

# Fishpond

## Group game

## Fishpond in brief



- You go fishing in a pond.
- The game ends either when all the fish are caught or at the end of the 10th round.
- Number of fish at the beginning of the game = number of players x 4.
- The number of fish that can be caught in any one round ranges from 0 to 3 per person.
- Your aim is to catch as many fish as possible (see scoring system).
- Please note: Although the fish population recovers between rounds, it does so only to a limited extent.
- You fish alone and anonymously (wearing a mask) over several rounds.

# Fishpond by round

- Players put on their masks before a round begins. Talking is not allowed.
- Players wishing to catch a FIRST fish should raise their hand when prompted.
- Players wishing to catch a SECOND fish should raise their hand when the second cast is called.
- Players wishing to catch a THIRD fish should raise their hand when the third cast is called.
- Please note: The second cast is only open to those who fished in the first cast, and the third cast is only open to those who fished in the first and second casts. Players who choose not to catch a fish in the first cast can thus not fish in the second or third cast.
- Players take off their masks and note down how many fish they caught on their score sheets.
- The number of fish remaining in the pond doubles between rounds. The fish population will never exceed what it was at the beginning of the game, however (four fish per player).

# Fishpond with penalties

- A penalty system can be introduced.
- After each round, the players are asked to raise their hand if they wish to penalise overuse.
- Penalty points cannot be given for free, however. Anyone wishing to give a penalty point has to give up one of their own points.
- Anyone who caught three fish in that round will be penalised.  
The number of penalty points they receive corresponds to the number of players giving penalty points minus one.
- No more than three penalty points can be given, however. Two examples:  
3 players giving penalty points = 2 penalty points  
7 players giving penalty points = 3 penalty points
- Penalty points are awarded anonymously and before the result of the round is announced (masks should therefore only be taken off afterwards).

# Teacher evaluation

without penalties

with penalties

short version

| #    | Number of fish at beginning of round | 1st fish | 2nd fish | 3rd fish                     | Total number of fish caught | Number of fish remaining at end of round | Number of players giving penalty | Number of penalty points received per player |
|------|--------------------------------------|----------|----------|------------------------------|-----------------------------|--|----------------------------------|--|
| Test | 0                                    |          |          |                              |                             |  |                                  |  |
| 1    | 0                                    |          |          |                              |                             |  |                                  |  |
| 2    | 0                                    |          |          |                              |                             |  |                                  |  |
| 3    | 0                                    |          |          |                              |                             |  |                                  |  |
| 4    | 0                                    |          |          |                              |                             |  |                                  |  |
| 5    | 0                                    |          |          |                              |                             |  |                                  |  |
| 6    | 0                                    |          |          |                              |                             |  |                                  |  |
| 7    | 0                                    |          |          |                              |                             |  |                                  |  |
| 8    | 0                                    |          |          |                              |                             |  |                                  |  |
| 9    | 0                                    |          |          |                              |                             |  |                                  |  |
| 10   | 0                                    |          |          |                              |                             |  |                                  |  |
|      |                                      |          |          | Total                        | 0                           |  |                                  |  |
|      |                                      |          |          | Average per player           | 0                           |  |                                  |  |
|      |                                      |          |          | Average per player and round | 0                           |  |                                  |  |

