

Arctic CleanUp multi players rules book V1

1 Inspiration

The goal of this game is to raise public awareness on plastic pollution in the Arctic.

This game took inspiration from the (real world) program: The Ocean CleanUp but also from research papers on Arctic pollution.

The Ocean Cleanup is a non-profit organization (NPO). They are developing and scaling technologies to rid the world's oceans of plastic. Figure 1 illustrates two technologies with a ship and a fence to collect trash.



Figure 1: “The Ocean Cleanup” project’s ship

In this game you will with others NPOs (multi player mode) to collect pollution token from the Arctic ocean and process them in your factory!

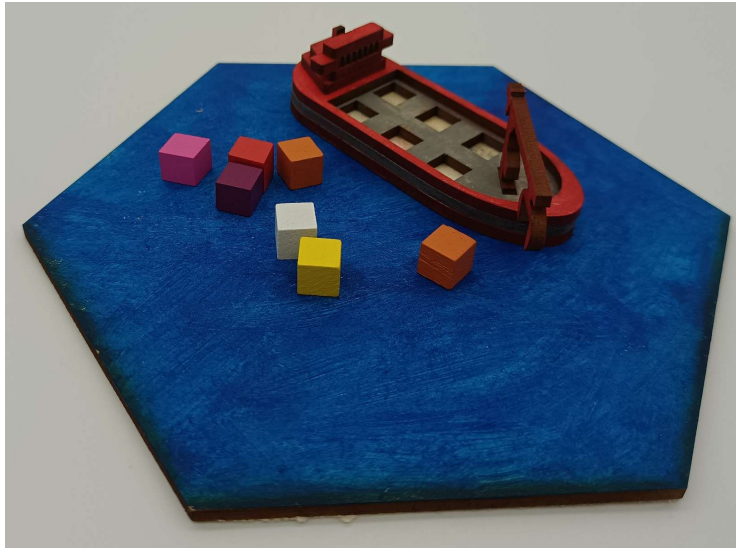


Figure 2: Ship and pollution tokens



Figure 3: Multi players

Carefully selecting the pollution token you load on your ships and that you will unload to process in your factory is key to win the game, as you are not the

only NPO in Arctic water!

2 Components

2.1 Pollution tokens

- 50 Pollutions tokens (colored wooden tokens as shown in Figure 4):
 - Red tokens: HDPE, 2 victory points (VP),
 - Green tokens: LDPE, 2 VP,
 - Blue tokens: : EVA, 2VP,
 - Yellow tokens: PP, 3VP,
 - Grey tokens: PS, 3VP,
 - Black tokens: PMMA, 2VP,
 - Purple tokens: PET, 2VP,
 - Pink tokens: PA6, 2VP,

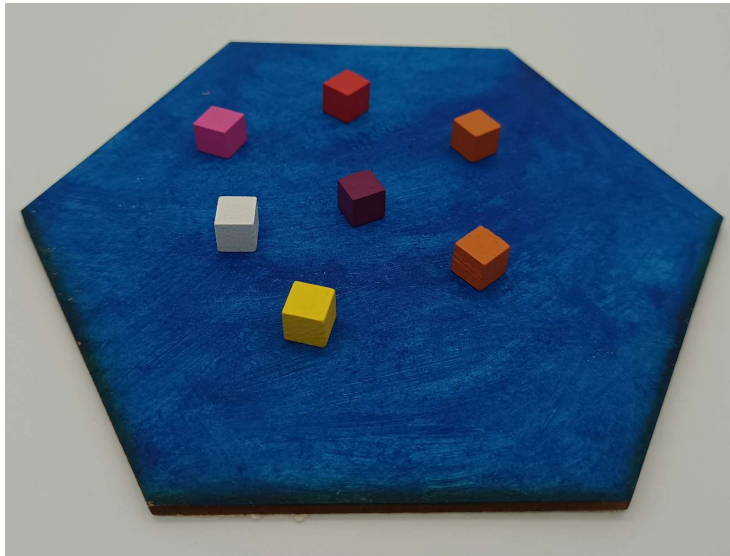


Figure 4: Set of pollutions tokens on a water hexagon

2.2 Main board

- 1 main board Ocean (Figure 5)

