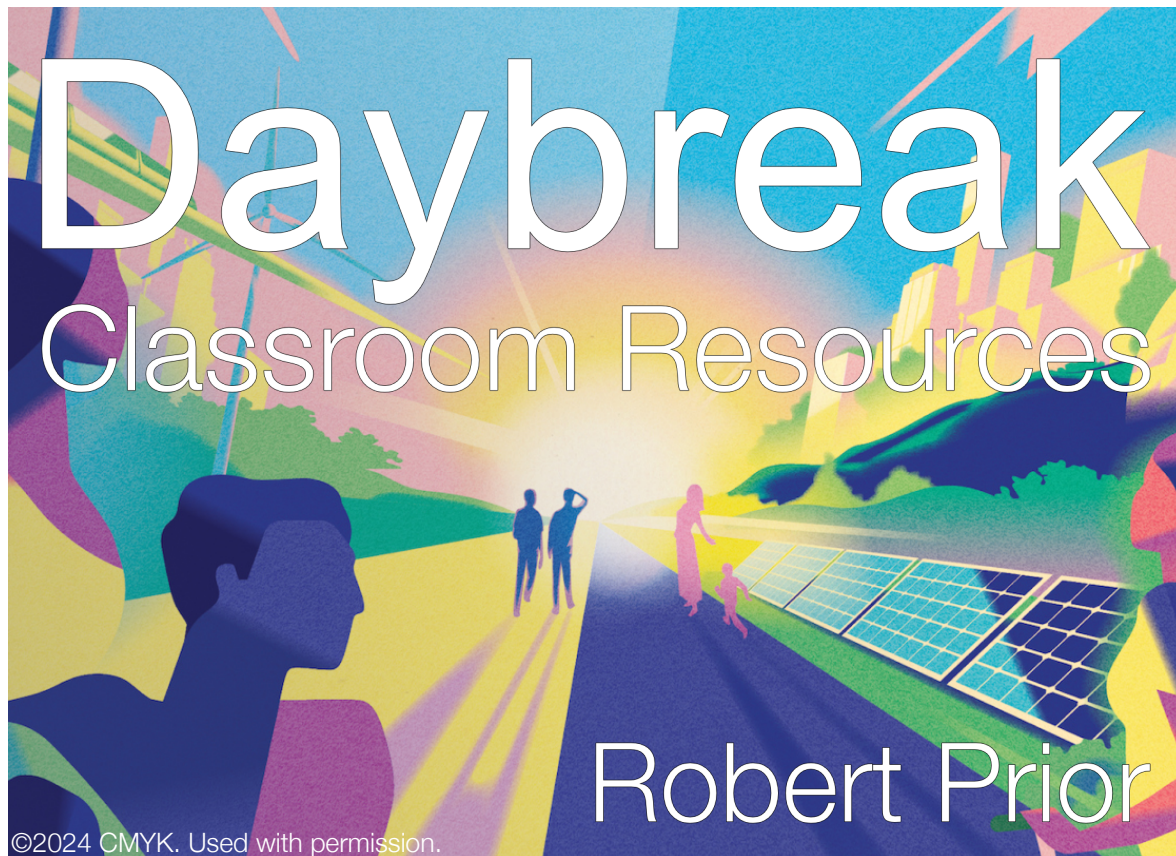




# Daybreak

## Classroom Resources



Robert Prior

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### About the author

Robert Prior is a retired science teacher with three decades of experience teaching at both high school and college level, who keeps his hand in by creating educational resources and helping publish the newsletter of the Ontario Association of Physics Teachers.

In 2021 he received the Outstanding Canadian Award, and in 2024 was made a Lifetime Member of the OAPT.

You can find more of his resources here:

<http://science.robertprior.ca/>

A new game by the designer of *Pandemic*, *Daybreak* is a cooperative board game for 1–4 players about saving the world. Initially crowdfunded (where I backed it), you can now purchase a retail copy.

While fun to play, *Daybreak* is also an excellent resource for teaching the climate change unit.

### Overview

In *Daybreak* each player represents a country (or bloc of countries) whose actions they have full control over (within the limits of available cards): America, China, the European Union, or the Majority World. During different phases of the game they negotiate with other players to agree on global projects, complete independent projects, and then resolve the effects that a changing climate has on everyone. Unlike competitive games, the players are a team working together to win (or lose) the game.

The goal of *Daybreak* is to survive long enough to achieve drawdown (when various projects remove more greenhouse gases from the atmosphere than are being added to it) without society breaking down.



## Components

*Daybreak* has a board with a (decorative) world map and tracks for various elements such as greenhouse gases added to the atmosphere, degrees of warming, effects of climate change, and other factors that affect all players.

Each player has their own board that keeps track of energy demand, energy production, other sources of greenhouse gas emissions, resilience, and societal stress.

The key components of *Daybreak* are the project cards and crisis cards. Each project card is a possible action we can take to mitigate or adapt to climate change, with the game effects listed on the card and a QR code that links to a description on the web site (with references). Each crisis card is a possible crisis that will need to be solved (or suffered through), also with a QR code linked to a description.

There are also numerous counters and tokens. All components are printed with sustainable inks and packaged in a plastic-free box.

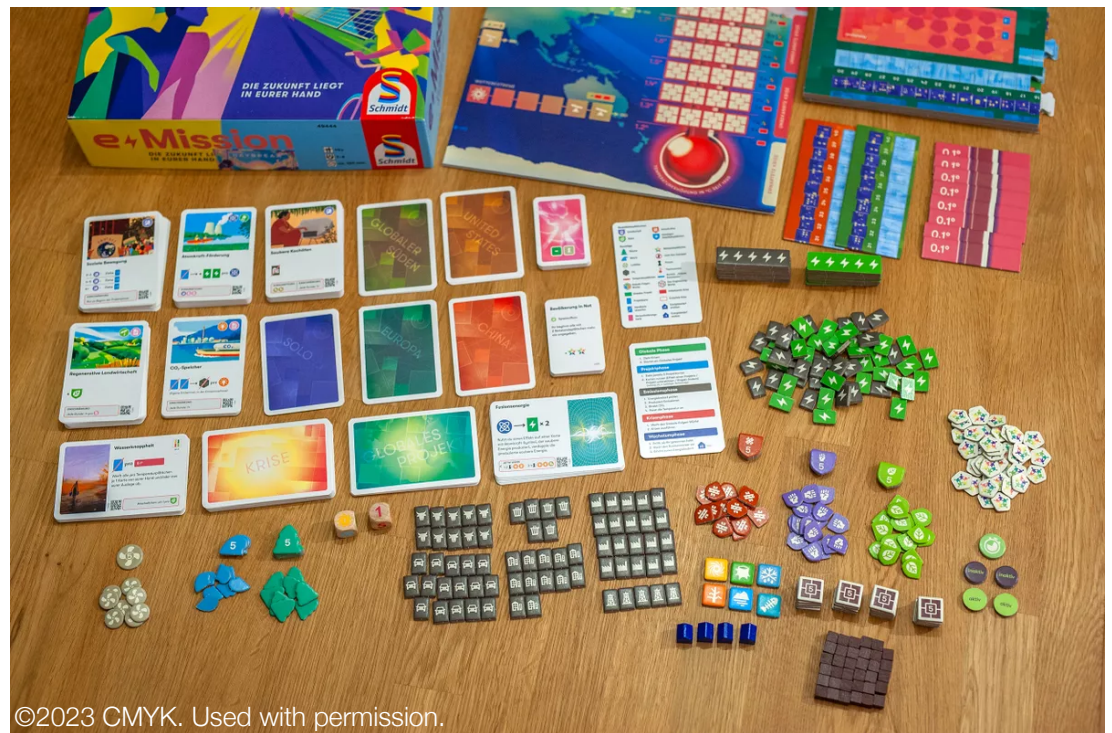
### About this package

I've created a number of activities, assignments, and projects based on the *Daybreak* game. The following pages contain teachers notes and suggestions, while an appendix contains photocopy-ready handouts.

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While the components are high quality and durable, there are so many that I would be nervous using my highly prized copy in class. If you have the budget, there is a program to partly subsidize class sets. More details are available on the website:

<https://daybreakgame.org/>



# Daybreak as an Educational Resource

While playing *Daybreak* in class would be a fun experience for students, the expense of buying one game per four students will strain most department budgets — not to mention finding the time required to teach students the rules and have them play enough to get some educational benefit. Even without a class set of games, though, *Daybreak* is an excellent resource for teaching about climate action.

Most obviously, the project and crisis cards are a great starting point for discussions and projects around positive steps that can be taken towards dealing with the climate crisis, as well as the obstacles we will face.

Each card has a page on the website, with a QR code on the card itself for easy access. The page has a short explanation of the project (or crisis) at the right level for grade ten students, as well as links to sources that provide more in-depth information that can be explored and actions that can be taken. There is also an image of the card (with its in-game effects) and links to related cards, which will be useful if you are using the game itself in class.

As well, playing a game about climate solutions can help counteract the lingering sense of gloom reading the news sometimes brings!

## LEARN MORE

- [Can Green Quantitative Easing \(QE\) Reduce Global Warming? \(Foundation for European Progressive Studies\)](#)
- [Green Central Banking](#)
- [The Green Central Banking Scorecard \(Positive Money\)](#)
- [Central Banking for a Low-Carbon Economy \(Positive Money\)](#)

## TAKE ACTION

Support groups like [Positive Money](#), an international research and campaigning organization that reimagines how money, banks, and finance can work better for the wellbeing of people and the planet.

**Green Quantitative Easing**  
Local Project

In the wake of the 2007/8 global financial crisis, governments sought a way to get economies growing again. Many ruled out spending public money. This meant that central banks had to play a big role, and they did so using quantitative easing (QE).

Banks create money whenever they issue loans. Under QE, central banks created new reserves of money, and used this to buy up financial assets, like the bonds issued by governments and companies, who then had more money to spend in the economy. This increased the price of these assets, which meant interest rates went down and it became easier for banks, people and companies to borrow again, putting even more money into the economy. The idea was that economic growth would follow.

Many of the financial assets purchased with QE helped fund fossil fuels and other destructive economic activities. So green QE advocates propose that only assets that fund renewable energy, natural restoration, and other sustainable activities should be purchased. This would help lower the cost of borrowing for these investments, encouraging more green investment. It would also help economies by creating green jobs, as well as helping save economies from being destroyed by the climate emergency.

While some central banks are exploring how to make their purchasing programmes greener, green QE is not widespread. Other central banking policies to boost climate action, which do not involve injecting money into the economy, include introducing climate risk into central bank goals and mandates; developing macroprudential risk-assessment tools to measure and regulate the climate risk companies and investors are exposed to; designing green lending guidelines for banks; ending central bank purchasing of bonds issued by fossil fuel companies; and developing credit guidance rules such as preferential interest rates on green loans.

**GAMEPLAY NOTES**

When you take this action, draw 1, 2, or 3 additional Local Project cards if you have 2-3, 4-5, or 6 or more Incentive tags in this card's stack.

You may do this once per round.

**Green Quantitative Easing**  
+3 Draw  
+5 Draw  
+6 Draw  
Limit: Once per round

**TAGS**

Incentive

**LEARN MORE**

- [Can Green Quantitative Easing \(QE\) Reduce Global Warming? \(Foundation for European Progressive Studies\)](#)
- [Green Central Banking](#)
- [The Green Central Banking Scorecard \(Positive Money\)](#)
- [Central Banking for a Low-Carbon Economy \(Positive Money\)](#)

**TAKE ACTION**

Support groups like [Positive Money](#), an international research and campaigning organization that reimagines how money, banks, and finance can work better for the wellbeing of people and the planet.

**Related Cards**

- Carbon Tax Dividend  
Local Project
- Climate Bonds  
Local Project
- Plant-Rich Diets  
Local Project
- Emissions Technology R+D  
Local Project



## Short Activities

Some activities don't have an assessment element and don't require a lot of preparation. They are briefly described below. Some of these could be expanded into projects by adding an assessment element.

### Local Project Scavenger Hunt

Have students collect as many examples of local projects in their community as they can. A bulletin board makes a good place to run this activity, maybe using index cards for each example. Alternately, an online board or shared document could also be used.

This could be extended by having each student choose a different local project and make a poster, write a report, or give a short presentation about it.

### Project Bingo

This activity requires a set of project bingo cards, bingo chips, and project cards to draw.

Distribute bingo cards and chips to the class. Draw a project and read out its description (using "this project" rather than its name). Students who have that on their bingo card add a chip. First to get five chips in a row wins.

The goal is learning what the projects are.

### Sorting Projects

Distribute the local project cards among the students. Have them sort the cards into four piles: adaptation, mitigation, both, and don't know.

Depending on your class, this would be suitable for small groups, or possibly as a whole-class activity with each student getting a few cards. Use less than the full number of projects to streamline the activity.

You could do this with the actual cards, or use the project card provided in the



appendix (which have the descriptions to keep students off their phones). If using the larger cards, then making it a whole-class activity and using the four walls of your classroom to sort the cards works nicely.

The goal is learning the difference between adaptation and mitigation — and hopefully helping students realize that adaptation will also be necessary. (Most media stories emphasize mitigation plans and technologies.) As always, discussing the choices brings the most benefit.





# Climate Crisis **Survivor**

## Time Required

One class period for choosing a setting and research, then 1-2 weeks to finish the project at home (estimated 2-4 hours homework).

## Group Size

Individual project, although students can work together to create linked stories.

## Materials

- ▶ assignment sheet
- ▶ note-taking sheet
- ▶ marking rubric

This assignment asks students to imagine themselves as a someone affected by a climate crisis, to research what that would be like, and to tell their story in whatever medium they like (approved by their teacher).

The rationale for this assignment is that people tend to sympathize with viewpoint characters, so creating a first-person account of someone living through a climate crisis will encourage students to have empathy for them.

There is scope for students to tell both optimistic and pessimistic stories. I let them decide — after all, they study *Romeo and Juliet* which doesn't have a happy ending!

Not all the crisis cards are directly linked to climate change, and while some are causes of the problem they aren't something that will directly affect people. I use the crises listed below. Depending on the class, I'll let students choose their crisis, or assign them randomly. Unless students are working together on a linked story I prefer them each to do a different combination of crisis and location.

- |                        |                                   |                             |
|------------------------|-----------------------------------|-----------------------------|
| ▶ Pandemic             | ▶ Storms                          | ▶ Air Pollution             |
| ▶ Heatwaves            | ▶ Infrastructure<br>Meltdowns     | ▶ Forest Fires              |
| ▶ Global Social Unrest | ▶ Energy Crisis                   | ▶ Displacement              |
| ▶ Water Insecurity     | ▶ Food Insecurity                 | ▶ Deforestation             |
| ▶ Overfishing          | ▶ Droughts                        | ▶ Eco-Fascist<br>Government |
| ▶ Loss of Fertile Land | ▶ Toxic Releases Due to<br>Storms | ▶ Oil Industry Pollution    |
| ▶ Hurricanes           | ▶ Global Crop Failures            | ▶ Soil Degradation          |
| ▶ Biodiversity Loss    | ▶ Water Pollution                 | ▶ Desertification           |
| ▶ Floods               |                                   | ▶ Sea Level Rise            |



Criteria	Level 4	Level 3	Level 2	Level 1	Level 0
<b>Research</b>					
Select, organize, and record relevant information from various sources, using recommended formats and an accepted form of academic documentation (A1.7)	<p>Student demonstrates a high degree of research skills</p> <ul style="list-style-type: none"> <li>▶ all information researched</li> <li>▶ reliable sources</li> <li>▶ duplicated information</li> </ul>	<p>Student demonstrates considerable research skills</p> <ul style="list-style-type: none"> <li>▶ most information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates some research skills</p> <ul style="list-style-type: none"> <li>▶ some information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates limited research skills</p> <ul style="list-style-type: none"> <li>▶ limited information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student does not demonstrate sufficient research skills</p> <ul style="list-style-type: none"> <li>▶ no information researched</li> <li>▶ unreliable sources</li> </ul>
<b>Writing Technique</b>					
Communicate ideas in writing using appropriate language (A1.11)	Story written in authentic voice and tone, medium chosen complements message	Story mostly written in authentic voice and tone, medium chosen complements message	Story sometimes written in authentic voice and tone, medium chosen complements message	Story not written in authentic voice and tone, medium has little connection to message	Story is disjointed, medium is inappropriate for the setting
<b>Information</b>					
Analyze current and/or potential effects of climate change on human activities and natural systems (D1.1)	Story shows a high degree of understanding of the effects of the climate crisis	Story shows considerable understanding of the effects of the climate crisis	Story shows some understanding of the effects of the climate crisis	Story shows limited understanding of the effects of the climate crisis	Does not show sufficient understanding of the effects of the climate crisis
Assess, on the basis of research, the effectiveness of some initiatives that address climate change (D1.2)	Story shows a high degree of understanding of the impacts of adaptation and/or mitigation measures	Story shows considerable understanding of the impacts of adaptation and/or mitigation measures	Story shows some understanding of the impacts of adaptation and/or mitigation measures	Story shows limited understanding of the impacts of adaptation and/or mitigation measures	Does not show sufficient understanding of the impacts of adaptation and/or mitigation measures

## Marking

I use the above rubric to mark this assignment, with research weighted at 50% and writing technique and information each weighted at 25%.



# Daybreak Project **Explanation**

## Time Required

One class period for research, then a week to finish the project at home (estimated 2 hours homework). If doing in-class presentations, another 1-2 periods for the presentations.

## Group Size

Individual project.

## Materials

- ▶ assignment sheet
- ▶ note-taking sheet
- ▶ marking rubric

This assignment has students explain one of the projects from the *Daybreak* game in essay, poster, or presentation form. While posters may seem a bit elementary, infographics and such are a common form of exposition — and not one that can be done (yet) by ChatGPT and its ilk!

In this assignment I have students use note-taking sheets to record properly-sourced information in point form. Although most of what they need can be found the project descriptions on the *Daybreak* website I insist that they find other sources to corroborate what is there.

I generally pick one format for the entire class, so everyone does the same thing (just about different projects). I have used an alternate format as an accommodation for students with IEPs that specify “alternate forms of assessment”.

The essay is scaffolded as a five paragraph essay because that is what my school’s English department teaches, so students are used to the format.

I limit the size of the poster to one letter-sized page because not only are they easier to store and transport, but because that size neatly fits above my boards so I can display the posters in my classroom. I don’t worry about artistic skill, just whether the poster conveys accurate information. (I show them *xkcd* as an example of how simple graphics can convey an idea.)

I insist on hand-written/hand-drawn partly to cut down on plagiarism, but mostly because there’s evidence that hand-written notes are better recalled than typed notes, and I want students to remember at least the main points of the information.

Not every project is suitable for this assignment. The technical local projects are good, as well as some of the policy projects. I want every student to have a unique project, so what I do for assignments like this is to hand them out randomly but let students swap with each other (or the unassigned projects). This gives everyone equal chance of getting the project they want and allows flexibility.



Criteria	Level 4	Level 3	Level 2	Level 1	Level 0
<b>Research</b>					
Select, organize, and record relevant information from various sources, using recommended formats and an accepted form of academic documentation (A1.7)	Student demonstrates a high degree of research skills <ul style="list-style-type: none"> <li>▶ all information researched</li> <li>▶ reliable sources</li> <li>▶ duplicated information</li> </ul>	Student demonstrates considerable research skills <ul style="list-style-type: none"> <li>▶ most information researched</li> <li>▶ reliable sources</li> </ul>	Student demonstrates some research skills <ul style="list-style-type: none"> <li>▶ some information researched</li> <li>▶ reliable sources</li> </ul>	Student demonstrates limited research skills <ul style="list-style-type: none"> <li>▶ limited information researched</li> <li>▶ reliable sources</li> </ul>	Student does not demonstrate sufficient research skills <ul style="list-style-type: none"> <li>▶ no information researched</li> <li>▶ unreliable sources</li> </ul>
<b>Writing Skills</b>					
Communicate ideas and conclusions in writing (A1.11)	Student expresses ideas and information with a high degree of effectiveness	Student expresses ideas and information with considerable effectiveness	Student expresses ideas and information with some effectiveness	Student expresses ideas and information with limited effectiveness	Student expresses ideas and information with insufficient effectiveness
Communicate using appropriate language (A1.11)	Student uses conventions, vocabulary, and terminology with a high degree of effectiveness	Student uses conventions, vocabulary, and terminology with considerable effectiveness	Student uses conventions, vocabulary, and terminology with some effectiveness	Student uses conventions, vocabulary, and terminology with limited effectiveness	Student uses conventions, vocabulary, and terminology with insufficient effectiveness
<b>Information</b>					
Assess, on the basis of research, the effectiveness of an initiative that address climate change (D1.2)	Student demonstrates a high degree of understanding of the initiative	Student demonstrates considerable understanding of the initiative	Student demonstrates some understanding of the initiative	Student demonstrates limited understanding of the initiative	Student does not demonstrate sufficient understanding of the initiative

## Marking

I use the above rubric to mark essays, with research, writing skills, and information each weighted equally.

