will play that round, all players reveal their cards simultaneously. Beginning with the player who has the initiative token, and moving clockwise, harvest the chosen number of fish from the corresponding fishery by taking the equivalent number of fish tokens. If the population of a fishery is below the number of fish a player chose to harvest, the player harvests the remaining fish in that fishery. If there are no more fish in a fishery after harvesting is over, that fishery is locally extinct, and players can no longer harvest its fish.
4. Calculate each player's profit for the round (number of fish caught * market price) and add it to players' running totals. If a player reaches \$100, the game ends. The player with the highest total profit wins.

Resetting for the next round

Begin to reset the board for the next round:

1. Rotate the initiative token clockwise to the next player.
2. Resolve any event cards that trigger at the end of the round, Starting with the event in the Event 1 spot if both resolve at the end of round.
3. Double the remaining fish population in each fishery. If doubling the population would cause the number of fish to surpass the fishery's carrying capacity, replenish the fish tokens back up to that fishery's carrying capacity.
4. Rotate the event cards in play. Move the card in the Event 2 spot into the discard pile and the card in the Event 1 spot into the Event 2 spot. Draw a card from the Event deck and place it into the Event 1 spot.

Important Notes and Exceptions

- ❖ Players must harvest from a non-extinct fishery.
- ❖ Players cannot abstain from harvesting in a round (you have to make a living!).
- ❖ Some event cards require players to vote. This should be carried out by counting down from 3 and each player should point at the player or fishery they are voting for.
- ❖ Should a fishery be extinct, but an event card references it, instead ignore the fishery and follow the rules of the card as completely as possible.
- ❖ Fisheries cannot have negative fish.

Rules Variants

Standard 52-Card Deck in Place of Event Deck

Materials

- ❖ Standard 52-Card Deck
 - Spades: Spotted Reef Crab (square tokens)
 - Clubs: Tang (circular tokens)
 - Diamonds: Parrot Fish (pentagonal tokens)
 - Hearts: Grouper (rhombus-shaped tokens)
- ❖ Standard Deck Reference Sheet

Steps:

1. Remove all Jokers from the deck.
2. Shuffle and place the deck in the Event Deck spot.
3. Use the Standard Deck Reference Sheet to match the playing cards to event cards during play.

Higher Difficulty Level

If players are looking for a higher difficulty level, they can play with one fewer fishery than the number of players (e.g. four players would play with three fisheries). Keep in mind that this version of the game is more competitive, and that fisheries will likely go extinct faster than at the normal difficulty level.

Steps:

1. Choose which fisheries to play with.
2. For whichever fishery or fisheries were not chosen, remove all fish tokens and event cards pertaining to the missing fisheries from the game.

Educational Guides and Information

Why These Fish?

These species of aquatic life were chosen to represent specific ecological roles in a coral reef ecosystem. Coral reef ecosystems are incredibly diverse and have substantial benefits to human populations, but are currently threatened by many factors, including unsustainable fishing practices. The species included in the game are spotted reef crabs, tangs, parrotfish, and groupers.

Spotted reef crabs are nocturnal scavengers and opportunistic hunters, mainly feeding on marine snails. While they are not fished commercially, they are trapped by indigenous fishermen in Tanzania and are sometimes used as additions to aquariums due to their striking appearance.

Tangs are small colorful fish that are primarily herbivores/primary consumers in the reef community, feeding mainly on algae. They are not fished commercially for food, but are popular aquarium fish. They have sharp, venomous spines at the base of their tail.

Parrotfish are also herbivorous. They are sometimes fished commercially and play an important role in the coral reef as ecosystem engineers; they shape the physical environment by scraping algae (their primary food source) off of corals. This prevents overgrowth of algae as well as allowing them to break down bits of coral into sand (which they poop out).

Many species of grouper are highly fished both commercially and recreationally. Some species are currently threatened by overfishing. These are large predatory fish who are generally solitary and territorial, hunting smaller fish opportunistically with their powerful jaws.

Why These Words? Comments About Specific Vocabulary and Events

The names and functions of the cards in the event deck were chosen to represent real-life processes that could affect an aquatic ecosystem or commercial fishers. Here are the reasons behind the cards:

Fishing Economy and Player Motivation:

- Supply and demand: If demand is high for a species (especially if supply is low), people will pay more.
- No market interest: If there is little demand for a species, consumers are willing to pay less.
- High incentive: Motivate players to harvest from a specific fishery (higher reward).
- Low incentive: Motivate players to harvest from a specific fishery (lower reward).
- Conservation watch: Reward players for prioritizing sustainability over profit.
- Bureaucracy: Reward players for prioritizing sustainability.

- Climate conference: Climate conferences are yearly conferences organized by the UN to assess progress and establish plans to address climate change. Here, this concept is used to decide on a fishery to target for conservation.
- Protected species: Species are categorized by extinction risk, with different regulations on hunting/harvesting based on category.
- Limits: Commercial fisheries often have a limit on the amount of each species of fish they can possess or harvest. By enacting limits and sticking to them, it is easier to maintain populations.
- Checks and balances: This gives other players an opportunity to punish someone who has been prioritizing profit over sustainability and prevent them from getting too far ahead in the game.

Ecological Events:

- Invasives: Invasive species are species that have been introduced to areas they are not native to and overpopulate their new environment, causing detrimental effects to native species through competition or predation.
- Coral bleaching: Corals rely on zooxanthellae (photosynthetic algae) that live inside the coral and are their primary food source. When water temperatures increase, corals expel their zooxanthellae (losing their food source) and turn white. This is detrimental to all species in the coral reef ecosystem.
- Population boom: Ecosystems vary in species composition over time. Populations can have a good breeding season and increase in population unexpectedly.
- Oil spill: Pollution can cause widespread death to many species in an ecosystem, wiping out a large number of individuals at once.
- Bycatch: Bycatch is the unintentional capture of non-target animals and is common in the fishing industry, threatening endangered and vulnerable species. It often kills the non-target animal, which is then discarded.

Did Everyone Lose? Here's Why: The Tragedy of the Commons

The tragedy of the commons is a situation in which individuals with access to a public resource act in their own interest and hoard the resource, ultimately resulting in complete depletion of the resource over time. In Fish or Failure, when players become too greedy and attempt to take all of the fish for themselves, it results in the extinction of the fish populations, making the game more difficult for all players. Players are encouraged to play the game again with this in mind. If players can temper their greed and fish sustainably, the fisheries can stay afloat (no pun intended!) and everyone will be happy.