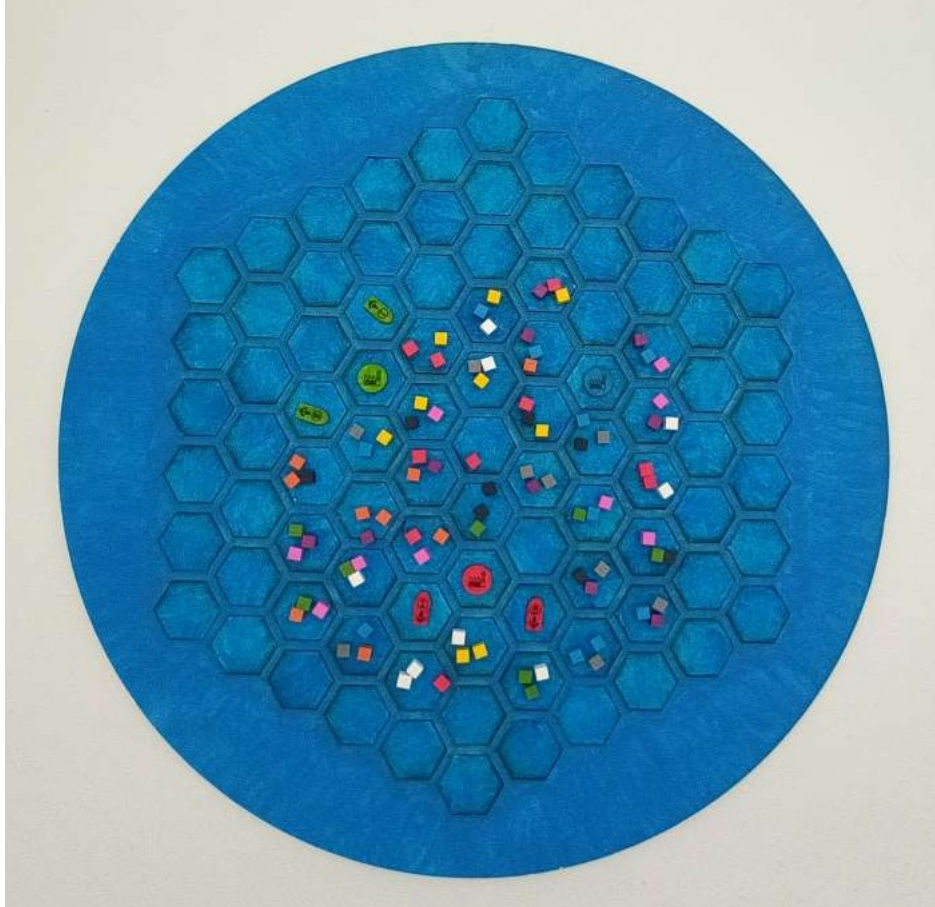


Figure 5: Main board: the Ocean

2.3 Players components

2.3.1 Your fleet



Figure 6: Red player 2 ships and 2 token ships

- 2 ships,
- 2 ships tokens.

The ships go on the personal board and the ship tokens go on the main board, they are a representation of your ship on the board. Figure 6 shows the ships and the ships tokens for red player.

2.3.2 Your personal board

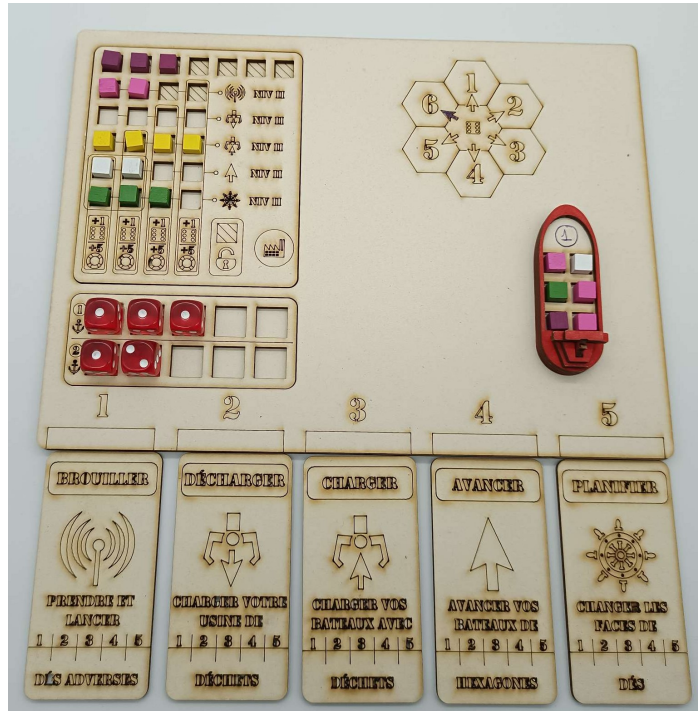


Figure 7: Red player personal board

- personal board layout:
 - top left: the factory, where the pollution tokens will be processed (cf. figure 8),
 - top right: a wind rose to help you plan your moves (cf. figure 7),
 - bottom left: your planning zone with dices, (cf figure 7)
 - bottom right: the place you put your 2 ships (cf figure 7),
 - bottom: 5 action cards you will choose one action to do at your turn in this list (cf. figure 7):
 - * plan,
 - * move,
 - * load,
 - * unload,
 - * analyze.