Criteria	Level 4	Level 3	Level 2	Level 1	Level 0
<b>Research</b>					
Select, organize, and record relevant information from various sources, using recommended formats and an accepted form of academic documentation (A1.7)	<p>Student demonstrates a high degree of research skills</p> <ul style="list-style-type: none"> <li>▶ all information researched</li> <li>▶ reliable sources</li> <li>▶ duplicated information</li> </ul>	<p>Student demonstrates considerable research skills</p> <ul style="list-style-type: none"> <li>▶ most information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates some research skills</p> <ul style="list-style-type: none"> <li>▶ some information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates limited research skills</p> <ul style="list-style-type: none"> <li>▶ limited information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student does not demonstrate sufficient research skills</p> <ul style="list-style-type: none"> <li>▶ no information researched</li> <li>▶ unreliable sources</li> </ul>
<b>Poster Design</b>					
Communicate ideas using a variety of formats (A1.11)	Attractive design that highlights key information, graphics convey information and complement text	Information is easy to find, graphics convey information and complement text	Information is hard to find, graphics are illustrations that do not add information	Disjointed design, graphics are illustrations that do not add information	Attempt at design, missing significant elements
<b>Information</b>					
Assess, on the basis of research, the effectiveness of an initiative that address climate change (D1.2)	Student demonstrates a high degree of understanding of the initiative	Student demonstrates considerable understanding of the initiative	Student demonstrates some understanding of the initiative	Student demonstrates limited understanding of the initiative	Student does not demonstrate sufficient understanding of the initiative

## Marking

I use the above rubric to mark posters, with research, poster design, and information each weighted equally.



Criteria	Level 4	Level 3	Level 2	Level 1	Level 0
<b>Research</b>					
Select, organize, and record relevant information from various sources, using recommended formats and an accepted form of academic documentation (A1.7)	<p>Student demonstrates a high degree of research skills</p> <ul style="list-style-type: none"> <li>▶ all information researched</li> <li>▶ reliable sources</li> <li>▶ duplicated information</li> </ul>	<p>Student demonstrates considerable research skills</p> <ul style="list-style-type: none"> <li>▶ most information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates some research skills</p> <ul style="list-style-type: none"> <li>▶ some information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student demonstrates limited research skills</p> <ul style="list-style-type: none"> <li>▶ limited information researched</li> <li>▶ reliable sources</li> </ul>	<p>Student does not demonstrate sufficient research skills</p> <ul style="list-style-type: none"> <li>▶ no information researched</li> <li>▶ unreliable sources</li> </ul>
<b>Presentation Skills</b>					
Communicate ideas in an organized presentation (A1.11)	<p>Presentation flows well and highlights key information, visual aids convey key information</p>	<p>Presentation flows well, visual aids convey information</p>	<p>Presentation is rambling, visual aids mostly convey information</p>	<p>Presentation is disjointed, visual aids are illustrations that do not convey information</p>	<p>Student does not demonstrate sufficient skill at presenting</p>
<b>Information</b>					
Assess, on the basis of research, the effectiveness of an initiative that address climate change (D1.2)	<p>Student demonstrates a high degree of understanding of the initiative</p>	<p>Student demonstrates considerable understanding of the initiative</p>	<p>Student demonstrates some understanding of the initiative</p>	<p>Student demonstrates limited understanding of the initiative</p>	<p>Student does not demonstrate sufficient understanding of the initiative</p>

## Marking

I use the above rubric to mark presentations, with research, presentation skills, and information each weighted equally.



# OSSLT Practice Questions

## Time Required

5-10 minutes

## Group Size

individual

## Materials

- ▶ practice quiz/exercise
- ▶ answer key
- ▶ marking rubrics

Passing the Ontario Secondary School Literacy Test is a requirement to graduate in Ontario, and many schools put a lot of effort into coaching their students how to do well on the test.

The project descriptions on the *Daybreak* website are at about the same reading levels as the text used in the OSSLT. I wrote reading comprehension questions in the same style as the OSSLT, based on the descriptive text for each project card. I used similar questions based on readings from the *Nelson Science 10* textbook, and my students told me the practice helped them on the OSSLT so I thought similar exercises based on the *Daybreak* cards would also be useful.

These resources are intended to give students practice reading to extract meaning, as well as writing short summaries. The OSSLT is rather idiosyncratic in its marking with students being required to fill the space provided for an answer, and being penalized for too long or short an answer based solely on the space and not the number of words they write.

Each quiz (or exercise) consists of four multiple choice questions to gauge how well they understand the project description, as well as space to write a short summary of the project.

Answer keys are provided. The summaries are examples only, to give an idea of the length and level of writing expected on the OSSLT.

I usually use these as a short quiz at the beginning of class. Students get 5-10 minutes to read the selection and write the quiz. Then we hand the quiz to the person behind and mark the multiple choice questions together (for immediate reinforcement). I then collect the quizzes to mark the summaries myself and return them as soon as I can.

I also use these as part of work left for supply teachers when I'm away, either as a quiz or as seatwork.

Criteria	Level 4	Level 3	Level 2	Level 1	Level 0
Student can read and understand a short article and extract meaning (A1.6)	Student shows a high degree of reading comprehension (4 correct)	Student shows considerable reading comprehension (3 correct)		Student shows limited reading comprehension (2 correct)	Student does not show sufficient reading comprehension (0 or 1 correct)
Student can summarize the main idea of an article (A1.11)	Summarizes main idea with a high degree of effectiveness, providing accurate, specific, and relevant ideas	Summarizes main idea with considerable effectiveness, providing accurate and relevant ideas	Summarizes main idea with some effectiveness, providing accurate ideas	Summarizes main idea with limited effectiveness, providing vague and irrelevant ideas	Does not summarize the main idea. Information is incorrect or unintelligible.
Student uses appropriate language (A1.11)	Spelling and grammar show a high degree of ability	Spelling and grammar show considerable ability	Spelling and grammar show some ability	Spelling and grammar show limited ability	Does not demonstrate the required ability in spelling and grammar

## Marking

I mark the quizzes using the above rubric, which aligns well with *Growing Success*. It is fast and easy to use, and aligns with how I generally mark student work. The OSSLT is marked using a different rubric (reproduced below), but I prefer to use one that matches what I use in the rest of the course. I generally weight the first item (for the multiple choice questions) at 50% and the other two (for the summary) at 25% each, so that the multiple choice questions are worth the same as the summary.

Below is the rubric used to mark the OSSLT. Further information can be found on the OSSLT website.

<https://www.eqao.com/the-assessments/osslt/>

Code	Descriptor
10	<ul style="list-style-type: none"> <li>▶ The response indicates minimal reading comprehension.</li> <li>▶ The response provides minimal or irrelevant ideas and information from the reading selection.</li> </ul>
20	<ul style="list-style-type: none"> <li>▶ The response indicates some reading comprehension</li> <li>▶ The response provides vague ideas and information from the reading selection; it may include irrelevant ideas and information from the reading selection.</li> </ul>
30	<ul style="list-style-type: none"> <li>▶ The response indicates considerable reading comprehension.</li> <li>▶ The response provides accurate, specific and relevant ideas and information from the reading selection.</li> </ul>

# Undeveloped Ideas

This resource package is a work in progress, and I have ideas about ways to use *Daybreak* that I haven't fully fleshed out yet. Things I'm currently working on include:

- ▶ An art assignment to create alternative artwork for *Daybreak* cards.
- ▶ An assignment creating new cards for the game, backed by research. This could involve both project and crisis cards.
- ▶ An assignment finding and documenting local examples of *Daybreak* projects.
- ▶ An assignment involving using the *Take Action* suggestions in a project description for students to actually take action.
- ▶ An English assignment to write (or find?) poetry about one of the cards, be it project or crisis.
- ▶ Guidelines for playing *Daybreak* as a class over an extended period of time. I've done this for other games (such as *Tribes* and *Black Death*) and it can work well with the right class.
- ▶ A research/writing assignment diving into one of the projects, looking at the science behind it.

## Project Cards

Many schools have banned cell phones in class, and the internet is full of distractions, so reading card descriptions on the *Daybreak* website might be problematical. CMYK has given permission for a set of one-page cards with most of the information from the website.

Currently there is a page for each local project. Some projects had multiple cards with different artwork but the same information — for those projects I only made one summary page.



# Appendix

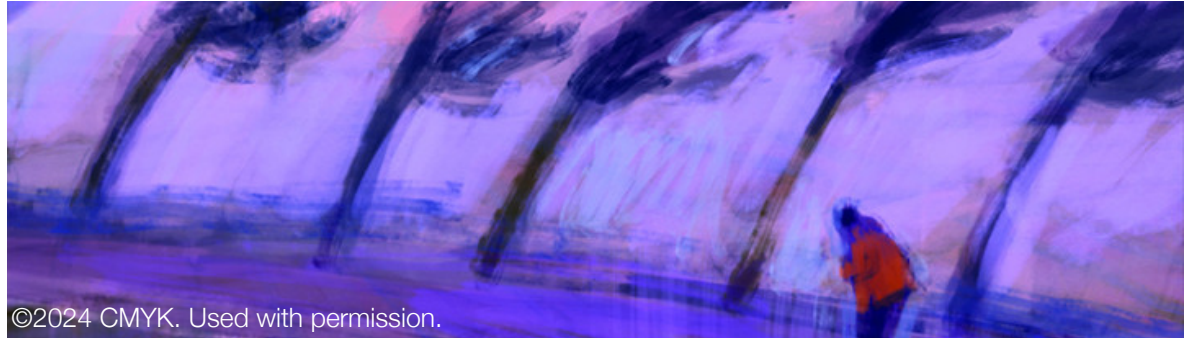
## Master Pages

# Master Pages

## Climate Crisis Survivor

### **Printing Instructions**

These two double-sided pages are student handouts: the first is the assignment sheet for students to keep, the second is a note-taking sheet to be handed in with their project.

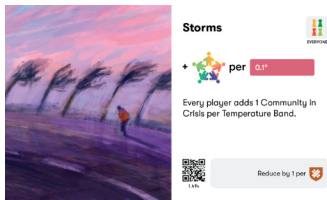


## Choosing a Crisis

There are many possible crises described in *Daybreak*. Your teacher will tell you which one to use.

## The Crisis Card

The crisis card has a QR code you can use to quickly find it on the *Daybreak* website. You can also find the card manually by visiting the website and selecting Explore Cards.



<https://daybreakgame.org/>

The *Daybreak* website provides a short description of each crisis with links to further information.

## UN Resources

The United Nations has a lot of excellent information. The *UN Refugee Agency* and *UNICEF* are good places to start. The *UN Development Programme* has a lot of information that might be useful.

# Climate Crisis Survivor

The Earth's climate is changing at a rate that has exceeded most scientific forecasts. Some families and communities have already started to suffer from disasters and the consequences of climate change, forced to leave their homes in search of a new beginning.

UNHCR Refugee Agency

In this assignment, you will be telling the story of a climate crisis survivor from their perspective. Although your viewpoint character will be fictional, the setting should be based on facts — things that are occurring now or are predicted to occur in the future.

## Part 1: Researching Your Crisis

Using reputable sources of information, detail the following facts about your chosen crisis and location:

- ▶ **Location.** Choose a setting and find it on a map. What is it like there?
- ▶ **Climate Crisis.** How is the climate crisis affecting your chosen location?
- ▶ **Traditional Life.** What was daily life like before the crisis, during your character's grandparents' day?
- ▶ **Current Life.** What is daily life for your character like now, during the crisis? How has daily life changed at a personal level from their grandparents' day?
- ▶ **Adaptation and Mitigation.** What is being done to adapt to and mitigate the crisis? Are these efforts local, international, or both? Are they working?
- ▶ **Possible Futures.** What might the future be like? Look at several possible scenarios before choosing one for your story.

Ideally you should back up every fact with *at least* two independent, reputable sources of information.

## Part 2: Presenting Your Information

You will present your information in the form of a **first-person account** from someone living through the climate crisis. You may write a short story, a blog, a series of tweets, or any other medium that your teacher approves of.

Your account must provide a sense of the changes in daily life being caused by the climate crisis (as well as other changes that may be happening). Your viewpoint character may or may not know why the changes are happening (they can be an *unreliable narrator*), but it should be clear to your reader. What does your character think the future will be like? How do they see their life changing? Can they remain, or will they have to leave? What hopes and fears do they have? Will you tell an optimistic or pessimistic story?

If you like, you can collaborate with up to two other students in your class and create a narrative that weaves together several viewpoints to provide a more detailed picture of the effects of climate change on people's lives. Each of you will be responsible for one viewpoint.

Your focus should be on showing the effects of the climate crisis on ordinary people, at a personal level.

<b>Crisis</b>		<b>Due Date</b>	
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### What to Hand In

- ▶ a filled out research sheet (use more than one if you need extra room)
- ▶ a first-person account of someone living through climate change

### What Your Teacher is Looking For

To do well on this assignment, make certain that you meet the following criteria:

#### Research

- ▶ reliable information sources are used
- ▶ sources are correctly cited
- ▶ all information is confirmed by *at least* two independent sources

#### First-Person Account

- ▶ includes physical effects of the climate crisis
- ▶ includes social effects of the climate crisis
- ▶ includes effects of possible adaptation and mitigation efforts (at a personal level)
- ▶ well-written, with attention to voice and perspective

Note that there is no explicit length requirement. Your account should be long enough to present all the required information.



## Facts about your setting

Record your sources below using APA format. When you record information, note which sources it came from beside the information. (Remember that each piece of information should come from *at least* two sources.)

Sources

1

2

3

4

Location

Climate Crisis



Traditional Life


Current Life


Adaptation & Mitigation


Possible Futures




# Master Pages

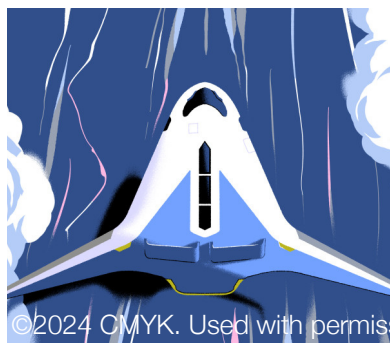
## *Daybreak* Project Explanation

### **Printing Instructions**

This section contains three different single-sided handouts for the students explaining the assignment, as well as a double-sided note-taking sheet to be handed in with the assignment.

Name

Due



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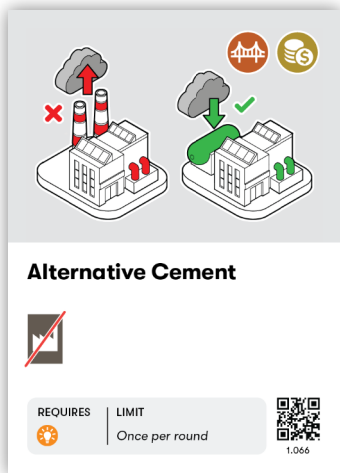
# Daybreak Project Essay

## Choosing a Project

There are many possible projects described in *Daybreak*. Your teacher will tell you which one to use.

## The Project Card

The project card has a QR code you can use to quickly find it on the *Daybreak* website. You can also find the card manually by visiting the website and selecting Explore Cards.



<https://daybreakgame.org/>

The *Daybreak* website provides a short description of each project with links to further information.

There are many possible ways to either adapt to the effects of climate change, or mitigate the severity of climate change. *Daybreak* lists many of these as both local and global projects. In this assignment you will be writing an essay about one of these projects.

## Local Project

Record your assigned project in the space above.

Your essay will follow the five paragraph essay framework, using this structure:

- ▶ An *introduction* to the project, telling the reader what your essay is about.
- ▶ A *definition* of the project.
- ▶ An *explanation* of how the project adapts to or mitigates the effects of climate change.
- ▶ An *example* of the project that currently exists.
- ▶ A *conclusion*, briefly summarizing what you have told the reader.

Start your research by reading the description of your project on the *Daybreak* website, taking point-form notes. While the descriptions on the *Daybreak* website are an excellent place to start, you should verify all information you are using from at least one other independent source. Not all information is given in the description, so you will need to research on your own too.

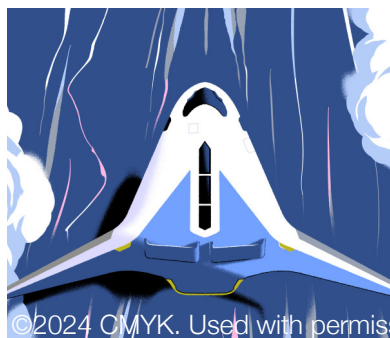
## What to hand in

- ▶ A **five paragraph essay** that contains the *definition*, *explanation*, and *example*.
- ▶ Properly filled-out **note-taking sheets** with the information you used in point form.

Your essay must be hand-written.

Name

Due

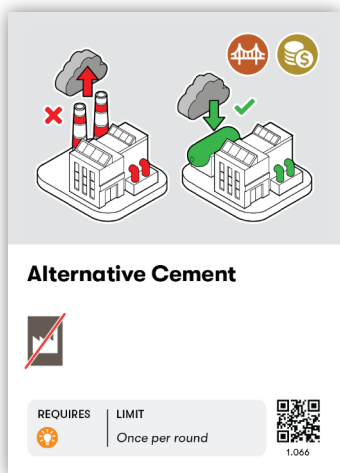


### Choosing a Project

There are many possible projects described in *Daybreak*. Your teacher will tell you which one to use.

### The Project Card

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<https://daybreakgame.org/>

The *Daybreak* website provides a short description of each project with links to further information.

## Daybreak Project Poster

There are many possible ways to either adapt to the effects of climate change, or mitigate the severity of climate change. *Daybreak* lists many of these as both local and global projects. In this assignment you will be making a poster about one of these projects.

### Local Project

Record your assigned project in the space above.

Your poster will contain a *definition* of the project, an *explanation* of how it adapts to or mitigates climate change, and an *example* of the project.

Start your research by reading the description of your project on the *Daybreak* website, taking point-form notes. While the descriptions on the *Daybreak* website are an excellent place to start, you should verify all information you are using from at least one other independent source. Not all information is given in the description, so you will need to research on your own too.

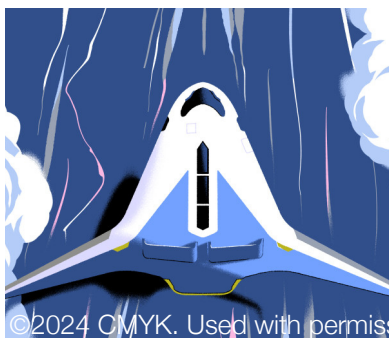
### What to hand in

- ▶ A **small poster** (8.5" × 11") that contains the *definition*, *explanation*, and *example*.
- ▶ Properly filled-out **note-taking sheets** with the information you used in point form.

Your poster must be hand-drawn and readable at a distance. You will have to make effective use of colour and graphics to communicate as much information as possible while using as few words as possible.

Name

Due



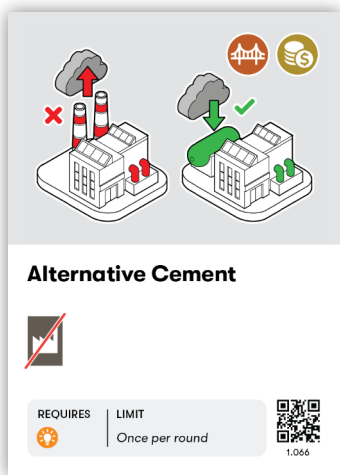
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### Choosing a Project

There are many possible projects described in *Daybreak*. Your teacher will tell you which one to use.

