

INSTRUCTIONS

1. Print this rulebook double-sided, ideally in color on kraft cardstock.
2. Make sure the hexagon is perfectly centered on the cardstock. If it is not, select the "Actual Size" printing option or set the scale to 100%.
3. Cut out the rulebook pages along the dotted lines.
4. Staple the two sheets of cardstock together, following the page numbers.



Coop



1-5



10+



30 min

OBJECTIVE

As members of Norvatica's government, you must work together to decide which solutions to implement to reduce pollution, weighing their costs and benefits, while also anticipating their long-term risks and interdependencies.

SETUP

1. Find objects that can be used as tokens (coins, buttons, pebbles, pasta, beans, tokens from other games, etc.), or make your own with the help of the Recipe card. Place these objects on the corresponding spaces on the Tokens card.
2. Find a die and place two paper clips on number 1 of each tracker.
3. Shuffle the social, technological, and geoengineering Solution cards together, then arrange them in three rows as shown in the image below.
4. On the board, place 3 wood tokens on each forest, 3 freshwater tokens on the river, 2 detritus tokens on each yellow city, 3 basic materials tokens on the orange quarry, and 2 rare metals tokens on the black mine. Place the hexagonal tile representing the technology center nearby.
5. Place 3 gold coins in your reserve, next to the board, and the remaining coins in the bank, alongside the awareness tokens and the remaining detritus tokens (representing all forms of pollution).

MATERIAL

TO PRINT

2 booklets
1 board
1 hex tile
1 Recipe card
1 Tokens card
1 Trackers card
18 Solution card

TO FIND

65 tokens (see card)
2 paper clips
1 die
1 ficelle





GAMEPLAY

A game consists of 5 rounds. Each round includes an Action phase and an Adjustment phase.

ACTION PHASE

Choose up to 3 actions in any order or, if you build a technology center, up to 4 actions starting the round after its construction. You may perform the same action more than once per round.

- **Extract 1 or more resources from the same hexagon** on the board, place them in the country's reserve, and replace each of them with a detritus token.
- **Sell 1 or more resources of the same type** from the country's reserve to the bank, or buy them from the bank and add them to the country's reserve.

1 resource token = 1 gold coin, 1 rare metals token = 2 gold coins

- **Implement 1 solution from the top row** by paying the required amount of gold coins to the bank and/or placing the required resources from the country's reserve on the card (geoengineering solutions require a technology center).

Place the chosen card next to the board and fill the empty spaces in the top and middle rows by moving up one of the two cards directly below, as shown in the image below.





- **Build a technology center** on a completely cleared forest by paying 3 gold coins to the bank and placing the hexagonal tile on it, as shown in the image above. Geoengineering solutions are then unlocked, and you may perform 1 additional action in subsequent rounds.

- **Run 1 awareness campaign** by paying 1 gold coin to the bank and adding 1 awareness token to the country's reserve.
- **Strengthen 1 implemented social solution**, when possible, by taking 1 awareness token from the country's reserve and placing it on the card (maximum 3 tokens per card).
- **Remove 1 detritus token** from the board (maximum once per round).

AJUSTMENT PHASE

Follow these 4 steps in order:



1. **Add 2 detritus tokens to each city** and, if applicable, 1 detritus token to the technology center.
2. **Add 2 gold coins to your reserve.** These represent government revenue allocated to environmental solutions.
3. **Pay the maintenance costs of implemented solutions** to the bank, when it is required, starting one round after their implementation. If you do not have enough gold coins to pay the maintenance cost of one solution, remove its card from the game, along with any resources placed on it.
4. **Apply the effects of implemented solutions** on detritus, as indicated at the bottom of the cards.





END OF THE GAME

If there are no detritus left when you need to add some to the board, you lose the game.

At the end of 5 rounds, open the Consequences booklet and apply the long-term effects of each implemented solution based on the number indicated on the card.

Evaluate your performance according to the number of detritus tokens left on the board:

0 - 1	Your country has become a nature sanctuary. Hooray!
2 - 3	The pollution level has decreased. Well done!
4 - 5	The pollution level has remained stable. That's acceptable.
6 - 7	The pollution level has increased. What a shame!
8+	Your country is now uninhabitable. It's a disaster!