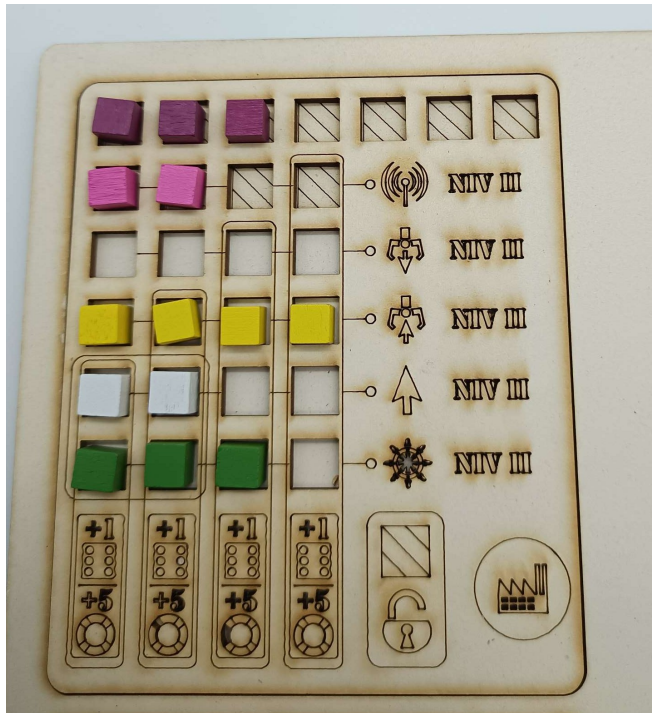


Figure 8: Zoom on red player factory

3 Setup of the game

3.1 Global set up

1. Ocean tiles: put the ocean tiles in the hexagonal grid except for the player factories hexagons, refer to the schematics for player factory placement (it changes depending on the number of players).
2. Pollution phase (pollution tokens distribution): this phase represents the past and current generations throwing plastic garbage in the ocean:
 - (a) take turn to throw cubes from the bag (without looking in the bag) at random locations on the board,
 - (b) then group the pollution cubes on the ocean tiles so that there is 3 pollution tokens on each hexagon (ocean tile). No cubes should be on the empty hexagons.
3. Determine players order (random),
4. The last player puts its factory first and so on until the first player puts its factory on the remaining empty hexagon on the board.

3.2 Personal board

- Put the 2 ships and the dices of your color on your personal board.
- Put only 5 dices on the planning board:
 - 3 dices for the ship 1,
 - 2 dices for the ship 2,
 - all 5 dices should have the face 1 (number 1) up.
- The five other dices remain in the supplies you can use them at the beginning of the game but we will see later how you can gain them!

4 Game play

In Arctic CleanUp players take turns in clockwise order starting from the first player until the end of the game is triggered. When the end of the game is triggered by a player the game end immediately. When it is your turn you take (only) one action among this list:

- plan the movement of your ships,
- move the ships,
- analyze water to find more pollution tokens,
- load pollution tokens to your ships,
- unload pollution token from your ships to your factory,

then it is the next player turn!

4.1 Strength of a card and slide movement

4.1.1 Cards layout

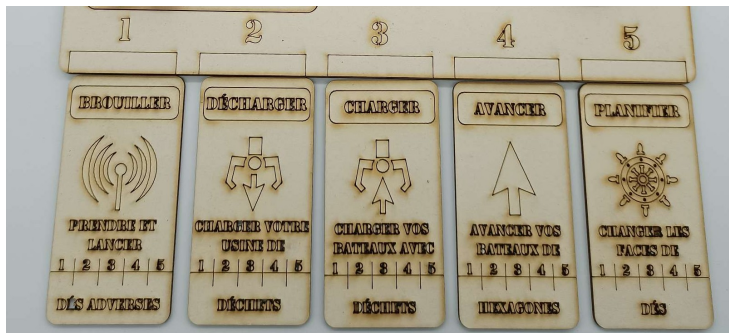


Figure 9: zoom on the action card columns on a personal board

The 5 possible action cards are stacked in columns, from column 1 to column 5 on your personal board as shown in figure 9.

4.1.2 Action mechanism

When it is your turn you have to:

1. choose only one card action,
2. do the action with the strength X, where X is the number of the column,
3. take the card out, slide all the cards in the columns under it up one column,
4. move the card you used back to column 1.

Important note: when playing a card with strength X you can choose to use it effect with a lower strength than X. For example playing a “strength 5” move action you can decide to only move your ship of one hexagon.

4.1.3 Examples

It is red player turn and her cards are in the layout off figure 9. First she must choose one action in this list:

- playing the analyze action at strength 1,
- playing the unload action at strength 2,
- playing the load action at strength 3,
- playing the move action at strength 4,
- playing the plan action at strength 5.

Let assume that she chooses the plan action at strength 5. She will affect 5 dices on her planning board (more details on this in the move section).