### The Project Card

The project card has a QR code you can use to quickly find it on the *Daybreak* website. You can also find the card manually by visiting the website and selecting Explore Cards.



<https://daybreakgame.org/>

The *Daybreak* website provides a short description of each project with links to further information.

## Daybreak Project Presentation

There are many possible ways to either adapt to the effects of climate change, or mitigate the severity of climate change. *Daybreak* lists many of these as both local and global projects. In this assignment you will be making a short presentation about one of these projects.

### Local Project

Record your assigned project in the space above.

Your presentation must include a *definition* of the project, an *explanation* of how it adapts to or mitigates climate change, and an *example* of the project.

Start your research by reading the description of your project on the *Daybreak* website, taking point-form notes. While the descriptions on the *Daybreak* website are an excellent place to start, you should verify all information you are using from at least one other independent source. Not all information is given in the description, so you will need to research on your own too.

Your teacher will tell you the length of the presentation, as well as what visual aids you can use during it. Record that information below.

### Length

### Visual Aids

## What to hand in

- ▶ Properly filled-out **note-taking sheets** with the information you used in point form.





# Facts about your project

Record your sources below using APA format. When you record information, note which sources it came from beside the information. (Remember that each piece of information should come from *at least* two sources.)

Sources

1

2

3

4

Definition



# Master Pages

# OSSLT Practice

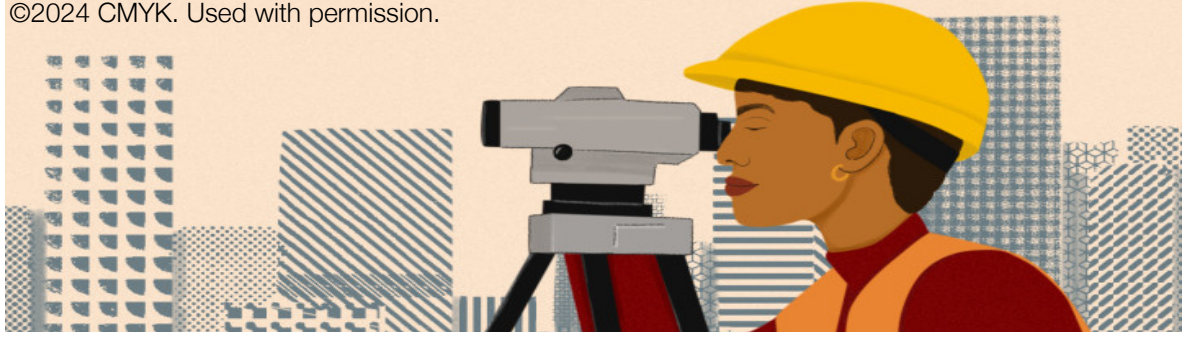
## **Printing Instructions**

These are single-sided pages that contain a quiz (or exercise) based on the Ontario Secondary School Literacy Test.

They are in pairs: the first page is the quiz, the second page is the answer key.



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## Adaptation Programs

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1100>

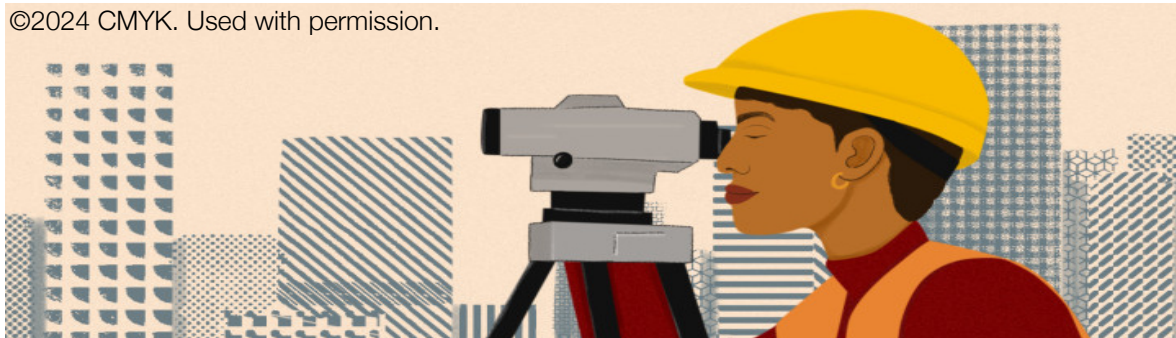
1. Climate adaptation involves
  - a) reducing greenhouse gas emissions
  - b) preparing for new climate impacts
  - c) promoting fossil fuels
  - d) all of the above
2. An example of climate adaptation is
  - a) eliminating dirty power plants
  - b) training for emergencies
  - c) installing solar panels
  - d) switching to green vehicles
- 3) Compared to climate mitigation efforts, climate adaptation is
  - a) equally prioritized
  - b) more prioritized than mitigation
  - c) underfunded
  - d) ignored
4. When planning climate adaptation programs, governments should prioritize
  - a) equitable and evidence-based programs
  - b) allowing the free market to set priorities
  - c) eliminating greenhouse gas emissions
  - d) all of the above

5. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Adaptation Programs

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1100>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Climate adaptation involves
  - reducing greenhouse gas emissions
  - preparing for new climate impacts
  - promoting fossil fuels
  - all of the above
- An example of climate adaptation is
  - eliminating dirty power plants
  - training for emergencies
  - installing solar panels
  - switching to green vehicles
- Compared to climate mitigation efforts, climate adaptation is
  - equally prioritized
  - more prioritized than mitigation
  - underfunded
  - ignored
- When planning climate adaptation programs, governments should prioritize
  - equitable and evidence-based programs
  - allowing the free market to set priorities
  - eliminating greenhouse gas emissions
  - all of the above

- Climate adaptation adapts to climate impacts by new practices in health, agriculture, infrastructure, and more. It is underfunded compared to mitigation efforts. Governments must ensure equitable programs decrease inequalities and prioritize funding for vulnerable communities.



Name

Date

Climate



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# Adaptation Projects

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Climate adaptation involves
  - a) reducing greenhouse gas emissions
  - b) preparing for new climate impacts
  - c) promoting fossil fuels
  - d) all of the above
2. An example of climate adaptation is
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4. When planning climate adaptation projects, governments should prioritize
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  - b) allowing the free market to set priorities
  - c) eliminating greenhouse gas emissions
  - d) all of the above



<https://daybreakgame.org/card/1101>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Adaptation Projects

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1101>

### Short Answer

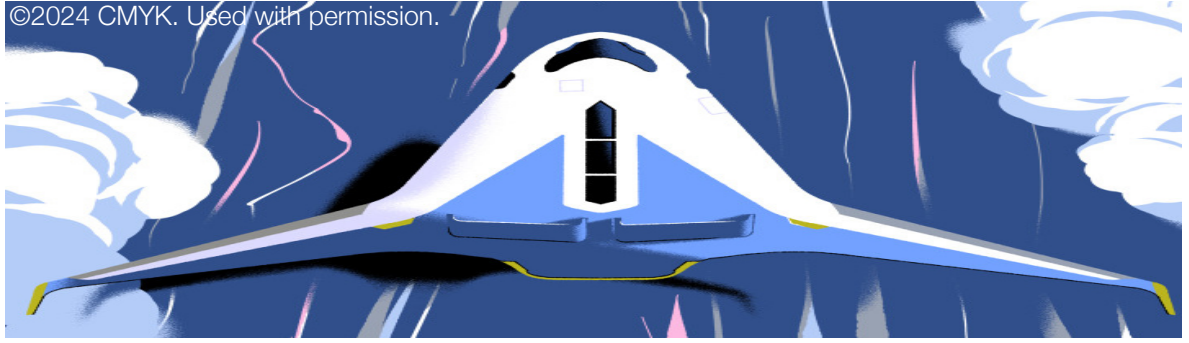
Summarize this project. Include a key benefit and one relevant point that supports it.

- Climate adaptation involves
  - reducing greenhouse gas emissions
  - preparing for new climate impacts
  - promoting fossil fuels
  - all of the above
- An example of climate adaptation is
  - eliminating dirty power plants
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  - installing solar panels
  - switching to green vehicles
- Compared to climate mitigation efforts, climate adaptation is
  - equally prioritized
  - more prioritized than mitigation
  - underfunded
  - ignored
- When planning climate adaptation projects, governments should prioritize
  - equitable and evidence-based projects
  - allowing the free market to set priorities
  - eliminating greenhouse gas emissions
  - all of the above

- Climate adaptation adapts to climate impacts by new practices in health, agriculture, infrastructure, and more. It is underfunded compared to mitigation efforts. Governments must ensure equitable programs decrease inequalities and prioritize funding for vulnerable communities.



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## Alternative Aviation Fuels

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1079>

1. A byproduct of jet travel that does not contribute to climate change is
  - a) soot
  - b) nitrous oxides
  - c) wingtip vortexes
  - d) contrails
- 2) Most flights are taken
  - a) for leisure travel
  - b) for work travel
  - c) to carry cargo
  - d) none of the above
- 3) The best way to eliminate aviation emissions is
  - a) cutting back on flying
  - b) using alternative aviation fuels
  - c) replacing big jets with smaller planes that use less fuel
  - d) none of the above
4. Possible alternative fuels include
  - a) biofuels made from plants
  - b) fuel made from industrial waste
  - c) hydrogen fuel
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. \_\_\_\_\_

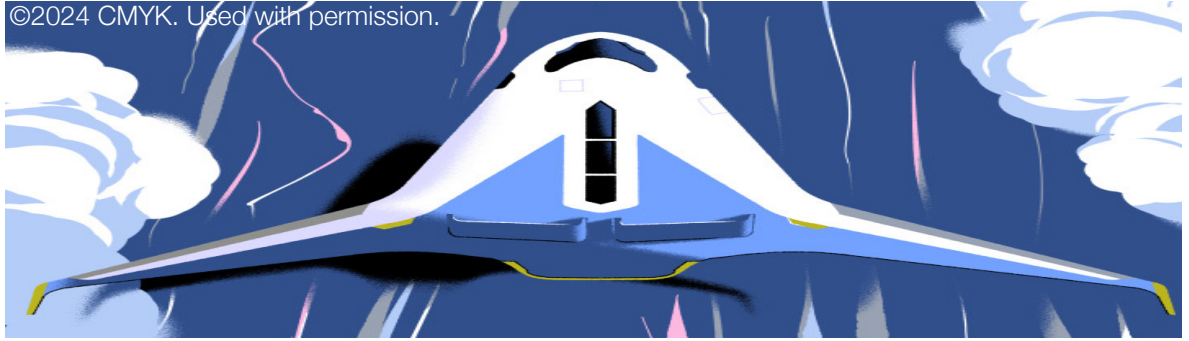
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## Alternative Aviation Fuels

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A byproduct of jet travel that does not contribute to climate change is
  - a) soot
  - b) nitrous oxides
  - c) wingtip vortexes
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- 2) Most flights are taken
  - a) for leisure travel
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- 3) The best way to eliminate aviation emissions is
  - a) cutting back on flying
  - b) using alternative aviation fuels
  - c) replacing big jets with smaller planes that use less fuel
  - d) none of the above
4. Possible alternative fuels include
  - a) biofuels made from plants
  - b) fuel made from industrial waste
  - c) hydrogen fuel
  - d) all of the above

5. Air travel and shipping cause 4% of global warming.  
Reducing flights, improving rail and public transport, and  
using boats for shipping can help. Research into renewable  
jet fuels is ongoing but faces cost and technical challenges.



<https://daybreakgame.org/card/1079>

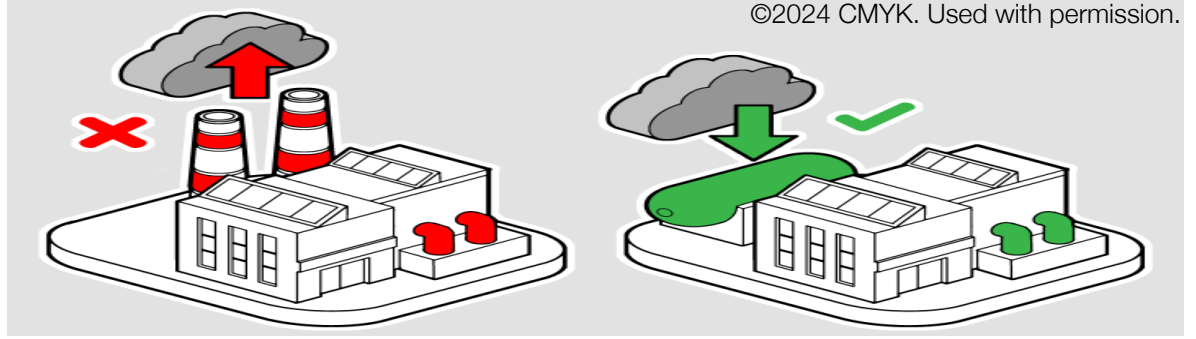
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Alternative Cement

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Making cement releases lots of greenhouse gases because
  - a) the high temperatures needed to make it usually come from burning fossil fuels
  - b) extracting and transporting the materials produced emissions
  - c) they are a product of the chemical reactions that make cement
  - d) all of the above
- 2) Emissions can be reduced by using alternative ingredients such as
  - a) sustainably quarried limestone
  - b) volcanic ash
  - c) ash from sustainably-sourced wood
  - d) all of the above
- 3) City planners and architects can reduce cement use by
  - a) repurposing existing buildings
  - b) limiting the height of buildings
  - c) tearing down buildings and replacing them with Brutalist architecture
  - d) making windows larger
4. Instead of cement, sustainable buildings can be made from
  - a) steel cladding
  - b) clay bricks
  - c) sustainable wood
  - d) all of the above

5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

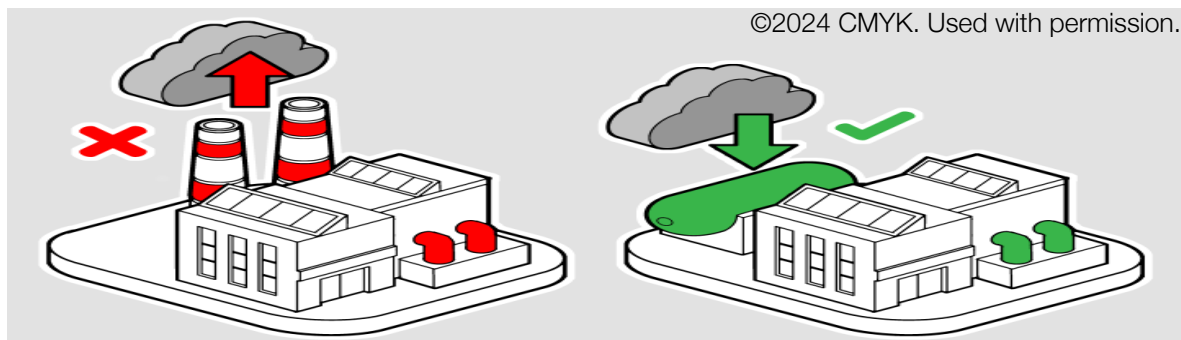
\_\_\_\_\_



<https://daybreakgame.org/card/1066>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Alternative Cement

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1066>

- Making cement releases lots of greenhouse gases because
  - the high temperatures needed to make it usually come from burning fossil fuels
  - extracting and transporting the materials produced emissions
  - they are a product of the chemical reactions that make cement
  - all of the above
- Emissions can be reduced by using alternative ingredients such as
  - sustainably quarried limestone
  - volcanic ash
  - ash from sustainably-sourced wood
  - all of the above
- City planners and architects can reduce cement use by
  - repurposing existing buildings
  - limiting the height of buildings
  - tearing down buildings and replacing them with Brutalist architecture
  - making windows larger
- Instead of cement, sustainable buildings can be made from
  - steel cladding
  - clay bricks
  - sustainable wood
  - all of the above

5. Making cement generates lots of greenhouse gases.

Different ingredients, renewable energy, and emission

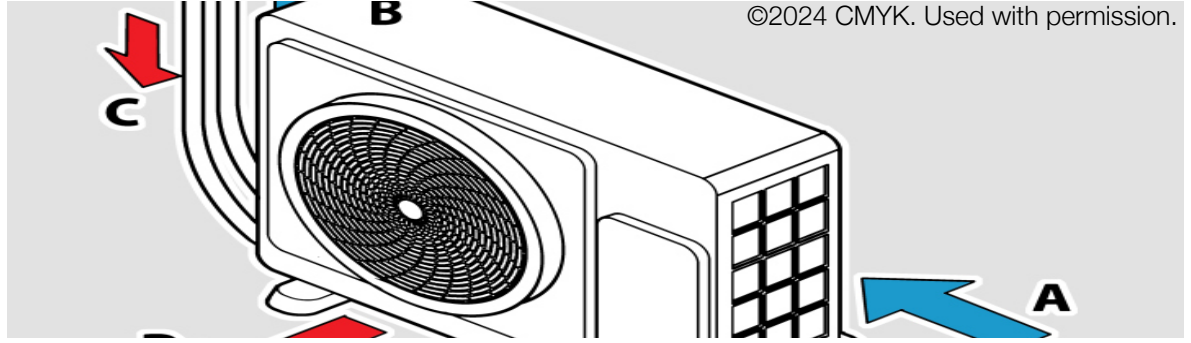
capture can reduce this, while repurposing buildings

and alternative materials can reduce cement use.



Name

Date



# Alternative Refrigerants

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Conventional cooling devices commonly use
  - a) ammonia and carbon dioxide
  - b) methane and carbon dioxide
  - c) propane and isobutane
  - d) HFCs and HCFCs
2. When conventional refrigerants leak into the air, they
  - a) improve air quality
  - b) act as greenhouse gases
  - c) create ozone holes
  - d) cause smog
- 3) For the climate, the problem with closed cooling systems is that
  - a) they are too expensive to properly maintain
  - b) they require frequent refills of chemicals
  - c) they are not perfectly sealed, leading to leaks
  - d) they are difficult to operate
4. Better techniques for installation, maintenance, and disposal of refrigerants
  - a) lowers energy consumption
  - b) minimizes leakage into the atmosphere
  - c) increases the lifespan of devices
  - d) improves cooling performance in hot climates

5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

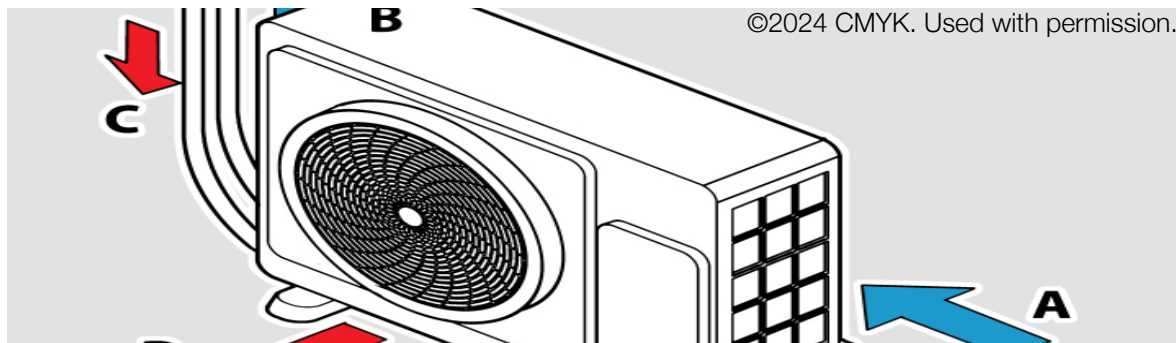
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<https://daybreakgame.org/card/1070>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Alternative Refrigerants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1070>

- Conventional cooling devices commonly use
  - ammonia and carbon dioxide
  - methane and carbon dioxide
  - propane and isobutane
  - HFCs and HCFCs
- When conventional refrigerants leak into the air, they
  - improve air quality
  - act as greenhouse gases
  - create ozone holes
  - cause smog
- For the climate, the problem with closed cooling systems is that
  - they are too expensive to properly maintain
  - they require frequent refills of chemicals
  - they are not perfectly sealed, leading to leaks
  - they are difficult to operate
- Better techniques for installation, maintenance, and disposal of refrigerants
  - lowers energy consumption
  - minimizes leakage into the atmosphere
  - increases the lifespan of devices
  - improves cooling performance in hot climates

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Cooling devices like refrigerators and air conditioners use HFCs and HCFCs, which can leak and cause global warming. By replacing them with safer chemicals like NH<sub>3</sub> and CO<sub>2</sub> and improving cooling systems' energy efficiency, we can lessen their harmful impact.