GAME DESIGN

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2026

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5. Punch a hole in each page where indicated by the black circle.
6. Thread a string through the hole and tie it into a loop.



LONG-TERM EFFECTS OF THE SOLUTIONS

25 years have passed. Apply the long-term effects of each implemented solution based on the number indicated on the card.

UNPREDICTABLE SOLUTIONS

Roll the die.

1. If you get 1 or 2, add 1 detritus to the board, as the dams failed during record floods.
2. If you get 1 to 4, add 3 detritus to the board, as the bacteria have mutated and begun to consume metals.
3. If you get 1 to 3, add 3 detritus to the board, because algal blooms have gotten out of control.
4. If you get 1 to 4, add 2 detritus to the board, as the space mirrors have caused droughts in some regions and disrupted flowering cycles.
5. If you get 1 or 2, add 1 detritus to the board, as marine energy plants have accelerated coastal erosion and disrupted marine ecosystems.
6. If you get 1 to 4, add 2 detritus to the board, since a tritium leak has contaminated the surrounding rivers and streams.
7. If you get 1 to 4, add 3 detritus tokens to the board, as sulfate aerosols have worsened ozone layer depletion.



INTERDEPENDENT SOLUTIONS

8. If Space Mirrors are implemented, add 2 detritus to the board, as these devices have reduced the efficiency of solar panels.
9. If Carbon-Neutral Buildings are not implemented, add 1 detritus to the board due to the formation of urban heat islands.
10. If no clean energy plants (Marine, Fusion, Hydroelectric, or Solar) are implemented, add 1 detritus to the board.
11. If Electric Transport is not implemented, add 1 detritus to the board, as transporting the seaweed generates pollution.
12. If Waste Digesters are not implemented, add 1 detritus to the board due to a compost shortage.
13. If Regenerative Agriculture is not implemented, add 1 detritus token to the board due to low demand for compost.