Then she take out the plan action card, slide all the cards bellow one column up and put the plan action in column 1.

At the end of her turn her cards layout is:

- plan card in column 1,
- analyze card in column 2,
- unload action in column 3,
- load action in column 4,
- move action in column 5.

The sections bellow will explain in more details each action card.

4.2 Plan Action

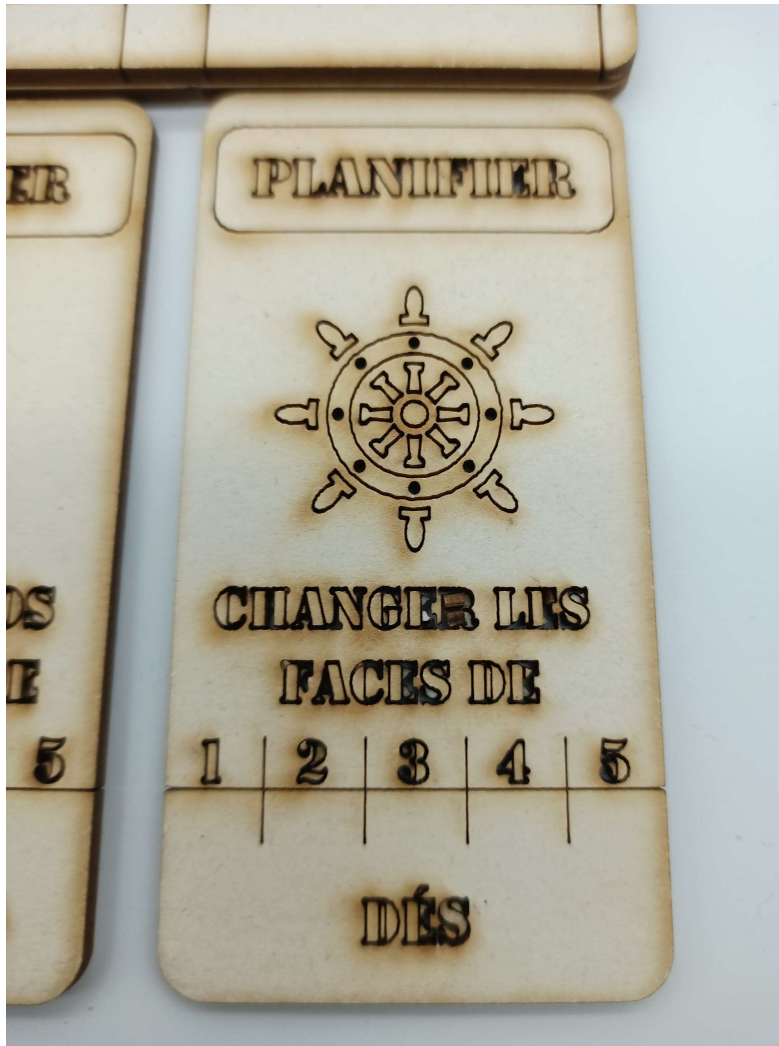


Figure 10: Zoom on the plan card

4.2.1 Planning zone



Figure 11: Zoom on red player planning zone

The planning board as two rows as shown in figure 11 :

1. the first row is used to plan the move of your first ship token on the main board (ocean),
2. the second row is used to plan the move of your second ship token on the main board (ocean).

4.2.2 Plan mechanism

Use your plan action at strength X to rotate and move X dices on your planning zone:

- rotate the dices to change theirs upper face values,
- move the dices:
 - from the outside of your personal board to the planning zone:
 - * Used dices during a move action are removed from your planning board and put on the side of your personal board.
 - * You can also gain new dices as we will see in the “unload action” section!
 - from one row to another if you want to have more movement for a specific ship.

The rose wind (cf figure 7) help you plan the moves of the ship, if you use a dice with upper face value of:

- “1” your ship will go up
- “2” your ship will go up right
- “3” your ship will go down right
- “4” your ship will go down
- “5” your ship will go down left
- “6” your ship will go up left

4.2.3 Example

After using the plan card at strength 1 you can affect 1 dice by either:

- putting a dice back in the planing board:
 - on row 1,
 - on row 2,
- move one dice from a row to the other row,
- rotate the dice to change the value of it’s upper face.

Figure 11 shows the result of using action plan at strength 1 where the second dice on the ship 2 row is rotated from 1 to 2.