Name

Date

Climate



## Buffer Zones

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1046>

1. The primary purpose of a buffer zone is to
  - a) promote industrial growth
  - b) separate industrial or agricultural areas from communities or ecosystems
  - c) increase land value
  - d) provide recreational space for the public
2. Advantages of buffer zones include
  - a) protecting communities from industrial processes
  - b) increasing local water security
  - c) improving air quality
  - d) all of the above
- 3) Buffer zones are best managed by
  - a) industry groups
  - b) international organizations
  - c) local authorities and councils
  - d) private landowners
4. Buffer zones help the environment by
  - a) absorbing greenhouse gas emissions
  - b) increasing industrial activity
  - c) reducing the need for green spaces
  - d) encouraging agricultural expansion

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Buffer Zones

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1046>

1. The primary purpose of a buffer zone is to
  - a) promote industrial growth
  - b) separate industrial or agricultural areas from communities or ecosystems
  - c) increase land value
  - d) provide recreational space for the public
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  - a) protecting communities from industrial processes
  - b) increasing local water security
  - c) improving air quality
  - d) all of the above
- 3) Buffer zones are best managed by
  - a) industry groups
  - b) international organizations
  - c) local authorities and councils
  - d) private landowners
4. Buffer zones help the environment by
  - a) absorbing greenhouse gas emissions
  - b) increasing industrial activity
  - c) reducing the need for green spaces
  - d) encouraging agricultural expansion
5. Buffer zones are green or wet areas separating industrial or agricultural zones from communities and ecosystems. They absorb emissions, protect water sources, and improve air quality, but stopping harmful pollution is better. They need community input and government support.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Carbon Capture and Storage

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1121>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Carbon capture and storage removes
  - a) carbon dioxide from energy generation processes
  - b) carbon dioxide from the atmosphere
  - c) water vapour from energy generation processes
  - d) Methane from energy generation processes
2. Carbon capture and storage can be applied to
  - a) geothermal power
  - b) fossil fuels
  - c) nuclear power
  - d) all of the above
- 3) Carbon capture and storage technology currently captures
  - a) less than 0.1% of global emissions
  - b) less than 1% of global emissions
  - c) around 5% of global emissions
  - d) more than 10% of global emissions
4. One problem with carbon capture and storage is that
  - a) it requires a significant financial investment
  - b) it needs a source of electricity
  - c) it may prolong the use of fossil fuels
  - d) all of the above

5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





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## Carbon Capture and Storage

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1121>

1. Carbon capture and storage removes
  - a) carbon dioxide from energy generation processes
  - b) carbon dioxide from the atmosphere
  - c) water vapour from energy generation processes
  - d) Methane from energy generation processes
2. Carbon capture and storage can be applied to
  - a) geothermal power
  - b) fossil fuels
  - c) nuclear power
  - d) all of the above
- 3) Carbon capture and storage technology currently captures
  - a) less than 0.1% of global emissions
  - b) less than 1% of global emissions
  - c) around 5% of global emissions
  - d) more than 10% of global emissions
4. One problem with carbon capture and storage is that
  - a) it requires a significant financial investment
  - b) it needs a source of electricity
  - c) it may prolong the use of fossil fuels
  - d) all of the above
5. Carbon capture and storage removes carbon dioxide and stores it underground to reduce emissions. Although it's new and expensive, it can help reduce fossil fuel impact while transitioning to clean energy.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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## Carbon Tax Dividend

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1002>

1. One of the simplest ways to nudge an economy towards clean energy is to
  - a) lower energy prices
  - b) increase energy imports
  - c) increase taxes on dirty energy
  - d) increase fossil fuels subsidies
2. A carbon tax is
  - a) a tax on solar panels
  - b) a tax based on greenhouse gas emissions
  - c) a tax on ordinary people
  - d) a tax based on the amount of coal (carbon) mined
- 3) Carbon taxes have less impact on wealthy people because
  - a) they are exempt from the taxes
  - b) they mostly drive electric vehicles
  - c) they can afford to pay the tax
  - d) they exclusively use clean energy
4. Under a “tax and dividend” policy,
  - a) carbon tax revenue is kept by the government
  - b) carbon tax revenue is paid to clean energy shareholders
  - c) carbon tax revenue is given to drivers of electric cars
  - d) carbon tax revenue is distributed equally to every citizen

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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## Carbon Tax Dividend

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1002>

- One of the simplest ways to nudge an economy towards clean energy is to
  - lower energy prices
  - increase energy imports
  - increase taxes on dirty energy
  - increase fossil fuels subsidies
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  - a tax on ordinary people
  - a tax based on the amount of coal (carbon) mined
- Carbon taxes have less impact on wealthy people because
  - they are exempt from the taxes
  - they mostly drive electric vehicles
  - they can afford to pay the tax
  - they exclusively use clean energy
- Under a "tax and dividend" policy,
  - carbon tax revenue is kept by the government
  - carbon tax revenue is paid to clean energy shareholders
  - carbon tax revenue is given to drivers of electric cars
  - carbon tax revenue is distributed equally to every citizen

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- A carbon tax makes dirty energy cost more to encourage clean energy, but often isn't high enough to trigger significant change.  
"Tax and dividend" policies aim to protect citizens economically while incentivizing energy efficiency and clean energy adoption.



Name

Date

Climate



# Circular Economy

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1053>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

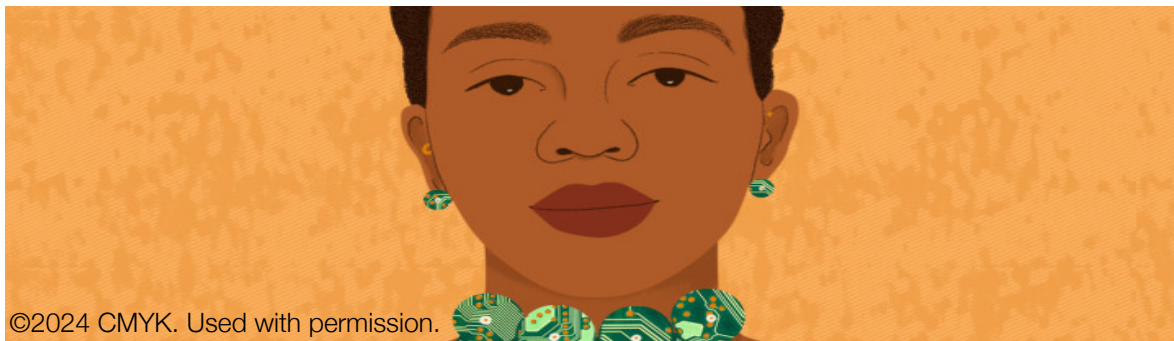
1. In a linear economy, after being used materials are typically
  - a) recycled
  - b) discarded
  - c) sold
  - d) donated
2. A circular economy reduces greenhouse gas emissions by
  - a) increasing production
  - b) eliminating jobs
  - c) reducing the need for raw materials
  - d) producing more waste
- 3) The goal of a circular economy is not
  - a) keeping products in operation as long as possible
  - b) reusing and recycling materials
  - c) extending the lifetime of products
  - d) increasing the extraction of raw materials
4. A poorly designed circular economy might
  - a) increase economic inequity
  - b) eliminate too much waste
  - c) run out of material to recycle
  - d) all of the above

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## Circular Economy

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1053>

1. In a linear economy, after being used materials are typically
  - a) recycled
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  - a) keeping products in operation as long as possible
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  - d) increasing the extraction of raw materials
4. A poorly designed circular economy might
  - a) increase economic inequity
  - b) eliminate too much waste
  - c) run out of material to recycle
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. A circular economy reduces waste by reusing and recycling materials, cutting greenhouse gas emissions and protecting nature. Recycling reduces the need for raw materials, while also creating jobs in reuse and recycling sectors.

Name

Date

Climate



# Citizen Nature Service

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1202>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. The main goal of a Citizen Nature Service is to
  - a) expand cities
  - b) restore ecosystems and provide clean technology jobs
  - c) fund industrial projects
  - d) provide subsidized labour for agricultural producers
2. The Civilian Conservation Corps employed
  - a) one million men
  - b) two million men
  - c) three million men
  - d) five million men
- 3) Unlike the original Civilian Conservation Corps, a Civilian Nature Service will
  - a) provide only part-time jobs
  - b) not use heavy machinery
  - c) work in the agricultural sector
  - d) be an equal-opportunity employer
4. As well as restoring damaged ecosystems, a Citizen Nature Service also provides
  - a) better housing opportunities
  - b) improved physical and mental health
  - c) free education for participants
  - d) government subsidies for families

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## Citizen Nature Service

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1202>

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  - a) better housing opportunities
  - b) improved physical and mental health
  - c) free education for participants
  - d) government subsidies for families

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. A modern version of the 1930s Civilian Conservation Corps, called a Citizen Nature Service, could restore ecosystems, create well-paid jobs, and install clean technologies. It would help the environment as well as participants' health and employability.

Name

Date

Climate



# Citizens Assemblies

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1085>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. A Citizens' Assembly is
  - a) a governmental meeting open to an audience of citizens
  - b) a randomly-selected group of people representing a community
  - c) a public body composed of citizens acting as a court of law
  - d) none of the above
2. Citizens' Assemblies can make society more resilient by
  - a) replacing the government for day-to-day matters
  - b) forcing consensus and agreement on all issues
  - c) giving people a greater sense of responsibility and control
  - d) all of the above
- 3) The main purpose of a Citizens' Assembly is to
  - a) pass and enforce new laws and community standards
  - b) provide a venue for social interaction
  - c) discuss and make recommendations on important issues
  - d) all of the above
4. A challenge faced by Citizens' Assemblies is
  - a) their recommendations are often ignored or watered down
  - b) they don't consider diverse viewpoints
  - c) they have too much power and can become 'tyrannies of the majority'
  - d) all of the above

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## Citizens Assemblies

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1085>

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  - c) they have too much power and can become 'tyrannies of the majority'
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Citizens' Assemblies are randomly selected groups that represent a community's diversity and discuss important issues. They help find compromises, include diverse views, and can speed up climate action by empowering citizens.

Name

Date

Climate



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## City Greening

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main goal of city greening is to
  - a) build more roads
  - b) change the colour of buildings
  - c) enhance local ecosystems
  - d) reduce traffic congestion
2. During a heat wave, trees help by
  - a) absorbing carbon emissions
  - b) creating shade
  - c) reducing rainfall
  - d) reducing water usage
- 3) Restoring wetlands and planting rain gardens in cities can
  - a) reduce water usage
  - b) increase urban population
  - c) absorb rainwater to reduce flood risks
  - d) reduce traffic congestion
4. Cities are more severely affected by events such as flooding and heat waves
  - a) because of their population density
  - b) because of their location
  - c) due to poor air quality
  - d) due to their size



<https://daybreakgame.org/card/1087>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## City Greening

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1087>

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  - reduce traffic congestion
- Cities are more severely affected by events such as flooding and heat waves
  - because of their population density
  - because of their location
  - due to poor air quality
  - due to their size

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- City greening improves urban health and safety by enhancing ecosystems, such as planting trees for shade. It can mitigate climate impacts like heat waves and flooding while addressing historic environmental injustices.



Name

Date

Climate



# City Relocation

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1099>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. City relocation is
  - a) moving cities to new locations to improve their economies
  - b) planned movement of people and infrastructure
  - c) building new cities in remote regions with fewer climate hazards
  - d) all of the above
2. Another term for city relocation is
  - a) industrialization
  - b) managed retreat
  - c) urbanization
  - d) urban sprawl
- 3) Government leaders are planning to relocate the capital of
  - a) Australia
  - b) Brazil
  - c) Indonesia
  - d) Japan
4. As well as social and cultural concerns, city relocation must also consider
  - a) economic growth
  - b) environmental laws
  - c) legal restrictions
  - d) political considerations

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## City Relocation

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1099>

- City relocation is
  - moving cities to new locations to improve their economies
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  - Australia
  - Brazil
  - Indonesia
  - Japan
- As well as social and cultural concerns, city relocation must also consider
  - economic growth
  - environmental laws
  - legal restrictions
  - political considerations

- City relocation involves moving people and infrastructure from areas vulnerable to climate hazards. It is challenging and controversial, requiring consideration of social, cultural, and political factors, and significant input from those affected.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

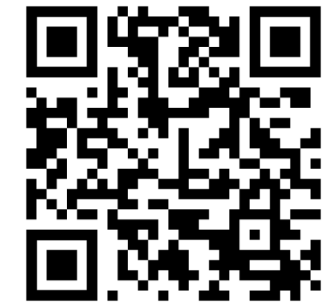
Climate



## Clean Cookstoves

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1061>

- Nearly a third of the global population eats food cooked on stoves burning
  - food or charcoal
  - dung
  - crop residues
  - all of the above
- Pollutants from dirty cookstoves cause
  - liver and kidney disease
  - lung and heart disease
  - skin and eye disease
  - bone and joint disease
- A benefit of replacing dirty cookstoves is
  - decreased greenhouse gas emissions
  - reduced deaths
  - reduced deforestation
  - all of the above
- A cleaner alternative replace traditional cookstoves in the Majority World is
  - gas stoves
  - electric stoves
  - solar stoves
  - coal stoves

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Clean Cookstoves

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Nearly a third of the global population eats food cooked on stoves burning
  - food or charcoal
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  - decreased greenhouse gas emissions
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  - gas stoves
  - electric stoves
  - solar stoves
  - coal stoves



<https://daybreakgame.org/card/1061>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Nearly 1/3 of people worldwide burn wood and charcoal to cook, causing 2% of emissions and 4 million deaths yearly. Alternatives such as solar-powered stoves reduce greenhouse gases, pollutants, deforestation, and free up time for women and girls who gather fuel.

Name

Date

Climate



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# Clean Electricity Plants

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Clean energy plants do not emit
  - a) greenhouse gases
  - b) nitrogen
  - c) oxygen
  - d) water vapour
2. One obstacle to building clean energy plants is
  - a) lack of fuel
  - b) high initial investment costs
  - c) limited availability of sunlight
  - d) excessive maintenance costs
- 3) Compared to dirty energy systems, clean energy plants
  - a) are more expensive in the long run
  - b) have higher fuel costs
  - c) are cheaper overall
  - d) none of the above
4. Quickly shifting away from coal and gas is important to
  - a) increase greenhouse gas emissions
  - b) reduce the impacts of the climate crisis
  - c) improve the financial performance of private utilities
  - d) all of the above

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<https://daybreakgame.org/card/1200>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Clean Electricity Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Clean energy plants do not emit
  - greenhouse gases
  - nitrogen
  - oxygen
  - water vapour
- One obstacle to building clean energy plants is
  - lack of fuel
  - high initial investment costs
  - limited availability of sunlight
  - excessive maintenance costs
- Compared to dirty energy systems, clean energy plants
  - are more expensive in the long run
  - have higher fuel costs
  - are cheaper overall
  - none of the above
- Quickly shifting away from coal and gas is important to
  - increase greenhouse gas emissions
  - reduce the impacts of the climate crisis
  - improve the financial performance of private utilities
  - all of the above

- Although initially costly, building clean energy plants can significantly reduce global greenhouse gas emissions. Shifting to clean power will lower energy costs and help tackle climate change.



<https://daybreakgame.org/card/1200>

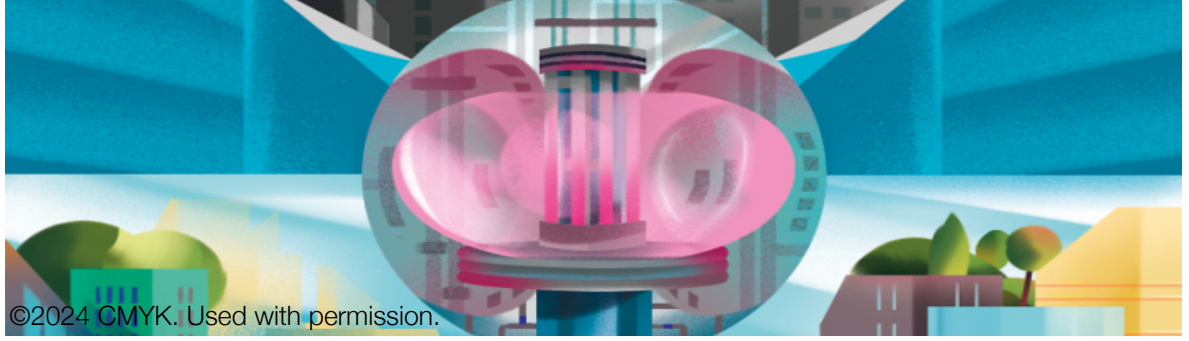
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Clean Energy R+D

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. An example of clean energy technology is
  - a) offshore floating wind turbines
  - b) capacitive microgenerators installed in sidewalks
  - c) cold fusion using biofuels
  - d) all of the above
2. Innovative clean energy technology
  - a) increases the cost of energy
  - b) makes the clean energy transition more affordable
  - c) reduces efficiency
  - d) impedes renewable energy production
- 3) Energy storage
  - a) decreases the efficiency of renewable energy generation
  - b) decreases renewable energy availability
  - c) enhances the efficiency and reliability of renewable energy
  - d) slows down energy distribution
4. When investing in clean energy technologies, there is a trade-off between
  - a) proven and unproven technologies
  - b) efficiency and return on investment
  - c) onshore and offshore wind turbines
  - d) risk and return on investment

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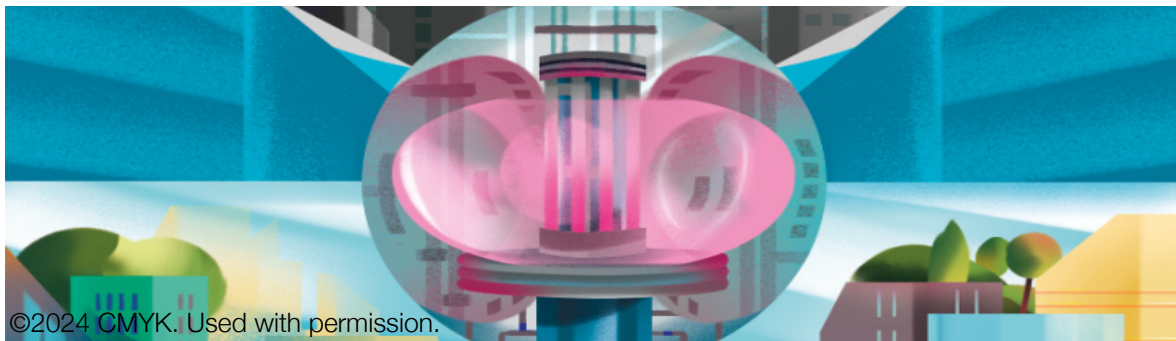


<https://daybreakgame.org/card/1118>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Clean Energy R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1118>

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  - a) offshore floating wind turbines
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  - a) proven and unproven technologies
  - b) efficiency and return on investment
  - c) onshore and offshore wind turbines
  - d) risk and return on investment

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Research and development can make clean energy cheaper and more efficient, improving technologies like wind turbines and green hydrogen production. Governments must balance investing in new, unproven tech with streamlining proven solutions for faster impact.