# Scoring system

## Points and marks

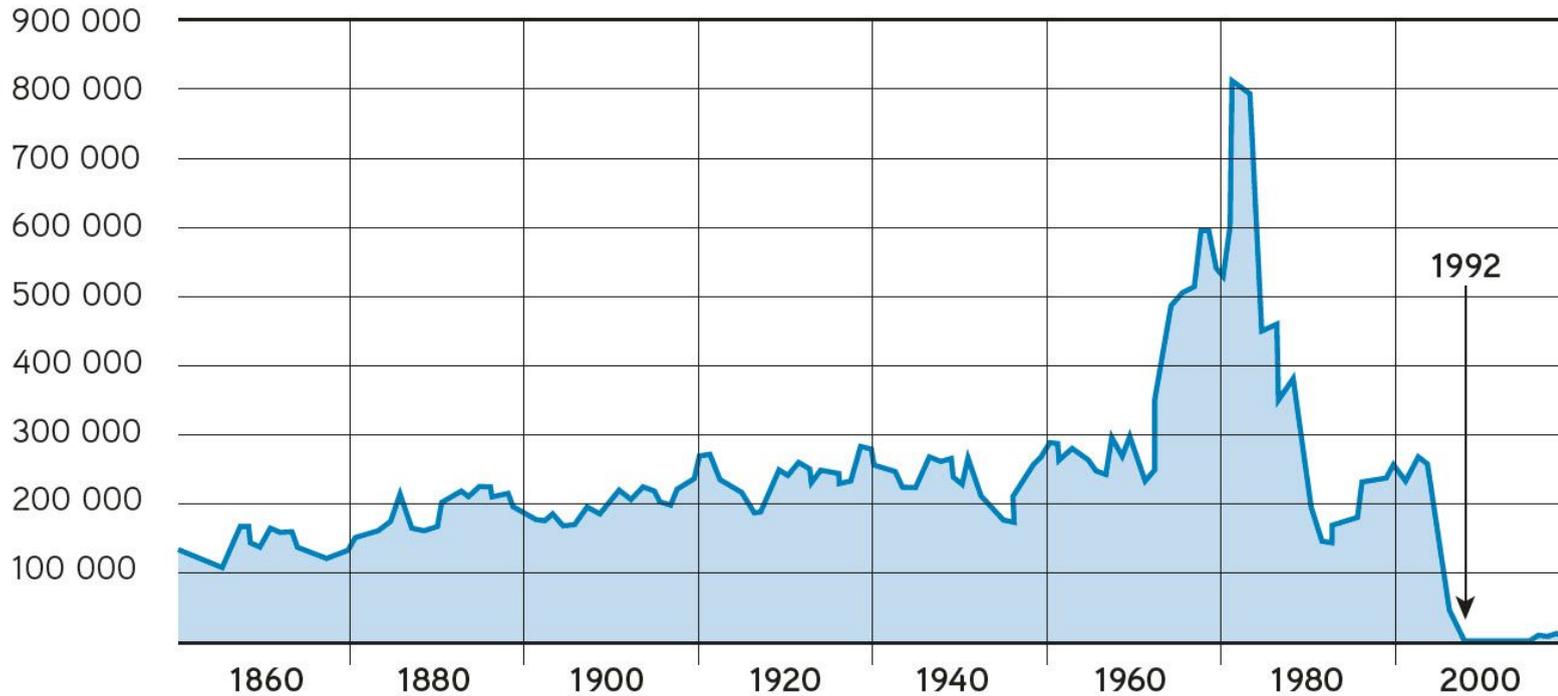
| 0-2 | 3-4 | 5-6 | 7-9 | 10-11 | 12-14 | 15-16 | 17-19 | 20-21 | 22-24 | 25-30 |
|-----|-----|-----|-----|-------|-------|-------|-------|-------|-------|-------|
| 1   | 1½  | 2   | 2½  | 3     | 3½    | 4     | 4½    | 5     | 5½    | 6     |

### Note for teacher:

This table can also be used if the game ends early as a result of the depletion of the resource (if no fish are left before ten rounds have been played).

# Collapse of Atlantic cod stocks off the east coast of Newfoundland (Canada)

## Fish landings in tonnes



# Solving the tragedy of the commons\*

## Privatisation

- Define and guarantee private property rights. This addresses the heart of the issue (no common pool resource and no negative externalities).
- However, this approach can be problematic as it is generally almost impossible or too expensive to put into effect, particularly with regard to the enforcement.

## Avoid overuse

- Commonage should remain commonage. Private or government solutions should aim to restrict overuse and negative externalities, however.

## Government measures\*\*

- Introduce prohibitions and restrictions, and enforce them through supervision and the use of sanctions.
- Restrict the incentive to overuse a resource by introducing fees and incentive taxes.

## Private measures

- Effect of social norms (expected behaviour in a group, which may be enforced with the help of sanctions).
- Negotiate and monitor voluntary agreements (rules, bans, compensation), and possibly enforce them through the use of sanctions.

\* Universally valid in the case of negative externalities.

\*\* To expand on this topic, a look at the following solution might be interesting: the creation of markets on which certificates for the use of a particular resource are negotiated (e.g. rights for CO2 emissions).