4.3 Move action

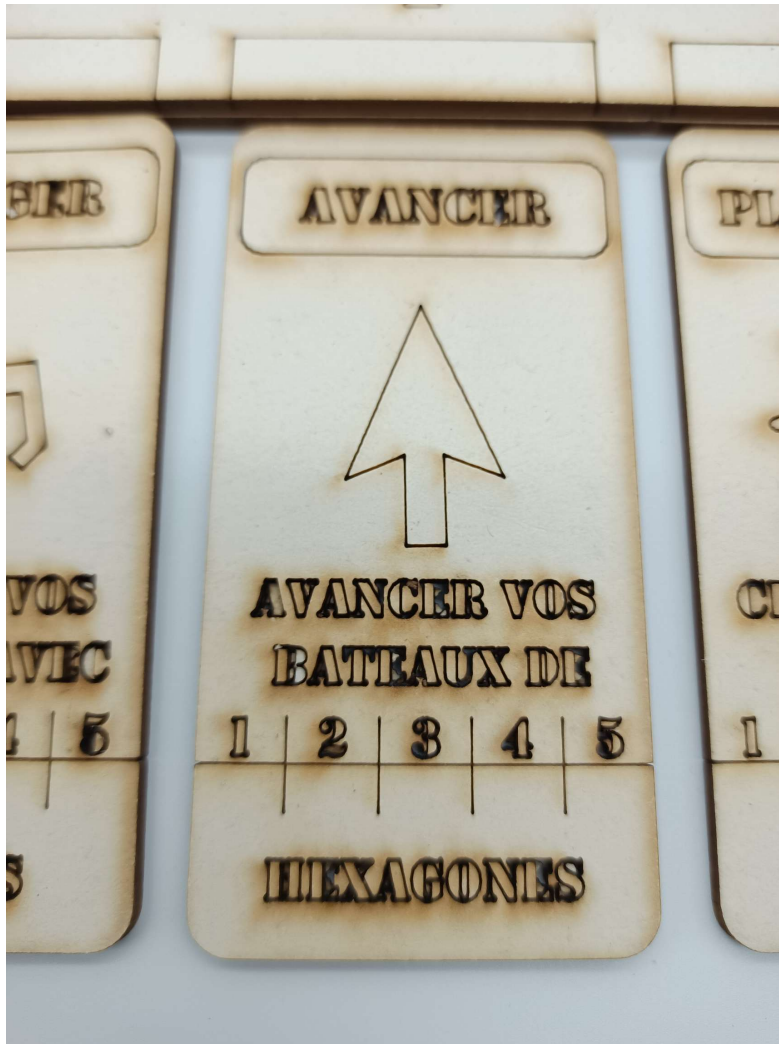


Figure 12: Zoom on the move action card

4.3.1 Move the ships

Use your move action with strength X to remove X dices from your planning board and move X times your ships tokens on the main board.

4.3.2 Example

Let assume we have figure 11 layout of dices and that you can and choose to do a strength 5 move action. You could do the following:

1. remove the 3 dices from row 1 and then move ship 1 token on the main board 3 times up,
2. remove two dices from row 2 and then move ship 2 token on the main board up and then left up.

But you could also choose to play the card effect with a lower strength then 5: for example only move ship 1 one time up and remove 1 dice on row 1 but do not move ship 2.