Name

Date

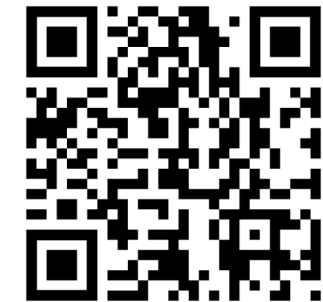
Climate



# Clean Energy Standards

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1047>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Clean energy standards work by
  - a) requiring utilities to sell a certain amount of zero-carbon electricity
  - b) subsidizing the construction of green power plants such as wind and solar
  - c) reducing energy consumption through efficiency standards
  - d) all of the above
2. Clean energy standards have been implemented by
  - a) Australia, China, South Korea, and Mexico
  - b) Russian, India, and Brazil
  - c) Australia, New Zealand, and the European Union
  - d) Canada, Mexico, South Korea, and Japan
- 3) Clean energy standards are attractive because
  - a) they are more efficient than carbon pricing
  - b) they ensure a reliable electricity supply
  - c) they provide utilities flexibility in how to meet them
  - d) all of the above
4. Properly enforced clean energy standards ensure
  - a) employment alternatives for fossil fuel industry workers
  - b) an increasing share of electricity from clean sources
  - c) adequate returns for investors
  - d) all of the above

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## Clean Energy Standards

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1047>

- Clean energy standards work by
  - requiring utilities to sell a certain amount of zero-carbon electricity
  - subsidizing the construction of green power plants such as wind and solar
  - reducing energy consumption through efficiency standards
  - all of the above
- Clean energy standards have been implemented by
  - Australia, China, South Korea, and Mexico
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- Clean energy standards are attractive because
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  - all of the above
- Properly enforced clean energy standards ensure
  - employment alternatives for fossil fuel industry workers
  - an increasing share of electricity from clean sources
  - adequate returns for investors
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Clean energy standards require utilities to produce a certain amount of electricity from zero-carbon sources like wind and solar. Many countries like Australia and China have implemented these standards to increase renewable energy use.*

Name

Date

Climate



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## Climate Bonds

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1003>

1. Bonds are
  - a) grants given by governments
  - b) donations to companies
  - c) loans where investors provide money for a set period
  - d) another term for stocks
2. A climate bond is used for
  - a) investing in fossil fuel extraction and refining
  - b) funding projects to reduce emissions and improve resilience
  - c) building highways and other transportation infrastructure
  - d) supporting housing construction
- 3) In 2022 sustainability-related bonds were issued worth
  - a) \$50 million
  - b) \$104 million
  - c) \$514 million
  - d) \$863 million
4. Greenwashing means
  - a) making something look environmentally friendly when it isn't
  - b) cleaning oil off of waterfowl and other animals affected by oil spills
  - c) using only environmentally friendly detergents when doing laundry
  - d) using only ethically-sourced money for investment

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Climate Bonds

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1003>

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  - c) using only environmentally friendly detergents when doing laundry
  - d) using only ethically-sourced money for investment

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Climate bonds are loans used to fund projects that reduce emissions and make societies stronger against climate change.  
They sometimes fund unsustainable projects, and rules are needed to ensure these bonds genuinely help reduce emissions.



Name

Date

Climate



# Climate Debt Reparations

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1214>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

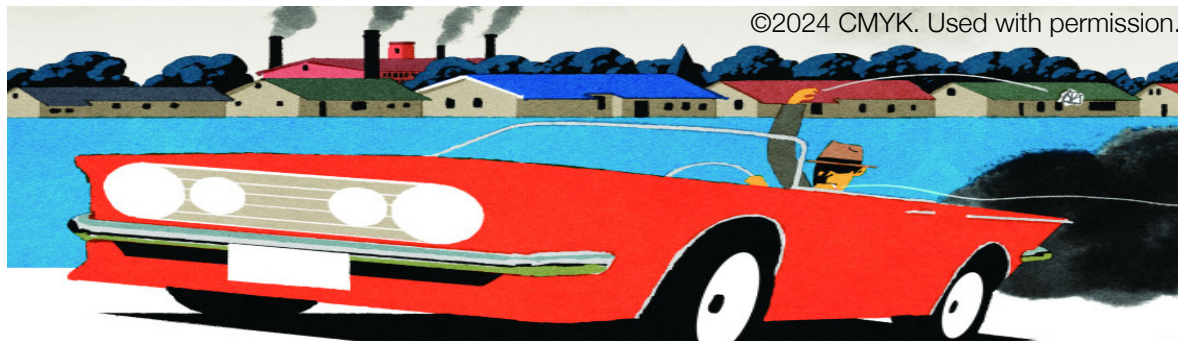
1. Climate debt reparations are
  - a) taxes paid to combat climate change
  - b) countries responsible for climate change helping poorer countries suffering it
  - c) wealthy countries buying climate bonds then cashing them in
  - d) all of the above
2. The country with the highest total overall greenhouse gas emissions is
  - a) China
  - b) India
  - c) Russia
  - d) United States
- 3) The climate emergency is a global problems because
  - a) it affects wealthy countries
  - b) it affects all countries worldwide
  - c) it affects poorer countries
  - d) it affects countries near the ocean
4. Climate reparations might include
  - a) open borders for climate migrants
  - b) climate litigation to hold countries and corporations accountable
  - c) loss and damage funds to compensate for historic or ongoing damages
  - d) all of the above

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## Climate Debt Reparations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1214>

- Climate debt reparations are
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  - open borders for climate migrants
  - climate litigation to hold countries and corporations accountable
  - loss and damage funds to compensate for historic or ongoing damages
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Climate debt reparations involve wealthy countries like the US providing funds and technology to poorer nations most affected by the climate crisis. This helps address global climate justice and supports adaptation and mitigation efforts.



Name

Date

Climate



# Climate Immigration

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1109>

- Climate change is forcing people to move because of
  - more frequent extreme weather
  - changes to agricultural patterns
  - increased environmental and societal tensions
  - all of the above
- Inclusive climate immigration means people
  - move when conditions are too bad to remain
  - move to the first country that provides a safe haven
  - might be separated from their families
  - are treated fairly when they arrive
- Climate immigration is complex because
  - large numbers of people will have to move
  - destination countries will also be dealing with a changing climate
  - integrating people into a new country takes time
  - all of the above
- Managing equitable climate immigration will require
  - unilateral action by the affected countries
  - ending hostile border controls
  - limiting immigration to compatible cultures
  - all of the above

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Climate Immigration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1109>

1. Climate change is forcing people to move because of
  - a) more frequent extreme weather
  - b) changes to agricultural patterns
  - c) increased environmental and societal tensions
  - d) all of the above
2. Inclusive climate immigration means people
  - a) move when conditions are too bad to remain
  - b) move to the first country that provides a safe haven
  - c) might be separated from their families
  - d) are treated fairly when they arrive
- 3) Climate immigration is complex because
  - a) large numbers of people will have to move
  - b) destination countries will also be dealing with a changing climate
  - c) integrating people into a new country takes time
  - d) all of the above
4. Managing equitable climate immigration will require
  - a) unilateral action by the affected countries
  - b) ending hostile border controls
  - c) limiting immigration to compatible cultures
  - d) all of the above

### Short Answer

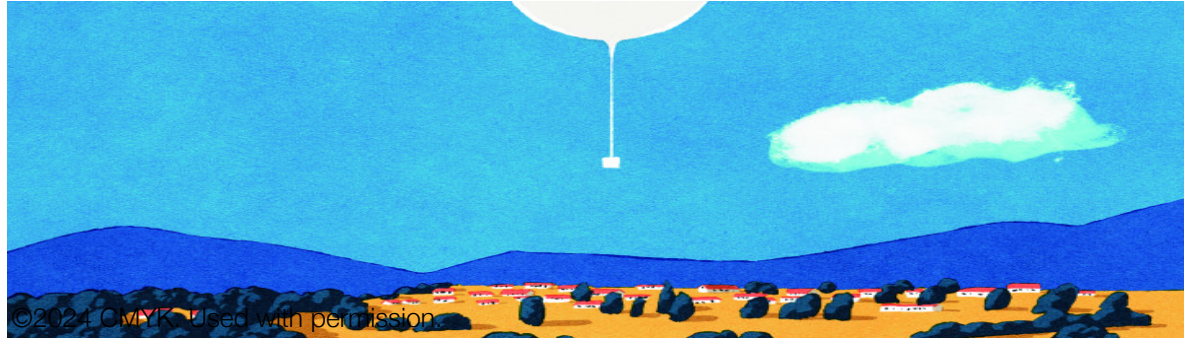
Summarize this project. Include a key benefit and one relevant point that supports it.

5. The climate emergency is driving people to relocate. Inclusive climate immigration prevents chaos. Global cooperation is essential, as new populations must be integrated while adapting to climate change. Without humane systems, mass migrations could become dangerous & disorderly.

Name

Date

Climate



# Climate Monitoring

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1103>

1. One benefit for farmers of continuously monitoring climate data is
  - a) it predicts economic growth
  - b) it provides continual updates on rainfall and temperature
  - c) it reduces the need for fertilizers
  - d) it replaces traditional farming methods
2. In order for climate data to be most useful,
  - a) it should remain on a computer
  - b) it should be kept confidential
  - c) it should be communicated to the right people
  - d) all of the above
- 3) Climate data is missing in much of the world because of
  - a) a lack of trained scientists
  - b) no internet access
  - c) poor coverage by weather stations
  - d) unavailable satellite technology
4. A common issue with large-scale climate datasets is
  - a) they are too accurate
  - b) they are hard to apply to individual situations
  - c) they are free to access
  - d) they are easily outdated

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Climate Monitoring

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1103>

- One benefit for farmers of continuously monitoring climate data is
  - it predicts economic growth
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- In order for climate data to be most useful,
  - it should remain on a computer
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  - it should be communicated to the right people
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- Climate data is missing in much of the world because of
  - a lack of trained scientists
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  - unavailable satellite technology
- A common issue with large-scale climate datasets is
  - they are too accurate
  - they are hard to apply to individual situations
  - they are free to access
  - they are easily outdated

### Short Answer

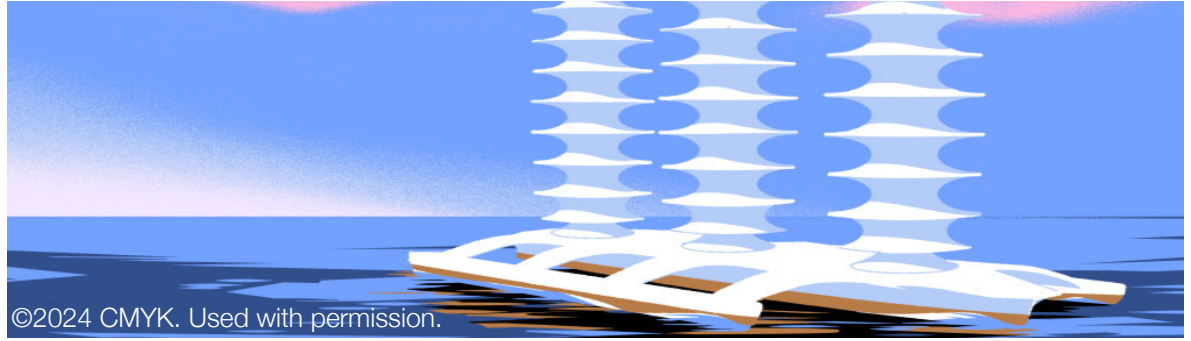
Summarize this project. Include a key benefit and one relevant point that supports it.

- Climate monitoring helps farmers and specialists make informed decisions, track climate changes, and predict events. However, information must be effectively communicated, and there are gaps in weather station coverage worldwide.*

Name

Date

Climate



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## Cloud Brightening

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1128>

1. Particulate pollution from burning fossil fuels has
  - a) a warming effect on the climate
  - b) a cooling effect on the climate
  - c) no effect on the climate
  - d) increases rainfall
2. The main idea behind cloud brightening is
  - a) removing clouds to prevent rain
  - b) darkening clouds to absorb more sunlight
  - c) brightening clouds to reflect more sunlight
  - d) thinning clouds to let more sunlight through
- 3) Cloud brightening might be used to cool
  - a) the Great Barrier Reef
  - b) the Amazon Rainforest
  - c) the Sahara Desert
  - d) all of the above
4. A risk of cloud brightening is that it might
  - a) cool the planet too much
  - b) shift rainfall patterns in nearby regions
  - c) cause more hurricanes
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

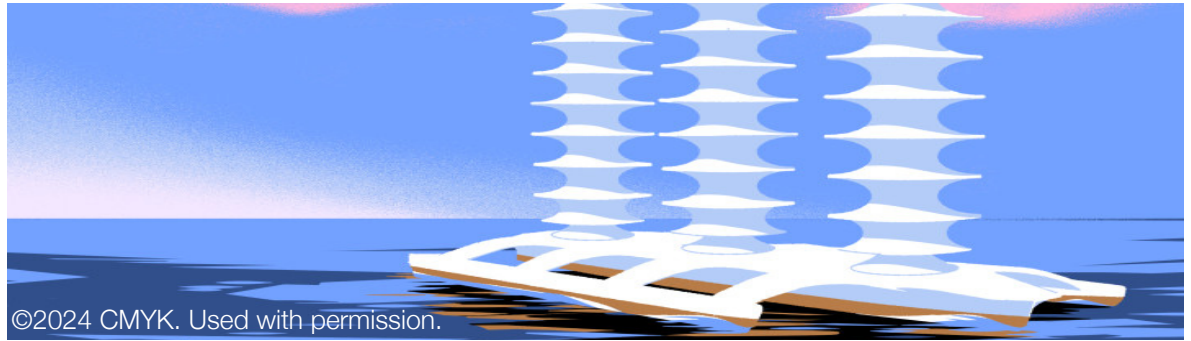
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## Cloud Brightening

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1128>

1. Particulate pollution from burning fossil fuels has
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  - c) the Sahara Desert
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4. A risk of cloud brightening is that it might
  - a) cool the planet too much
  - b) shift rainfall patterns in nearby regions
  - c) cause more hurricanes
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Cloud brightening involves spraying sea-salt particles into clouds to reflect more sunlight and cool certain regions. This technique may help slow Arctic melting but carries risks like shifting rainfall patterns.



Name

Date

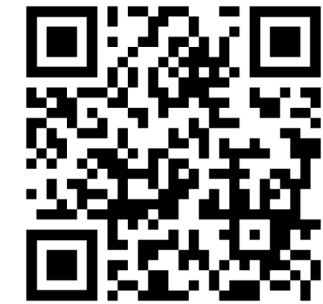
Climate



# Community Solar

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1018>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. A community solar project is
  - a) owned and operated by higher-level government
  - b) owned and operated by community members
  - c) a for-profit solar business
  - d) owned and operated by an electric utility
2. The benefits of community solar include
  - a) decreased greenhouse gas emissions
  - b) reduced reliance on large, for-profit utilities
  - c) increased community engagement
  - d) all of the above
- 3) Community solar projects rely on community members
  - a) for time and expertise to put the project together
  - b) to write regulations and procedures to connect to the national grid
  - c) to convince for-profit utilities to grant permission to build
  - d) to provide a market for the electricity they produce
4. The main goal of community solar projects is to
  - a) increase profits to improve the tax base
  - b) improve community equity while helping the environment
  - c) demonstrate the need for increased government regulation
  - d) reduce reliance on distant for-profit utilities

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## Community Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1018>

- A community solar project is
  - owned and operated by higher-level government
  - owned and operated by community members
  - a for-profit solar business
  - owned and operated by an electric utility
- The benefits of community solar include
  - decreased greenhouse gas emissions
  - reduced reliance on large, for-profit utilities
  - increased community engagement
  - all of the above
- Community solar projects rely on community members
  - for time and expertise to put the project together
  - to write regulations and procedures to connect to the national grid
  - to convince for-profit utilities to grant permission to build
  - to provide a market for the electricity they produce
- The main goal of community solar projects is to
  - increase profits to improve the tax base
  - improve community equity while helping the environment
  - demonstrate the need for increased government regulation
  - reduce reliance on distant for-profit utilities

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Community solar projects allow local people to generate and use solar energy together, reducing reliance on large utilities. They face financial and regulatory challenges, but improve community equity and should be supported.

Name

Date

Climate



# Community Wealth

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main goal of community wealth building is
  - a) attracting foreign investors
  - b) making locals citizens rich
  - c) keeping wealth within the local community
  - d) promoting international trade
2. Large businesses affect local economies by
  - a) generating and investing wealth locally
  - b) extracting wealth and sending the profits to distant shareholders
  - c) supporting local businesses
  - d) all of the above
- 3) A long-standing approach to local economic development is
  - a) worker co-operatives
  - b) investing in global supply chains
  - c) reducing taxes for large corporations
  - d) encouraging multinational companies
4. Austerity measures affect community wealth building by
  - a) helping local businesses grow
  - b) cutting local government budgets, making building community wealth harder
  - c) freeing up capital to increase local investments
  - d) providing more support for cooperatives and creating local community wealth

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<https://daybreakgame.org/card/1006>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Community Wealth

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1006>

1. The main goal of community wealth building is
  - a) attracting foreign investors
  - b) making locals citizens rich
  - c) keeping wealth within the local community
  - d) promoting international trade
2. Large businesses affect local economies by
  - a) generating and investing wealth locally
  - b) extracting wealth and sending the profits to distant shareholders
  - c) supporting local businesses
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  - a) worker co-operatives
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4. Austerity measures affect community wealth building by
  - a) helping local businesses grow
  - b) cutting local government budgets, making building community wealth harder
  - c) freeing up capital to increase local investments
  - d) providing more support for cooperatives and creating local community wealth

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Community wealth building keeps money local by supporting local businesses and co-operatives, reducing reliance on distant companies. It promotes democratic control of economies. Barriers include government budget cuts and focus on large companies.



Name

Date

Climate



# Community Wind

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A key feature of community wind projects is that they
  - a) are owned by public utilities
  - b) are owned by the community where they are located
  - c) are only suitable for urban areas
  - d) have a poor return on investment
2. A challenge often faced by community wind projects is
  - a) no one wants to own them
  - b) regulatory and financial barriers
  - c) they are illegal in many places
  - d) they are complex and difficult to maintain
- 3) Community wind projects are typically located
  - a) in the middle of cities, on tall buildings
  - b) on ocean shorelines
  - c) on the periphery of denser areas
  - d) all of the above
4. Models for community wind projects include
  - a) community owned and operated
  - b) utility owned with community participation in selection and operation
  - c) making profits to reinvest in the community
  - d) all of the above

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<https://daybreakgame.org/card/1132>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Community Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1132>

1. A key feature of community wind projects is that they
  - a) are owned by public utilities
  - b) are owned by the community where they are located
  - c) are only suitable for urban areas
  - d) have a poor return on investment
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  - a) no one wants to own them
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- 3) Community wind projects are typically located
  - a) in the middle of cities, on tall buildings
  - b) on ocean shorelines
  - c) on the periphery of denser areas
  - d) all of the above
4. Models for community wind projects include
  - a) community owned and operated
  - b) utility owned with community participation in selection and operation
  - c) making profits to reinvest in the community
  - d) all of the above
5. Community wind projects are owned by local communities, providing clean energy and reducing reliance on profit-driven utilities. They face challenges like funding and regulations, but promote community equity.