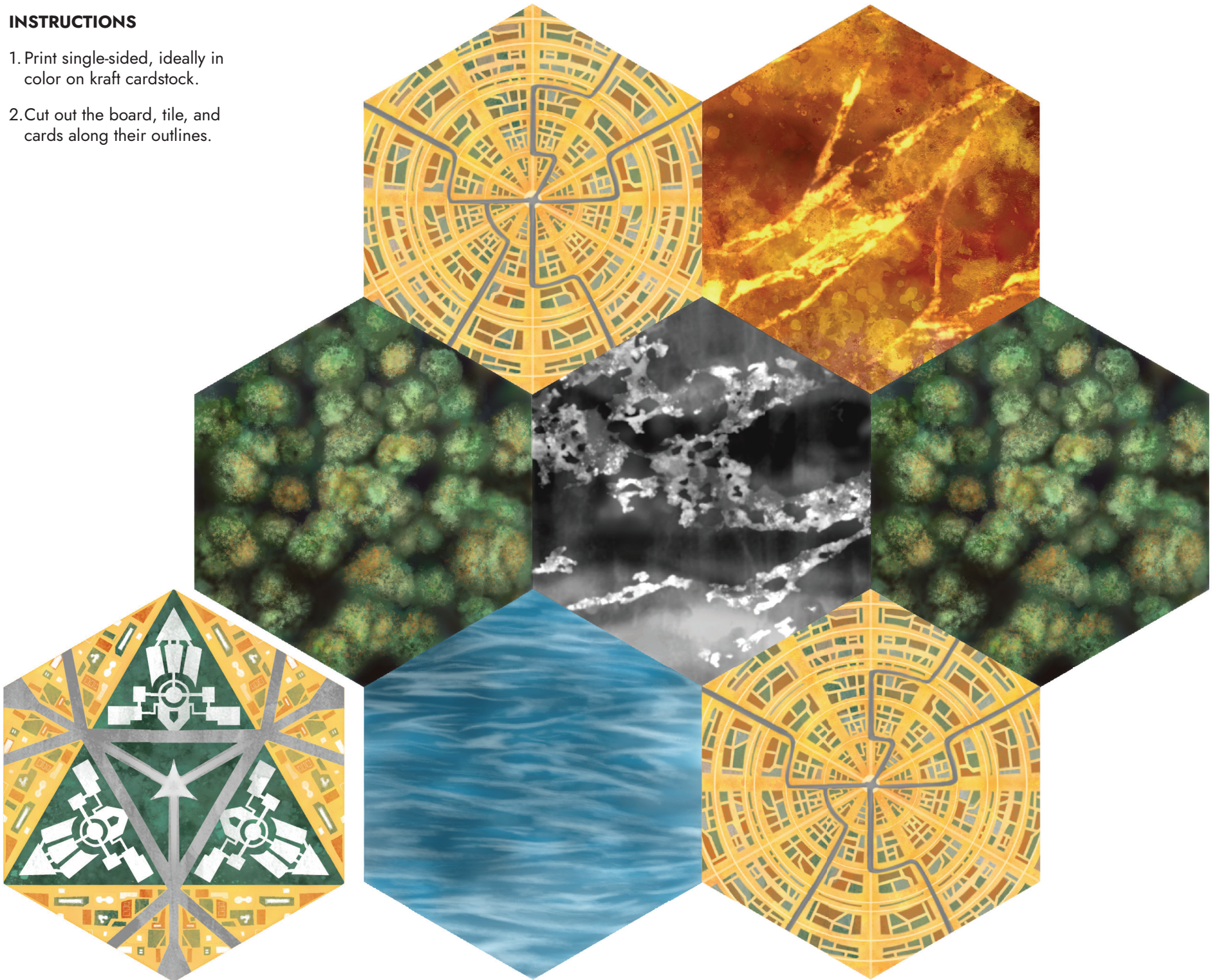
PREDICTABLE SOLUTIONS

14. The widespread adoption of a circular economy has considerably reduced the amount of waste while also strengthening community ties.
15. The large-scale adoption of a low-meat diet has reduced CO₂ levels while improving the livestock welfare.
16. Forcing companies to transition toward greener practices has proven profitable for them in the long term and beneficial to public health.
17. Thanks to the savings they provide, carbon-neutral buildings have become the standard in construction.
18. Regulating highly polluting luxury activities has not only reduced pollution but also social inequalities.

Do not open this booklet until the end of the game.

INSTRUCTIONS

1. Print single-sided, ideally in color on kraft cardstock.
2. Cut out the board, tile, and cards along their outlines.



Recipe

To craft your tokens:

1. Mix 1 cup of baking soda with $\frac{1}{2}$ cup of cornstarch in a saucepan.
2. Add $\frac{3}{4}$ cup of water and stir until the mixture is smooth.
3. Cook over medium heat, stirring constantly, until the mixture forms a thick dough.
4. Remove the dough from the saucepan, cover it with a damp cloth, and let it cool.
5. Knead the dough until smooth.
6. Shape the dough into the desired token shapes and let them air-dry for 12 hours.
7. Dye tokens of the same color by shaking them together in a container with a few drops of food coloring.

Tokens

Wood (6)	
Freshwater (3)	
Basic materials (3)	
Rare metals (2)	
Gold coins (15)	
Detritus (21)	
Awareness (15)	

Counters

Rounds

Actions

1	1
2	2
3	3
4	4
5	



Technology

Place 2 basic materials tokens

1- HYDROPOWER PLANT



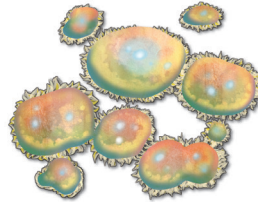
Pay 1 gold coin per round
Remove 2 detritus per round

Harnessing the power of moving water to spin turbines generates energy without emitting CO₂.

Geoengineering

Pay 3 gold coins

2- WASTE-EATING BACTERIA



Remove 1 detritus per round

Genetically engineering bacteria could enable them to break down plastic waste.

Geoengineering

Pay 2 gold coins

3- OCEAN FERTILIZATION



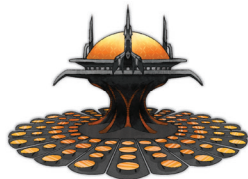
Remove 2 detritus per round

Fertilizing the oceans with nitrogen or phosphorus could boost the growth of phytoplankton that absorbs CO₂.