4.4 Load action

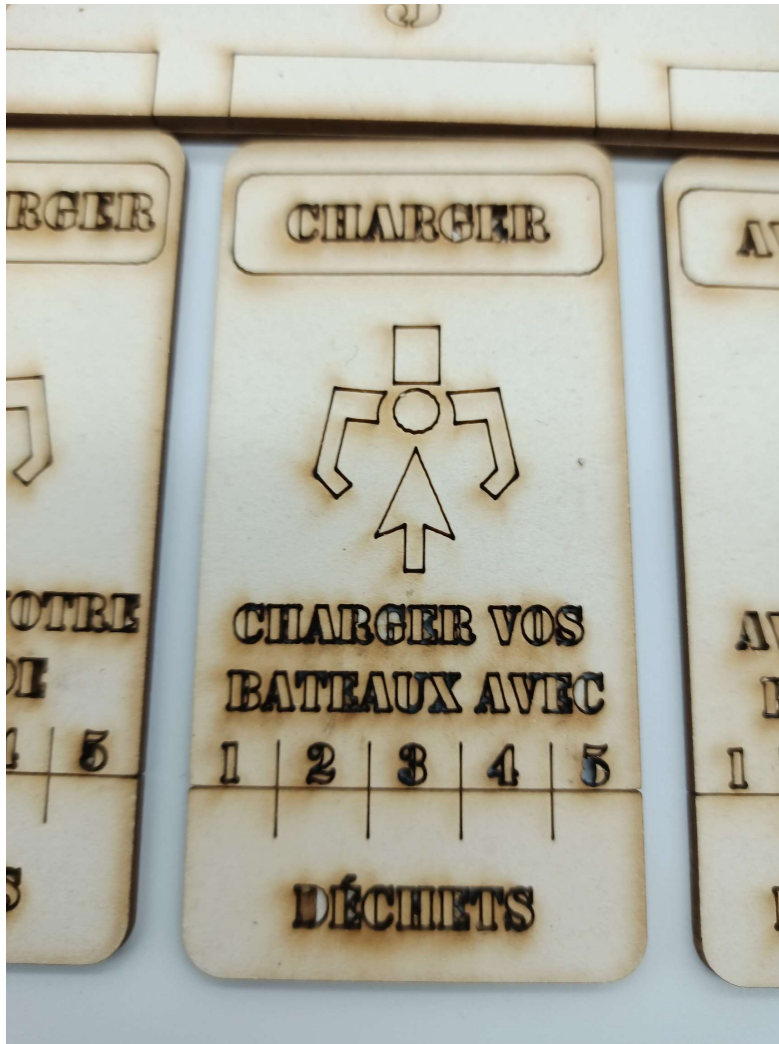


Figure 13: Zoom on the load action card

Use the load card with strength X (1 to 5) to load up to X pollution tokens on your ships.

4.4.1 Process

- Take the tokens from the main board and put it in the corresponding ship on your personal board.

- You can split the number of token to load as you want between your two ships.
- You can load all type of pollution tokens in your ship, but the pollution tokens that score 3VP tokens at the end of the game requires a special bonus unlock in your factory to unload them on special processing lines!

4.4.2 Requirement

- To load a pollution token it must be on the same ocean tile as your ship.

4.4.3 Restrictions

Be careful:

- you cannot load tokens on a ship that is already full!
- you cannot throw back pollution token from your ship to the sea (that would be polluting)!
 - So you cannot exchange a token from your ship to a better one from the sea if your ship is already full.
 - You can only get rid of the loaded token by unloading them in your factory, if possible (more on that on the next section).
- you cannot load your 2 ships full of 3VP pollution tokens before you have unlock the corresponding block bonus. You need to have at least one free space to load regular 2 VP otherwise you will be locked with two full ships and no way of unloading them...

4.4.4 End game scoring

- Loaded token that are remaining in your ships at the end of the game only give you 1 victory point regardless of their type (instead of 2VP or 3VP in the factory)!

4.4.5 Example



Figure 14: Loading tokens on your ships

Let assume we have figure 14 scenario, and that you can use a load action with strength 5. You can load the 3 tokens on the same ocean tile that ship 1 and the 2 pollutions tokens that are on the same ocean tile that ship 2. Figure 15 shows the tokens in the corresponding red player's ships.