### Short Answer

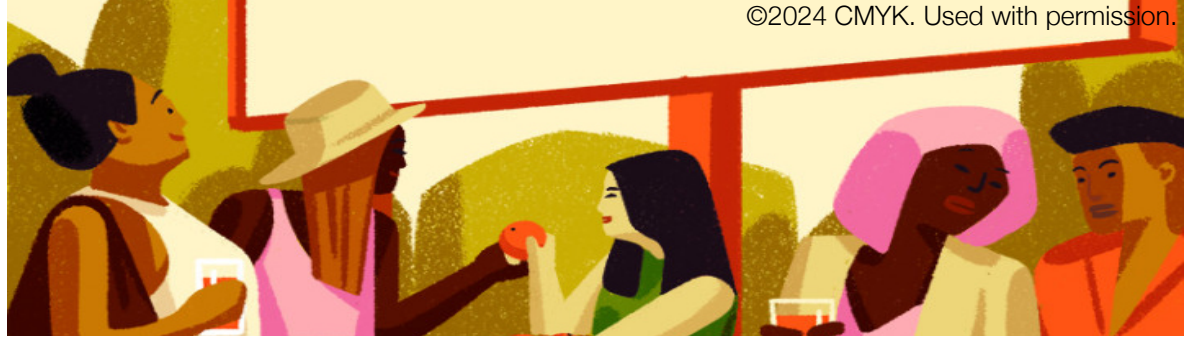
Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



# Degrowth Movement

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Degrowth is intended to reduce
  - a) government policies and regulations
  - b) energy and resource use
  - c) population size
  - d) tax rates
2. The climate emergency is driven by
  - a) overuse of fossil fuels and natural resources
  - b) lack of innovation of new products and services
  - c) insufficient productions capability
  - d) high taxation
- 3) Degrowth prioritizes well-being over
  - a) education
  - b) healthcare
  - c) profit
  - d) technology
4. Degrowth reduces consumerism by promoting
  - a) higher wages
  - b) increased advertising
  - c) sharing
  - d) lowering prices

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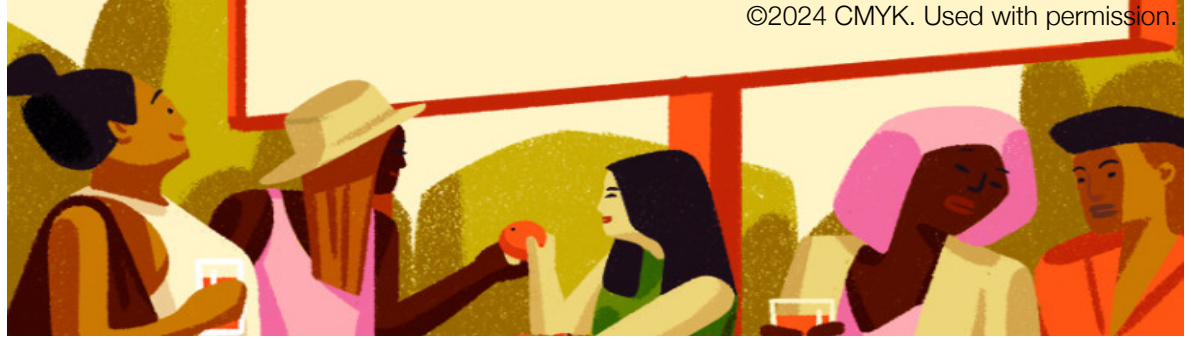
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<https://daybreakgame.org/card/1033>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Degrowth Movement

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Degrowth is intended to reduce
  - government policies and regulations
  - energy and resource use
  - population size
  - tax rates
- The climate emergency is driven by
  - overuse of fossil fuels and natural resources
  - lack of innovation of new products and services
  - insufficient productions capability
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- Degrowth prioritizes well-being over
  - education
  - healthcare
  - profit
  - technology
- Degrowth reduces consumerism by promoting
  - higher wages
  - increased advertising
  - sharing
  - lowering prices

- Degrowth is about reducing energy and resource use to improve community well-being through less consumption and more sharing. It shifts priorities from economic growth to well-being, especially in wealthy countries, to tackle climate change and resource inequality.



<https://daybreakgame.org/card/1033>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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## Development Assistance

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Development assistance involves
  - a) trading resources between countries
  - b) transferring resources from wealthy to poorer countries
  - c) investing in poorer countries with the expectation of large returns
  - d) all of the above
2. Development assistance typically includes resources like
  - a) money, technology, and people's time and skills
  - b) medical supplies and disaster relief
  - c) food and consumer products
  - d) all of the above
- 3) The countries most vulnerable to the climate emergency are often
  - a) developed countries
  - b) countries with strong global trade links
  - c) countries least responsible for causing it
  - d) countries with economies based on resource extraction
4. One criticism of development assistance is that
  - a) aid spending is too generous
  - b) aid spending only benefits the recipient country
  - c) aid spending must often be spent on the donor country's companies
  - d) all of the above

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<https://daybreakgame.org/card/1049>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Development Assistance

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1049>

1. Development assistance involves
  - a) trading resources between countries
  - b) transferring resources from wealthy to poorer countries
  - c) investing in poorer countries with the expectation of large returns
  - d) all of the above
2. Development assistance typically includes resources like
  - a) money, technology, and people's time and skills
  - b) medical supplies and disaster relief
  - c) food and consumer products
  - d) all of the above
- 3) The countries most vulnerable to the climate emergency are often
  - a) developed countries
  - b) countries with strong global trade links
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  - a) aid spending is too generous
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  - c) aid spending must often be spent on the donor country's companies
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### Short Answer

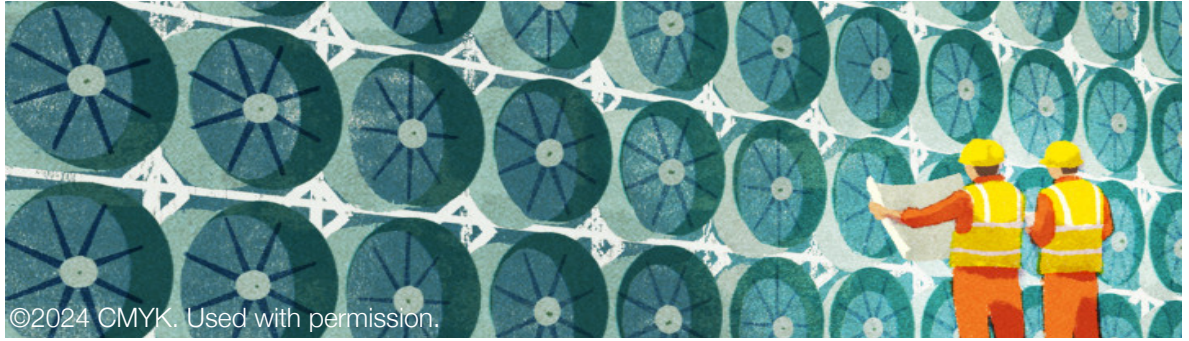
Summarize this project. Include a key benefit and one relevant point that supports it.

5. Development Assistance is transferring resources like money & technology from wealthy to poorer countries. It helps vulnerable nations adapt to climate change, but challenges include loans with interest & voluntary commitments from wealthy countries.

Name

Date

Climate



## Direct Air Capture

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1123>

1. Direct air capture works by
  - a) blowing air over a fluid that binds  $\text{CO}_2$
  - b) using solar planets to capture  $\text{CO}_2$
  - c) capturing  $\text{CO}_2$  from cars and other vehicles
  - d) cooling the air to remove  $\text{CO}_2$
2. A major challenge of direct air capture is that
  - a) it is easy and inexpensive
  - b) it is energy-intensive and costly
  - c) it works best in cold climates
  - d) it can only be done in deserts and other dry climates
- 3) A criticism of direct air capture is that
  - a) it encourages overly-ambitious climate goals
  - b) it makes everything more expensive
  - c) it eliminates the need for renewable energy
  - d) it is used to justify less ambitious climate goals
4. A cheaper and easier alternative to direct air capture is
  - a) capturing methane from landfills
  - b) cutting  $\text{CO}_2$  emissions at their source
  - c) pumping water into the air
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

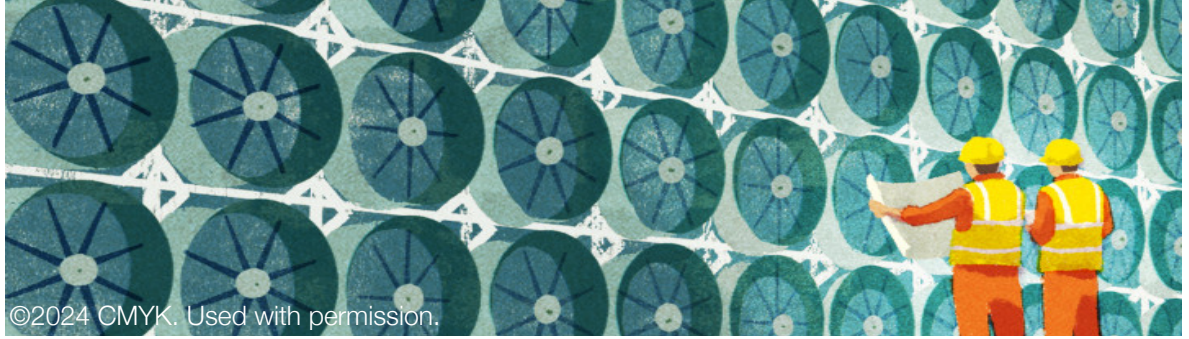
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## Direct Air Capture

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1123>

1. Direct air capture works by
  - a) blowing air over a fluid that binds CO<sub>2</sub>
  - b) using solar planets to capture CO<sub>2</sub>
  - c) capturing CO<sub>2</sub> from cars and other vehicles
  - d) cooling the air to remove CO<sub>2</sub>
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  - a) it is easy and inexpensive
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4. A cheaper and easier alternative to direct air capture is
  - a) capturing methane from landfills
  - b) cutting CO<sub>2</sub> emissions at their source
  - c) pumping water into the air
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

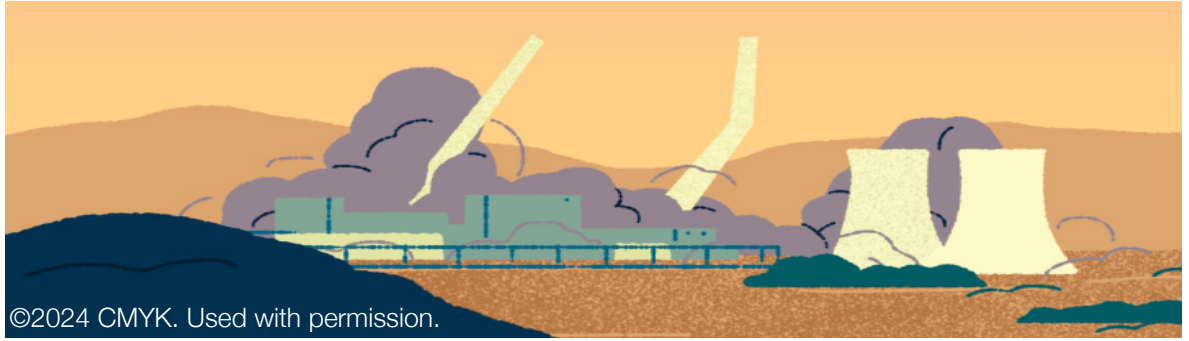
5. Direct air capture is a method to capture CO<sub>2</sub> directly from the air using chemical reactions. It is very energy-intensive and expensive. Cutting emissions at their source is currently a cheaper and easier option.



Name

Date

Climate



# Dirty Electricity Phaseout

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

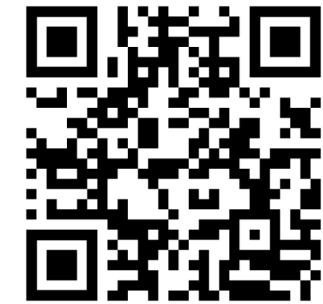
1. One of the largest single sources of global greenhouse gas emissions is
  - a) solar power
  - b) wind energy
  - c) dirty power plants
  - d) hydroelectric dams
2. Dirty power sources include
  - a) coal, natural gas, and oil
  - b) biomass and hydropower
  - c) nuclear and geothermal
  - d) all of the above
- 3) Phasing out dirty electricity faces resistance because
  - a) clean electricity is more expensive
  - b) fossil-fuel interests oppose it
  - c) it is too difficult to achieve
  - d) all of the above
4. Poorer countries hesitate to phase out dirty electricity without help because
  - a) Xx they don't use enough electricity
  - b) Xx they fear it will disrupt their growth
  - c) Xx they already have too much clean energy
  - d) Xx xx

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<https://daybreakgame.org/card/1201>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Dirty Electricity Phaseout

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- One of the largest single sources of global greenhouse gas emissions is
  - solar power
  - wind energy
  - dirty power plants
  - hydroelectric dams
- Dirty power sources include
  - coal, natural gas, and oil
  - biomass and hydropower
  - nuclear and geothermal
  - all of the above
- Phasing out dirty electricity faces resistance because
  - clean electricity is more expensive
  - fossil-fuel interests oppose it
  - it is too difficult to achieve
  - all of the above
- Poorer countries hesitate to phase out dirty electricity without help because
  - Xx they don't use enough electricity
  - Xx they fear it will disrupt their growth
  - Xx they already have too much clean energy
  - Xx xx

- Shutting down dirty power plants is crucial for reducing greenhouse gas emissions. Replacing them with cleaner energy requires investment but leads to cheaper, cleaner power. Financial support is needed to help poorer countries transition.



<https://daybreakgame.org/card/1201>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Discount Rate Reduction

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. With a higher social discount rate
  - a) future generations are prioritized
  - b) current generations are prioritized
  - c) climate action is slowed
  - d) economic growth is reduced
2. There is a growing consensus that discount rates
  - a) should remain high
  - b) should be lowered
  - c) should be increased annually
  - d) should be eliminated entirely
- 3) There is a perceived trade-off between
  - a) economic growth and job creation
  - b) climate action today and future benefits
  - c) pollution control and energy production
  - d) clean energy and fossil fuels
4. A zero discount rate means
  - a) current and future generations are treated equally
  - b) future generations are ignored
  - c) climate action is delayed
  - d) economic growth is halted

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<https://daybreakgame.org/card/1001>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1001>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

# Discount Rate Reduction

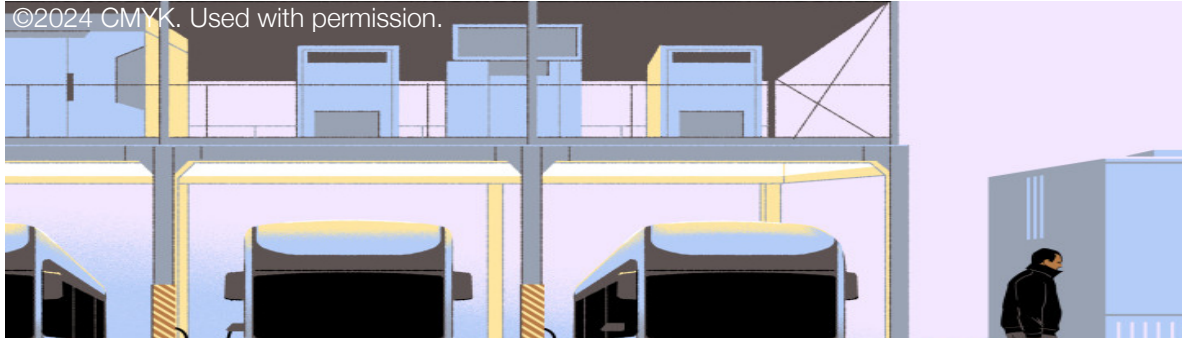
1. With a higher social discount rate
  - a) future generations are prioritized
  - b) current generations are prioritized
  - c) climate action is slowed
  - d) economic growth is reduced
2. There is a growing consensus that discount rates
  - a) should remain high
  - b) should be lowered
  - c) should be increased annually
  - d) should be eliminated entirely
- 3) There is a perceived trade-off between
  - a) economic growth and job creation
  - b) climate action today and future benefits
  - c) pollution control and energy production
  - d) clean energy and fossil fuels
4. A zero discount rate means
  - a) current and future generations are treated equally
  - b) future generations are ignored
  - c) climate action is delayed
  - d) economic growth is halted

5. The "social discount rate" costs today against future benefits. A higher rate prioritizes current generations, but worsening climate damage challenges this view. There are debates about the balance between present and future needs.

Name

Date

Climate



## Distributed Energy Storage

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1083>

1. Distributed energy storage is
  - a) large-scale energy storage in central facilities
  - b) fossil fuel stored in lots of small tanks to reduce the risk of explosions
  - c) a web of smaller storage devices for storing electricity
  - d) a method of storing nuclear energy
2. The two main methods for distributed energy storage are
  - a) small dams and power plants
  - b) small-scale batteries and electric vehicles
  - c) coal and gas reserves
  - d) solar panels and wind turbines
- 3) A benefit of combining distributed energy storage with rooftop solar is
  - a) decreased energy bills
  - b) making buildings self-sufficient
  - c) lower greenhouse gas emissions
  - d) all of the above
4. Lithium-ion battery prices are
  - a) rapidly falling
  - b) steadily increasing
  - c) remaining constant
  - d) varying unpredictably

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

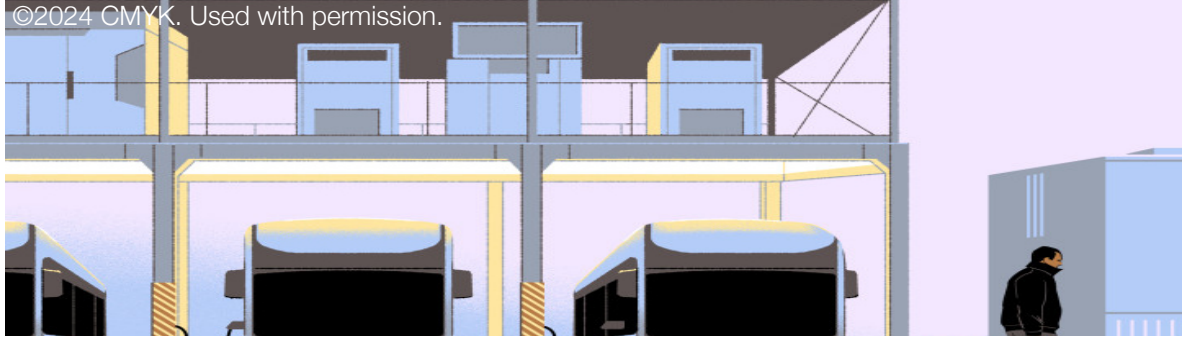
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## Distributed Energy Storage

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1083>

1. Distributed energy storage is
  - a) large-scale energy storage in central facilities
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  - d) all of the above
4. Lithium-ion battery prices are
  - a) rapidly falling
  - b) steadily increasing
  - c) remaining constant
  - d) varying unpredictably

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

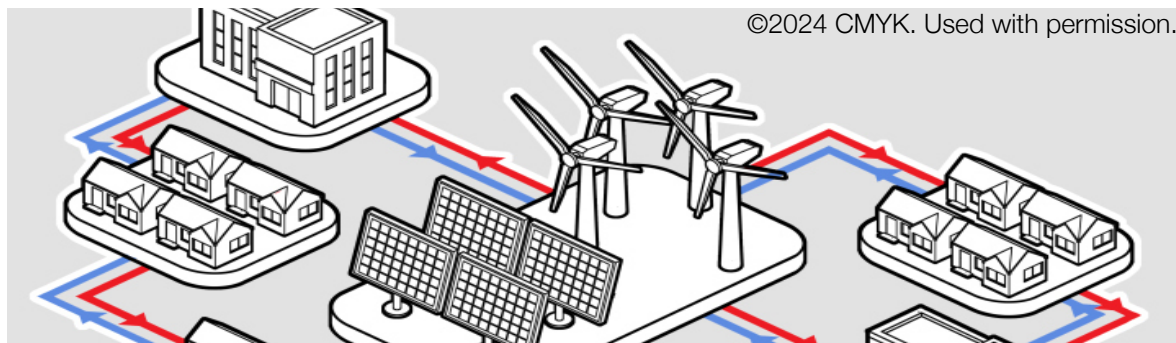
5. Distributed energy storage uses small-scale batteries and electric vehicles to store energy, reducing emissions and energy costs. While barriers like costs and regulations exist, falling battery prices and grid modernization are making decentralized storage more feasible.



Name

Date

Climate



# District Heating

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. District heating means
  - a) installing boilers in each building that are shared by units in the building
  - b) heating buildings with solar panels
  - c) connecting adjacent buildings to a central boiler by insulated piping
  - d) all of the above
2. District heating is most beneficial in
  - a) cold climates
  - b) tropical climates
  - c) desert climates
  - d) coastal climates
- 3) The amount of piping required for district heating can be minimized by
  - a) building taller buildings
  - b) using electric heating
  - c) clustering buildings closely together
  - d) all of the above
4. One challenge of district heating systems is
  - a) lack of heating capacity
  - b) difficulties installing adequate insulation
  - c) too much energy consumption
  - d) high upfront installation costs



<https://daybreakgame.org/card/1062>

## Short Answer

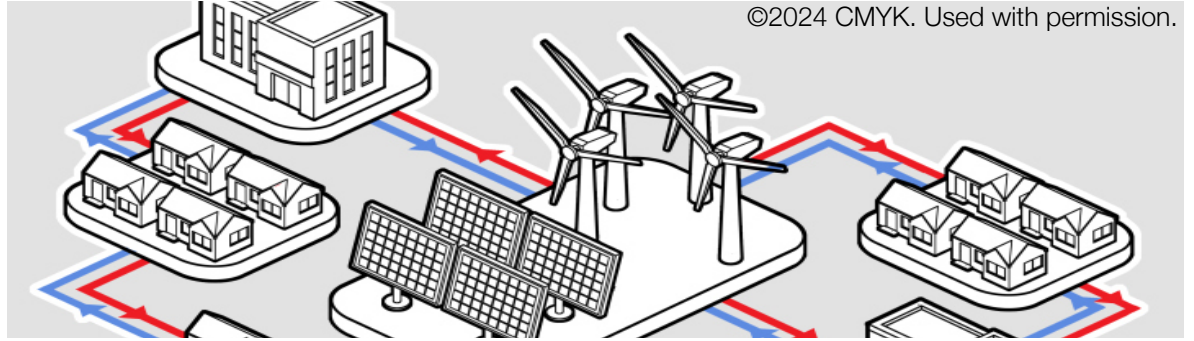
Summarize this project. Include a key benefit and one relevant point that supports it.