Technology

Place 1 rare metals token

8- SOLAR POWER PLANT



Pay 1 gold coin per round
Remove 2 detritus per round

Installing photovoltaic panels allows the conversion of solar energy into electricity.

Geoengineering

Place 1 rare metals token and
pay 1 gold coin

4- SPACE MIRRORS



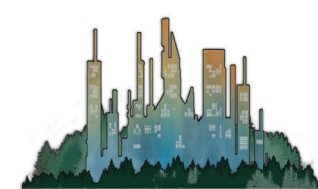
Pay 1 gold coin per round
Remove 3 detritus per round

Deploying reflective devices in orbit could deflect a portion of sunlight and help reduce global temperatures.

Technology

Place 1 awareness token
and 1 basic materials token

9- VERTICAL CITIES



Remove 2 detritus per round

Reducing urban sprawl helps preserve more vegetation that can absorb greenhouse gases.

Social solution

Place 1 awareness token

14 - CIRCULAR ECONOMY



Remove 1 detritus per awareness token placed on the card (max.3) per round

Reusing, repairing, sharing, renting, and exchanging goods would reduce resource and plastic consumption.

Social solution

Place 1 awareness token

15 - LOW-MEAT DIET



Remove 1 detritus per awareness token placed on the card (max.3) per round

Reducing meat consumption would decrease methane emissions, water pollution, and deforestation caused by intensive livestock farming.

Social solution

Place 2 awareness tokens

16- ANTI-POLLUTION LAWS



Remove 2 detritus per round

Imposing fines or penalties on polluting industries would encourage them to reduce their CO₂ emissions.

Technology

Place 2 wood tokens

17 - CARBON-NEUTRAL BUILDINGS



Pay 1 gold coin per round
Remove 2 detritus per round

Using wood, recycled materials, green roofs, and superior insulation reduces buildings' carbon footprint.

Technology

Place 2 basic materials tokens

5 - MARINE POWER PLANTS



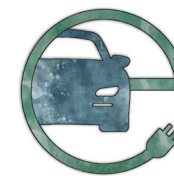
Pay 1 gold coin per round
Remove 2 detritus per round

Using tides, ocean currents, or waves to power turbines generates energy without producing CO₂.

Technology

Place 1 rare metals token

10 - ELECTRIC TRANSPORT



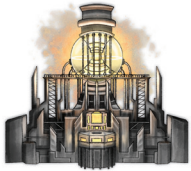
Pay 1 gold coin per round
Remove 2 detritus per round

Replacing gasoline-powered vehicles with rechargeable battery-powered vehicles helps reduce CO₂ emissions.

Geoengineering

Place 1 basic materials token
and 1 rare metals token

6- NUCLEAR FUSION PLANTS



Pay 1 gold coin per round
Remove 3 detritus per round

Mastering nuclear fusion could
provide abundant energy without
producing radioactive waste.

Technology

Place 1 freshwater token

11- RED SEAWEED FEED



Remove 1 detritus per round

Feeding ruminants red seaweed helps
reduce their methane emissions.

Technology

Place 1 wood token and
1 awareness token

12- REGENERATIVE AGRICULTURE



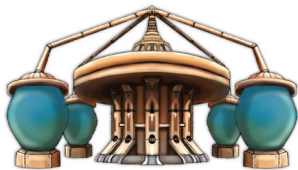
Remove 2 detritus per round

Using compost, intercropping,
and less tillage helps store carbon
and reduces the use of chemical
fertilizers.

Technology

Place 1 basic materials token

13- WASTE DIGESTERS



Remove 1 detritus per round

Using microorganisms to break down
organic waste allows to produce
compost and biogas.

Social solution

Place 2 awareness tokens

18- ULTRA-LUXURY BAN



Remove 2 detritus per round

Banning highly polluting ultra-luxury
activities, such as private jets and
space tourism, would reduce CO₂
emissions.

Geoengineering

Pay 2 gold coins

7- STRATOSPHERIC AEROSOLS



Pay 1 gold coin per round
Remove 2 detritus per round

Spraying sulfur aerosols in the
stratosphere could reflect a portion
of sunlight and cool the planet.