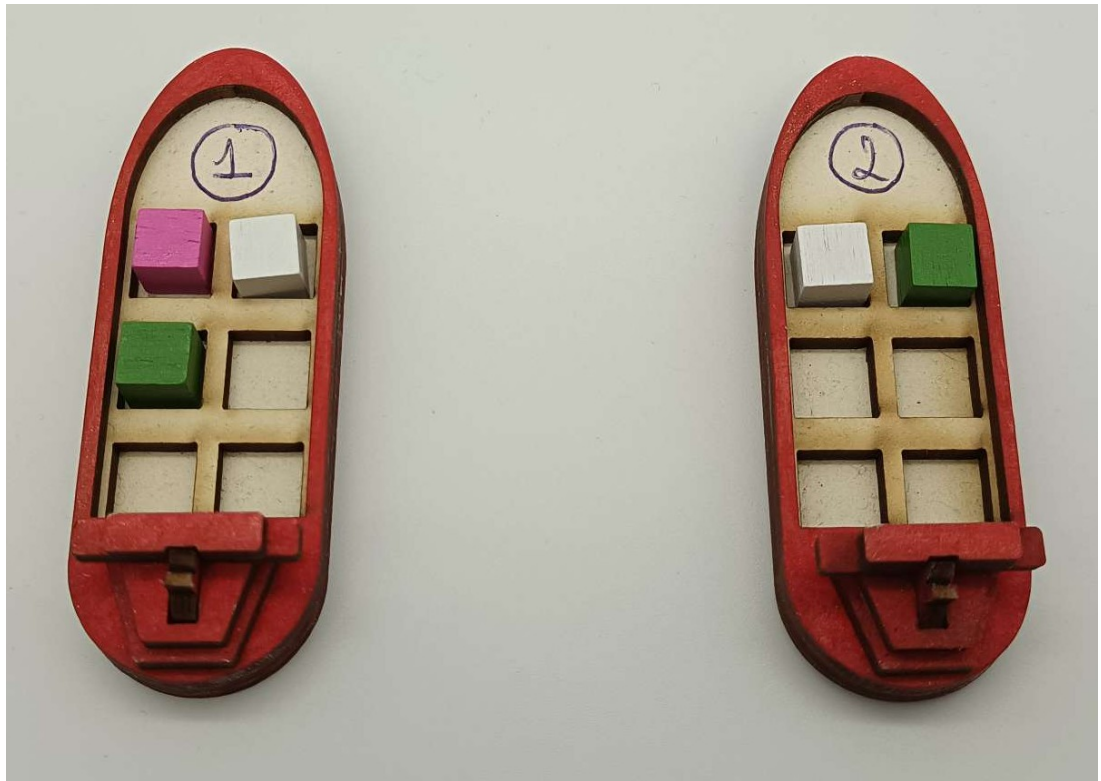


Figure 15: Loaded tokens on red player ships

4.5 Analyze water to find more pollution token

Figure 16: Zoom on the analyze action card

Use the Analyze card with strength X to take X pollution tokens from the pollution tokens bag (without looking in the bag) and put them on the tiles where your ships are. You can choose the distribution of pollution tokens between your two ships.

4.6 Unload action



Figure 17: Zoom on the unload action card

Use the unload card with strength X (from 1 to 5) to unload X pollution token in your base factory.

4.6.1 Requirements

Your ship must be on a ocean tile touching your factory to unload.

Figure 18 shows a configuration where red player's ship 1 can unload but ship 2 cannot.



Figure 18: Zoom on the unload action card

4.6.2 Pollution tokens in the factory

- Put every token of the same color on the same line of your factory,
- always start the line from the left,
- you can't store 2VP tokens on the hatched lines those are in construction for processing only 3VP pollution tokens!
- you can't mix pollution token type (color) on a same factory line, once you start with a color you need to commit to it and fill the line with the same color (be strategic when loading the pollution cubes!).
- You can have multiple lines of the same color.
- Pollution token processed on any player factory is public information for other players.

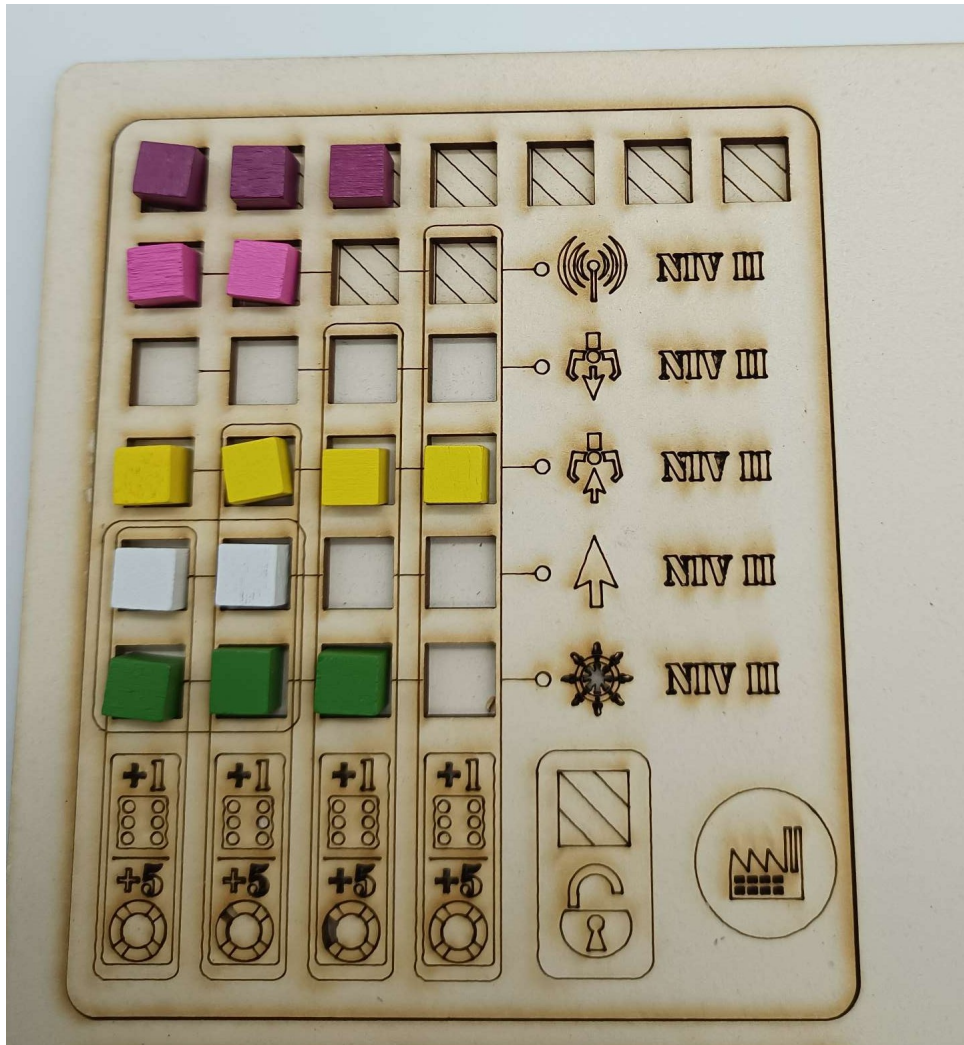


Figure 19: Zoom on the factory of red player

4.6.3 Gaining dice block upgrades

After filling a block with pollutions tokens that is attached to a dice reward, the player gain a new dice from the supply. It can be used for the rest of the play. The player also get a 5VP bonus for each dice upgrade at the end of the game.