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## District Heating

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1062>

- District heating means
  - installing boilers in each building that are shared by units in the building
  - heating buildings with solar panels
  - connecting adjacent buildings to a central boiler by insulated piping
  - all of the above
- District heating is most beneficial in
  - cold climates
  - tropical climates
  - desert climates
  - coastal climates
- The amount of piping required for district heating can be minimized by
  - building taller buildings
  - using electric heating
  - clustering buildings closely together
  - all of the above
- One challenge of district heating systems is
  - lack of heating capacity
  - difficulties installing adequate insulation
  - too much energy consumption
  - high upfront installation costs

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- District heating connects buildings to a central boiler, reducing climate impact. It's most effective in cold climates, especially when using renewable energy sources, but faces challenges like coordination, installation costs, and system reliability.

Name

Date

Climate



# Drilling and Mining Bans

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

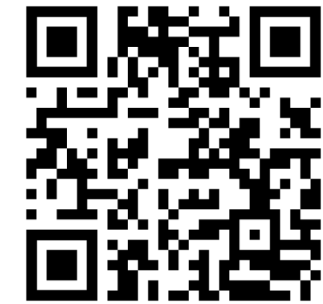
1. Bans on drilling and mining would need to be enacted by
  - a) private companies
  - b) environmental organizations
  - c) governments
  - d) the fossil fuel industry
2. International agreements to ban fossil fuel extraction would
  - a) allow drilling in more countries
  - b) promote global cooperation and avoid local pushback
  - c) reduce the cost of mining licenses
  - d) increase fossil fuel production
- 3) To help workers in banned industries, governments should
  - a) authorize new drilling sites
  - b) subsidize wages
  - c) provide retraining for green jobs
  - d) provide free housing
4. A potential consequence of deepwater drilling is
  - a) increased fish populations
  - b) catastrophic oil spills
  - c) improved air quality
  - d) reduced global warming

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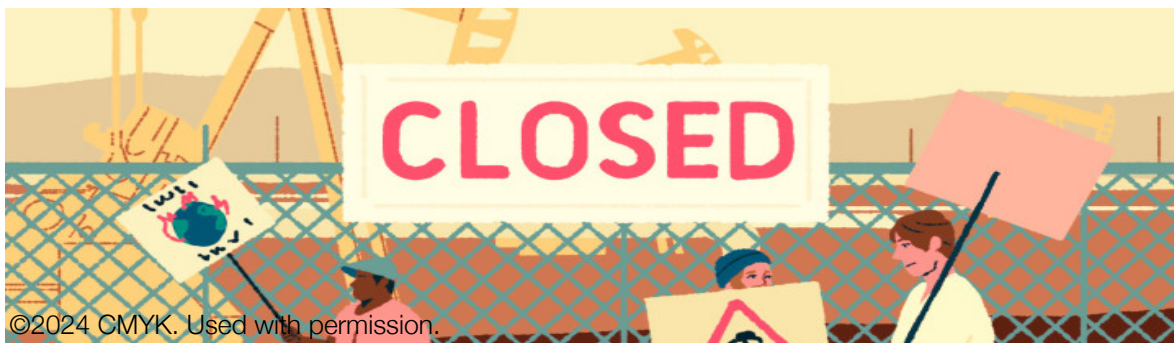
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<https://daybreakgame.org/card/1045>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Drilling and Mining Bans

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Bans on drilling and mining would need to be enacted by
  - private companies
  - environmental organizations
  - governments
  - the fossil fuel industry
- International agreements to ban fossil fuel extraction would
  - allow drilling in more countries
  - promote global cooperation and avoid local pushback
  - reduce the cost of mining licenses
  - increase fossil fuel production
- To help workers in banned industries, governments should
  - authorize new drilling sites
  - subsidize wages
  - provide retraining for green jobs
  - provide free housing
- A potential consequence of deepwater drilling is
  - increased fish populations
  - catastrophic oil spills
  - improved air quality
  - reduced global warming

- Banning fossil fuel extraction would reduce emissions and promote clean energy investments. Government-led bans, with worker retraining, could prevent ecological damage, though resistance from industry lobbyists and workers may arise.



<https://daybreakgame.org/card/1045>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Early Warning Systems

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1224>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Early warning systems help signal
  - a) election results in democratic countries
  - b) sports events
  - c) new technological inventions
  - d) impending hazardous natural events
2. Early warning systems reduce the risk of disaster by
  - a) preventing disasters
  - b) reducing infrastructure costs
  - c) giving people more time to prepare
  - d) promoting renewable energy
- 3) To be effective, early warning systems require
  - a) government investment and control
  - b) community involvement and public awareness
  - c) advanced technological innovations
  - d) high population density
4. Each dollar invested in early warning systems returns an average benefit of
  - a) \$1 (breaks even)
  - b) \$5
  - c) \$9
  - d) \$21

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## Early Warning Systems

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1224>

1. Early warning systems help signal
  - a) election results in democratic countries
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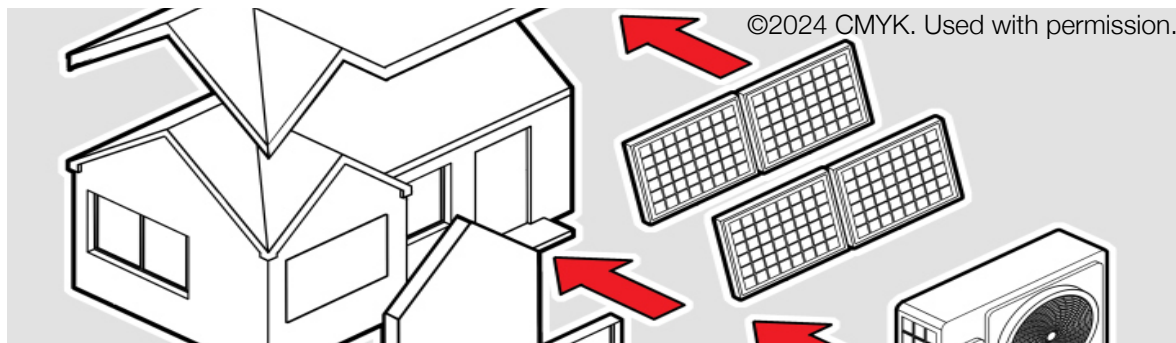
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Early warning systems, such as sensors and radar, help reduce disaster impacts by giving people time to prepare. They are important in vulnerable regions. Involving at-risk communities and sharing knowledge can improve their effectiveness.

Name

Date



## Efficiency Regulations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1032>

1. Current targets call for meeting 40% of emissions reductions by
  - a) building more sustainable power plants
  - b) using electricity more efficiently
  - c) improving insulation
  - d) switching to biofuels for vehicles
2. Energy efficiency is best achieved by
  - a) government regulations that set specific energy efficiency standards
  - b) industry associations such as CAPP and IOGP
  - c) global intergovernmental bodies like the UN
  - d) individuals and corporations acting as the market dictates
- 3) Efficiency standards work best when coupled with
  - a) financing or loan programs
  - b) prioritization of public and social housing upgrades
  - c) retrofitting projects
  - d) all of the above
4. A significant problem with improving efficiency in the Majority World is that
  - a) their engineers are poorly trained and do not understand the concept
  - b) traditional industries such as blast furnaces are part of their cultures
  - c) they lack the resources to upgrade or replace inefficient equipment
  - d) all of the above

### Short Answer

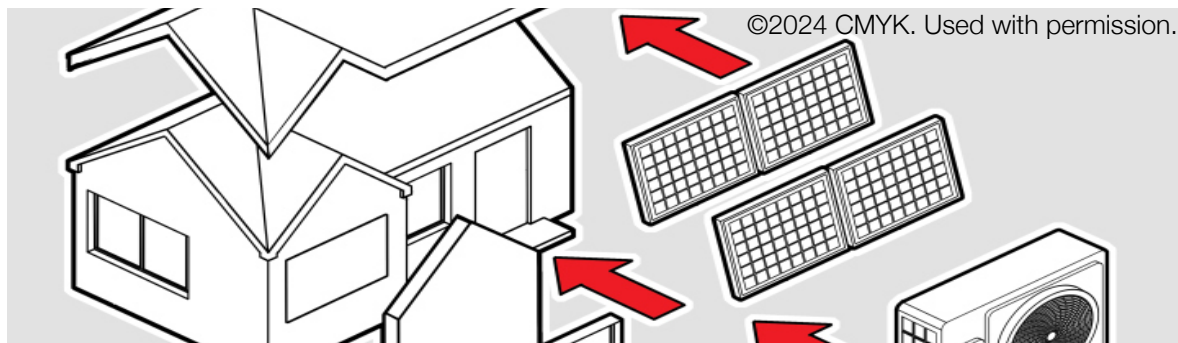
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Efficiency Regulations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1032>

- Current targets call for meeting 40% of emissions reductions by
  - building more sustainable power plants
  - using electricity more efficiently
  - improving insulation
  - switching to biofuels for vehicles
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  - government regulations that set specific energy efficiency standards
  - industry associations such as CAPP and IOGP
  - global intergovernmental bodies like the UN
  - individuals and corporations acting as the market dictates
- Efficiency standards work best when coupled with
  - financing or loan programs
  - prioritization of public and social housing upgrades
  - retrofitting projects
  - all of the above
- A significant problem with improving efficiency in the Majority World is that
  - their engineers are poorly trained and do not understand the concept
  - traditional industries such as blast furnaces are part of their cultures
  - they lack the resources to upgrade or replace inefficient equipment
  - all of the above

- 40% of planned emission reductions will come from improved efficiency. Government standard and subsidies help, but many countries in the Majority World need foreign aid to upgrade equipment. This would save money and lower global emissions.

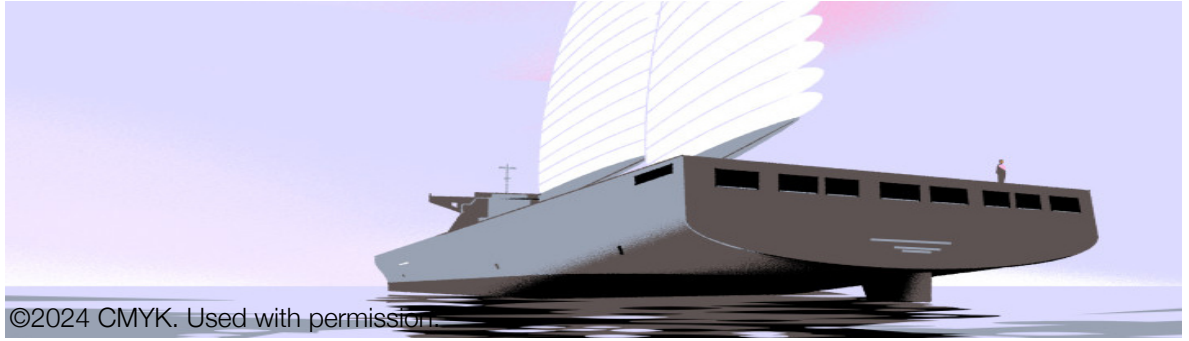
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Efficient Ocean Shipping

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The global commercial shipping fleet has
  - a) 1000 vessels
  - b) 10,000 vessels
  - c) 50,000 vessels
  - d) 100,000 vessels
2. These ships affect the environment by
  - a) endangering sea creatures
  - b) altering sea currents
  - c) emitting greenhouse gases
  - d) all of the above
- 3) The efficiency of a ship can be improved by
  - a) reshaping the stern
  - b) adding fins and a gantry
  - c) using taller sails
  - d) all of the above
4. A benefit of deploying known energy-saving measures on ships is
  - a) they reduce greenhouse gas emissions
  - b) they halve fuel consumption, saving money
  - c) they don't require new technological discoveries
  - d) all of the above



<https://daybreakgame.org/card/1080>

## Short Answer

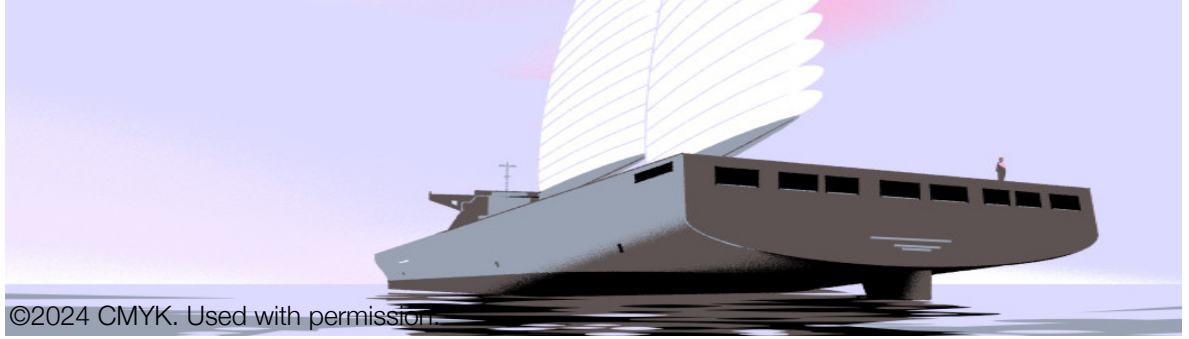
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Efficient Ocean Shipping

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1080>

1. The global commercial shipping fleet has
  - a) 1000 vessels
  - b) 10,000 vessels
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  - d) 100,000 vessels
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  - a) they reduce greenhouse gas emissions
  - b) they halve fuel consumption, saving money
  - c) they don't require new technological discoveries
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Over 50,000 commercial ships contribute to greenhouse gas emissions. By slowing ship speeds and using technologies like improved hull design and propeller cleaning, fuel consumption and emissions can be reduced by up to half.



Name

Date

Climate



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## Electric Vehicle Subsidies

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1075>

1. Most vehicles currently run on
  - a) electricity
  - b) solar power
  - c) gasoline or diesel
  - d) hydrogen fuel
2. Electric vehicles are currently more expensive because of
  - a) low demand
  - b) high battery costs
  - c) expensive maintenance costs
  - d) preferential tax policies
- 3) Governments can encourage consumers to buy electric vehicles by
  - a) increasing gasoline prices
  - b) offering rebates and reduced taxes
  - c) allowing preferential parking and lane access
  - d) all of the above
4. While transitioning to electric vehicles, government is needed to
  - a) reduce manufacturing costs
  - b) ensure the profits expected by financial markets
  - c) avoid leaving workers and businesses behind
  - d) ban gas-powered vehicles

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Electric Vehicle Subsidies

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1075>

- Most vehicles currently run on
  - electricity
  - solar power
  - gasoline or diesel
  - hydrogen fuel
- Electric vehicles are currently more expensive because of
  - low demand
  - high battery costs
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  - preferential tax policies
- Governments can encourage consumers to buy electric vehicles by
  - increasing gasoline prices
  - offering rebates and reduced taxes
  - allowing preferential parking and lane access
  - all of the above
- While transitioning to electric vehicles, government is needed to
  - reduce manufacturing costs
  - ensure the profits expected by financial markets
  - avoid leaving workers and businesses behind
  - ban gas-powered vehicles

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Electric vehicles reduce pollution, improves health, and lower maintenance costs. However, EVs are expensive due to battery costs and infrastructure is underdeveloped. Governments can promote EVs through incentives and policy support.

Name

Date

Climate



# Electrification Initiatives

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Electrification means
  - a) building more fossil fuel plants to generate electricity
  - b) replacing fossil fuels with electricity
  - c) building factories to make electrical equipment
  - d) using less electricity
2. The energy sources involved in electrification initiatives are
  - a) coal and oil
  - b) solar, wind, geothermal, and hydro
  - c) gasoline and diesel
  - d) nuclear and biomass
- 3) What percentage of global carbon emissions could electrification eliminate?
  - a) 25%
  - b) 50%
  - c) 75%
  - d) 90%
4. Challenges to electrification include
  - a) finding ways to store and transmit green electricity
  - b) the need for substantial investments in electrical infrastructure
  - c) opposition from fossil fuel industries
  - d) all of the above

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<https://daybreakgame.org/card/1058>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Electrification Initiatives

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1058>

- Electrification means
  - building more fossil fuel plants to generate electricity
  - replacing fossil fuels with electricity
  - building factories to make electrical equipment
  - using less electricity
- The energy sources involved in electrification initiatives are
  - coal and oil
  - solar, wind, geothermal, and hydro
  - gasoline and diesel
  - nuclear and biomass
- What percentage of global carbon emissions could electrification eliminate?
  - 25%
  - 50%
  - 75%
  - 90%
- Challenges to electrification include
  - finding ways to store and transmit green electricity
  - the need for substantial investments in electrical infrastructure
  - opposition from fossil fuel industries
  - all of the above
- Electrification replaces fossil fuels with electricity, powered by renewable sources like solar and wind. This can reduce carbon emissions and air pollution. It requires significant investments in infrastructure and is opposed by fossil fuel industries.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



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## Electrify Everything

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main benefit of replacing fossil fuel-powered appliances with electric ones is
  - a) it reduced greenhouse gas emissions
  - b) it increases building efficiency
  - c) it decreases the size required for buildings
  - d) all of the above
2. An obstacle to electrification is
  - a) lack of water
  - b) upfront costs
  - c) increased noise
  - d) all of the above
- 3) Electrification can create challenges for utilities by
  - a) reducing demand for electricity, limiting profits
  - b) increasing demand for water
  - c) increasing the overall demand for electricity
  - d) decreasing the need for transmission infrastructure
4. Buildings can be made more resilient to extreme weather and power disruptions by
  - a) making them larger
  - b) installing more windows
  - c) designing highly efficient buildings
  - d) all of the above

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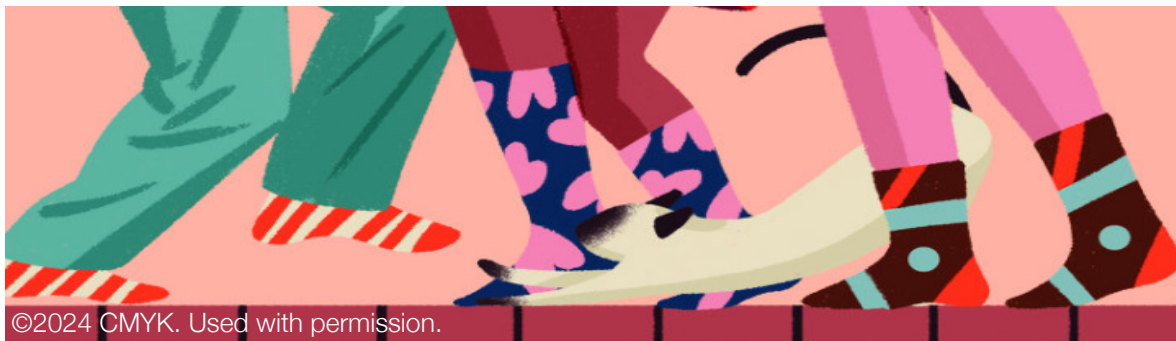


<https://daybreakgame.org/card/1064>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





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## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1064>

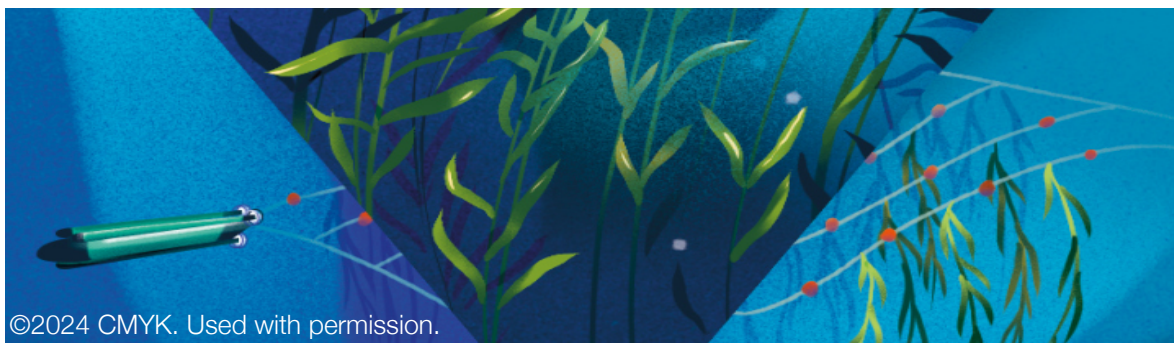
## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

# Electrify Everything

- The main benefit of replacing fossil fuel-powered appliances with electric ones is
  - it reduced greenhouse gas emissions
  - it increases building efficiency
  - it decreases the size required for buildings
  - all of the above
- An obstacle to electrification is
  - lack of water
  - upfront costs
  - increased noise
  - all of the above
- Electrification can create challenges for utilities by
  - reducing demand for electricity, limiting profits
  - increasing demand for water
  - increasing the overall demand for electricity
  - decreasing the need for transmission infrastructure
- Buildings can be made more resilient to extreme weather and power disruptions by
  - making them larger
  - installing more windows
  - designing highly efficient buildings
  - all of the above

- Switching fossil fuel-powered appliances to electric alternatives reduces greenhouse gas emissions, improves indoor air quality, and saves energy. This shift, however, requires investment in grid systems and ethical resource extraction.