Figure 20 shows a factory where the player unlocked the first dice block bonus.

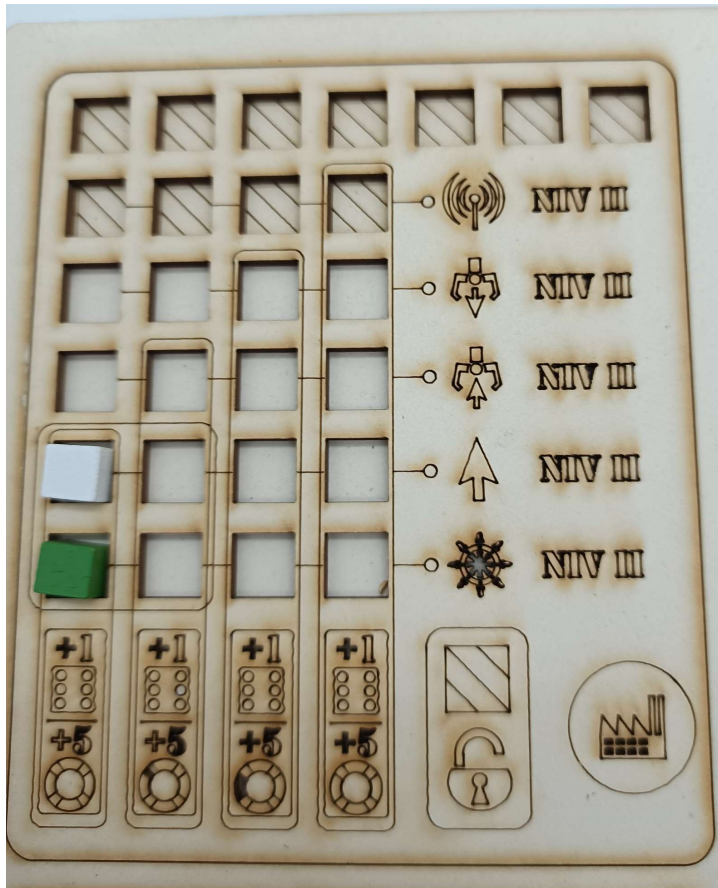


Figure 20: Zoom on the factory of red player

In figure 19 the players unlocked 2 dices and 10 VP bonus for the end of the game!

4.6.4 Gaining access to the 3VP pollution tokens hatched processing lines

You need to have 2 tokens on the bottom processing line and two tokens on the processing line above to unlock this bonus!

Congratulations!

- You can now unload 3VP pollution tokens in your factory, but only on the hatched processing lines.
- You will be able to upgrade the Analyze card if you fulfill the hatched processing line with 4 emplacement.
- You cannot put 3VP tokens on the regular processing lines.

- As for regular 2VP tokens when you start a hatched processing line with a type of 3VP pollution token (a color) you can only put the same type on all the line no mixing of the trash.
- Reminder: you cannot put 2VP tokens on the hatched processing lines at any times.

In figure 19 shows a factory where the player unlocked the 3VP processing lines.

4.6.5 Gaining the analyze upgrade

When you have unlocked the 3VP processing line block and you have completed the hatched processing line with 4 emplacement line (with 3VP tokens of the same color) you can upgrade your analyze card by flipping it to the upgraded side!

4.6.6 Gaining the other upgrades

When you have completed the processing line with 4 emplacement line (with 2VP tokens of the same color) that match the logo of the action you can now upgrade your card by flipping it to the upgraded side!

4.6.7 Benefits of the upgrade

When playing an upgraded card with strength X you can now play the action with the double of X as an effect!

For example playing an upgraded move action at strength 5 gives you 10 moves that you can allocated to your 2 ships (but you need to unlock additional dice to fully benefit from this upgrade, don't you!).

4.7 End of the game

4.7.1 Triggering

After an unload action if a player have 16 pollution tokens or more in the factory, the game ends immediately! There is no more actions for the others players. So I suggest that you keep an eye on others players factory, their ships cargo and their ships positions during the game!

4.7.2 Scoring points

Count the victory points in your factory:

- points for pollution tokens,
- points for upgrades unlocked.

Count the victory points for remaining pollution tokens in your ship:

- 1 point for every pollution token still onboard of your ship (regardless of the color).

The player with the most points at the end of the game wins.

In case of a tie, players tied share the victory.



Figure 21: Happy Arctic Ocean cleaning!