## Emissions Technology R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



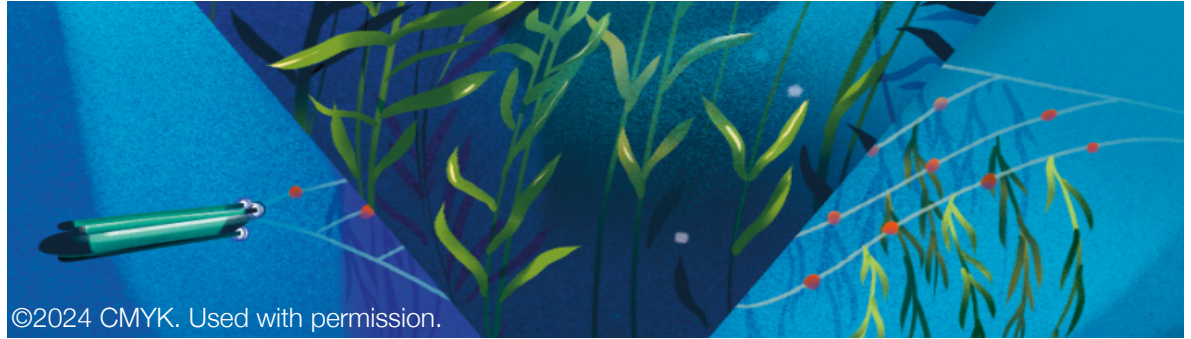
<https://daybreakgame.org/card/1208>

1. China plans to reach carbon neutrality in
  - a) 2040
  - b) 2050
  - c) 2060
  - d) 2070
2. China's emissions technology R&D does not include
  - a) electric vehicles
  - b) wind and solar technologies
  - c) carbon capture and storage
  - d) nuclear fusion
- 3) China's R&D could improve by
  - a) reducing carbon emissions
  - b) integrating ideas of a just transition
  - c) developing hydrogen fuel cells
  - d) increasing battery costs
4. A concern about China's clean technology sector is
  - a) use of forced labour
  - b) lack of innovation
  - c) overstaffing
  - d) all of the above

5. \_\_\_\_\_  
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### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Emissions Technology R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- China plans to reach carbon neutrality in
  - 2040
  - 2050
  - 2060
  - 2070
- China's emissions technology R&D does not include
  - electric vehicles
  - wind and solar technologies
  - carbon capture and storage
  - nuclear fusion
- China's R&D could improve by
  - reducing carbon emissions
  - integrating ideas of a just transition
  - developing hydrogen fuel cells
  - increasing battery costs
- A concern about China's clean technology sector is
  - use of forced labour
  - lack of innovation
  - overstaffing
  - all of the above



<https://daybreakgame.org/card/1208>

### Short Answer

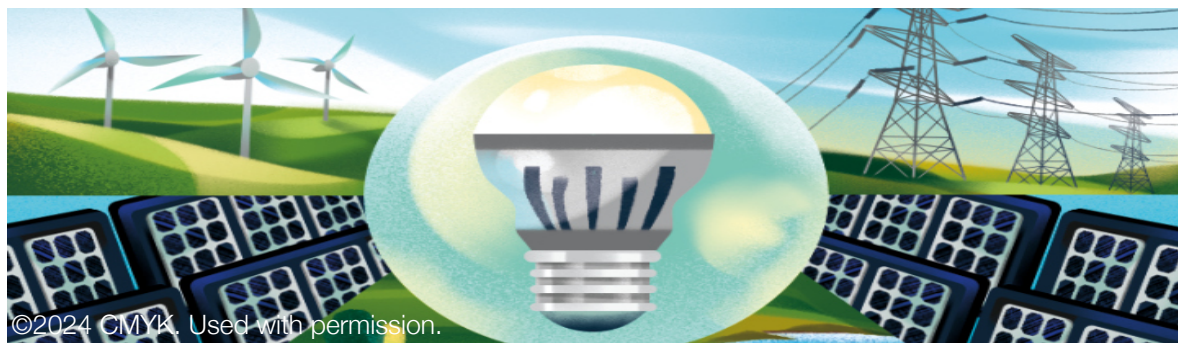
Summarize this project. Include a key benefit and one relevant point that supports it.

- China is investing in research and development of clean technologies to reduce greenhouse gas emissions and reach carbon neutrality by 2060. This helps China and supports global climate efforts, though poor labor conditions are concerning.

Name

Date

Climate



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## Energy Infrastructure R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Innovations in energy infrastructure
  - a) increase efficiency
  - b) increase reliability
  - c) reduce environmental impact
  - d) all of the above
2. Infrastructure innovation has historically focused on
  - a) low-carbon energy
  - b) fossil energy infrastructure
  - c) solar energy infrastructure
  - d) wind energy infrastructure
- 3) Global energy infrastructure is threatened by
  - a) hurricanes
  - b) heatwaves
  - c) wildfires
  - d) all of the above
4. Next-generation control systems are needed to manage
  - a) complex energy usage patterns
  - b) strict financial regulatory regimes
  - c) tension between producers and consumers
  - d) all of the above



<https://daybreakgame.org/card/1115>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

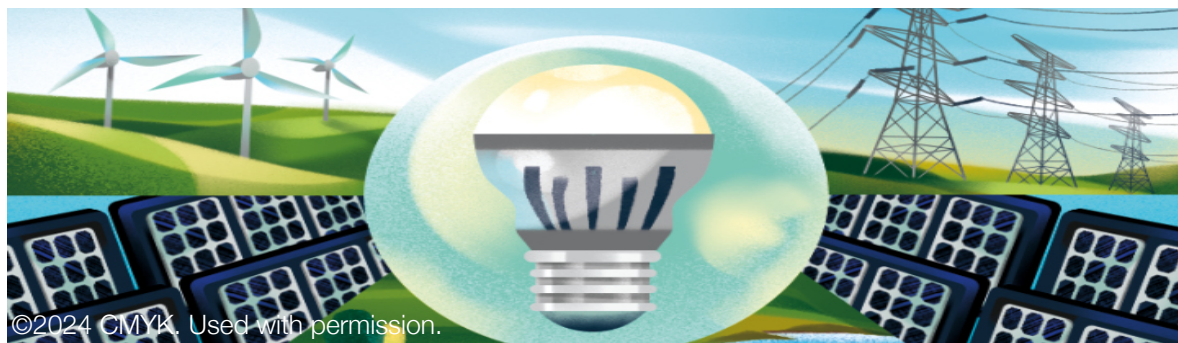
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## Energy Infrastructure R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Innovations in energy infrastructure
  - a) increase efficiency
  - b) increase reliability
  - c) reduce environmental impact
  - d) all of the above
2. Infrastructure innovation has historically focused on
  - a) low-carbon energy
  - b) fossil energy infrastructure
  - c) solar energy infrastructure
  - d) wind energy infrastructure
- 3) Global energy infrastructure is threatened by
  - a) hurricanes
  - b) heatwaves
  - c) wildfires
  - d) all of the above
4. Next-generation control systems are needed to manage
  - a) complex energy usage patterns
  - b) strict financial regulatory regimes
  - c) tension between producers and consumers
  - d) all of the above

5. Improving energy infrastructure through R&D is crucial for  
reducing greenhouse gas emissions. Innovations increase  
efficiency and reliability while supporting green energy.  
helping to build a safer and more resilient global power system.



<https://daybreakgame.org/card/1115>

### Short Answer

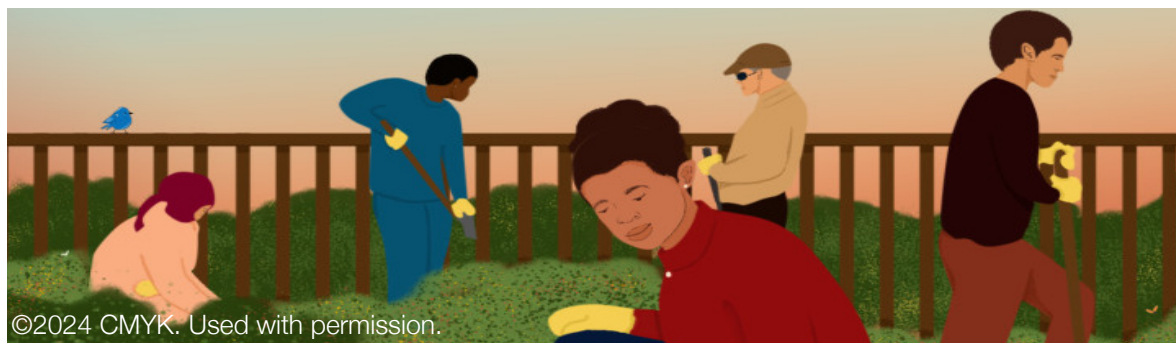
Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



# Environmental Movement

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Central to environmental movements is the idea that
  - a) humans are distinct from nature
  - b) humans are part of natural systems
  - c) technology can solve all environmental issues
  - d) humans are the peak of evolution
2. An example of a technological focus in an environmental movement is
  - a) clean air laws
  - b) cultural festivals
  - c) art installations
  - d) all of the above
- 3) A key focus of anti-colonial environmental movements is
  - a) space travel and explorations
  - b) urban planning
  - c) technological innovation
  - d) the consequences of imperialism
4. Becoming part of an environmental movement has become easier because of
  - a) more government support
  - b) greater employment opportunities
  - c) increased access to information
  - d) the commercialization of the environment

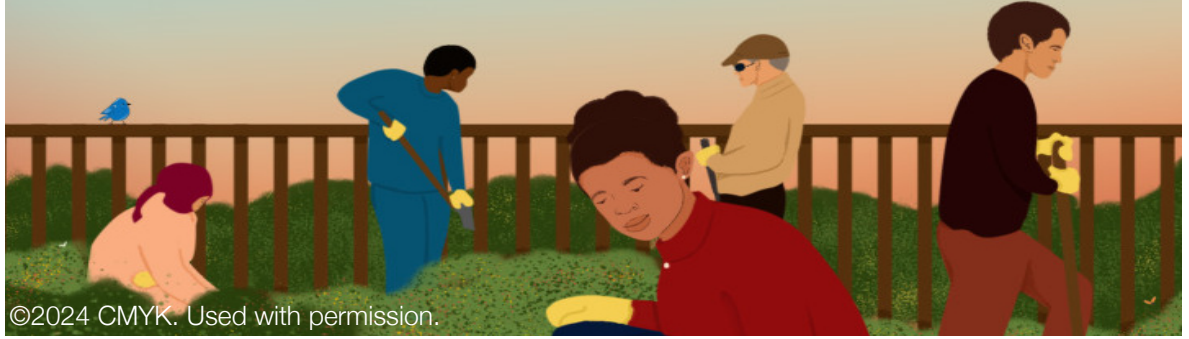
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<https://daybreakgame.org/card/1005>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Environmental Movement

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Central to environmental movements is the idea that
  - humans are distinct from nature
  - humans are part of natural systems
  - technology can solve all environmental issues
  - humans are the peak of evolution
- An example of a technological focus in an environmental movement is
  - clean air laws
  - cultural festivals
  - art installations
  - all of the above
- A key focus of anti-colonial environmental movements is
  - space travel and explorations
  - urban planning
  - technological innovation
  - the consequences of imperialism
- Becoming part of an environmental movement has become easier because of
  - more government support
  - greater employment opportunities
  - increased access to information
  - the commercialization of the environment

- Environmental movements have evolved over centuries. They focus on regulation, technology, and societal power dynamics. They have grown globally, but participating can be dangerous, with activists often facing deadly consequences.



<https://daybreakgame.org/card/1005>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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## Fertilizer Efficiency

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The nutrient most added by synthetic fertilizers is
  - a) carbon
  - b) nitrogen
  - c) oxygen
  - d) none of the above
- 2) Synthetic fertilizers
  - a) require large amounts of energy to produce
  - b) pollute water
  - c) create greenhouse gases
  - d) all of the above
- 3) Farmers can reduce the need for synthetic fertilizers by
  - a) using manure
  - b) planting crops that fix nitrogen in the soil
  - c) matching the amount and timing of fertilizers to the crop
  - d) all of the above
4. Fertilizer use can be reduced by
  - a) passing the right legislation
  - b) using green energy to make fertilizers
  - c) making fertilizers with different nutrients
  - d) all of the above

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<https://daybreakgame.org/card/1060>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Fertilizer Efficiency

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1060>

1. The nutrient most added by synthetic fertilizers is
  - a) carbon
  - b) nitrogen
  - c) oxygen
  - d) none of the above
- 2) Synthetic fertilizers
  - a) require large amounts of energy to produce
  - b) pollute water
  - c) create greenhouse gases
  - d) all of the above
- 3) Farmers can reduce the need for synthetic fertilizers by
  - a) using manure
  - b) planting crops that fix nitrogen in the soil
  - c) matching the amount and timing of fertilizers to the crop
  - d) all of the above
4. Fertilizer use can be reduced by
  - a) passing the right legislation
  - b) using green energy to make fertilizers
  - c) making fertilizers with different nutrients
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Synthetic fertilizers increase global food production but harm the environment by greenhouse gas emissions and pollution. Efficient use, organic alternatives, and regenerative practices can reduce impacts, increase yields, and save money. Change is resisted by powerful lobbying groups.

Name

Date

Climate



# Financial Risk Regulations

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Under capitalism, most economic activity is initially funded by
  - a) government grants
  - b) donations
  - c) investors
  - d) charities
2. To make informed decisions, investors rely on
  - a) financial markets and accurate information
  - b) public opinion and news media
  - c) word of mouth and social media
  - d) government reports and academic research
- 3) Investors need climate-related risk information to
  - a) protect themselves and their families
  - b) reduce taxes
  - c) understand how the risks impact their investments
  - d) qualify for government grants
4. Besides lack of information, barriers to sustainability include
  - a) power, culture, and vested interests
  - b) technology and innovation
  - c) lack of funding and marketing
  - d) all of the above

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<https://daybreakgame.org/card/1088>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Financial Risk Regulations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Under capitalism, most economic activity is initially funded by
  - government grants
  - donations
  - investors
  - charities
- To make informed decisions, investors rely on
  - financial markets and accurate information
  - public opinion and news media
  - word of mouth and social media
  - government reports and academic research
- Investors need climate-related risk information to
  - protect themselves and their families
  - reduce taxes
  - understand how the risks impact their investments
  - qualify for government grants
- Besides lack of information, barriers to sustainability include
  - power, culture, and vested interests
  - technology and innovation
  - lack of funding and marketing
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Investors fund economic activities like renewable energy, relying on information about climate risks. Disclosure rules help guide investments toward sustainability but green investments might not be timely or equitable.

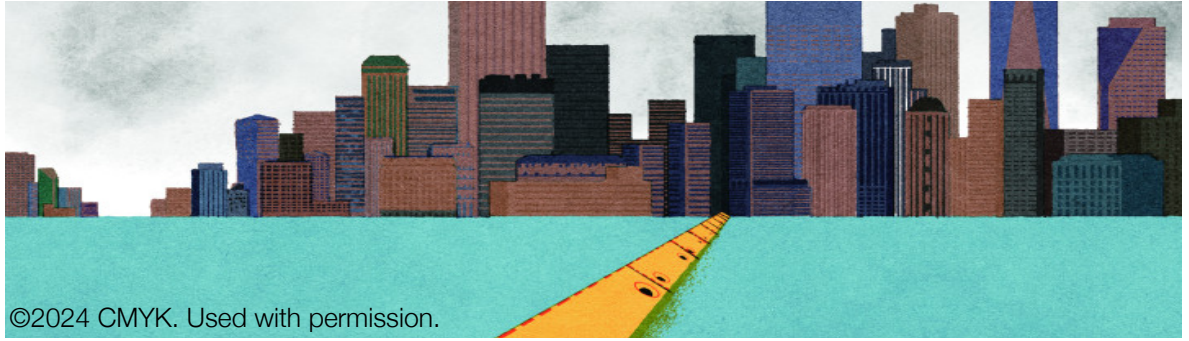


<https://daybreakgame.org/card/1088>

Name

Date

Climate



# Flood Barriers

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. An example of a hard flood barrier is a
  - a) floodwall
  - b) levee
  - c) dike
  - d) all of the above
2. Natural flood management
  - a) uses barriers made of sustainable materials
  - b) plants trees and other vegetation to form a natural barrier to water
  - c) shapes areas to absorb flood water safely
  - d) means accepting that floods happen, and focusing on waterproofing buildings
- 3) In the future, flooding will become more severe because of
  - a) sea level rise
  - b) more frequent and intense rainstorms
  - c) more frequent and intense hurricanes
  - d) all of the above
4. A significant challenge for coastal cities creating flood defenses is
  - a) it is hard to predict where flooding will happen
  - b) the cost of construction
  - c) we don't know how to build effective flood defenses
  - d) all of the above

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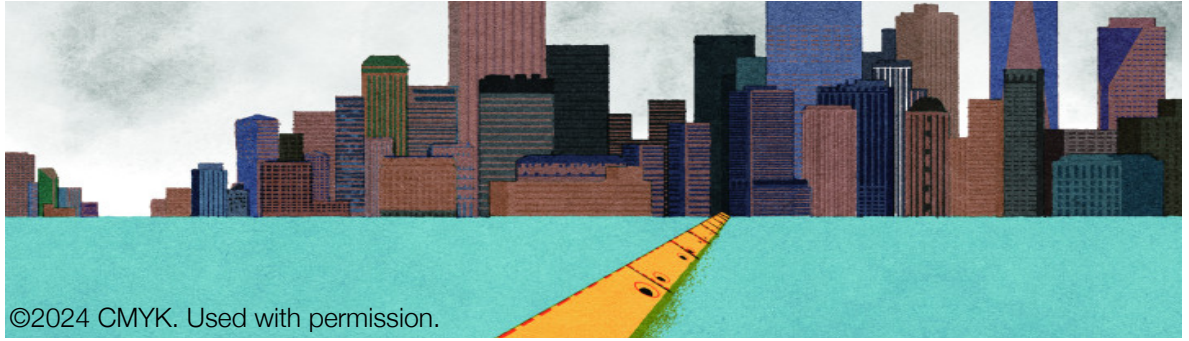
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<https://daybreakgame.org/card/1096>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Flood Barriers

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1096>

- An example of a hard flood barrier is a
  - floodwall
  - levee
  - dike
  - all of the above
- Natural flood management
  - uses barriers made of sustainable materials
  - plants trees and other vegetation to form a natural barrier to water
  - shapes areas to absorb flood water safely
  - means accepting that floods happen, and focusing on waterproofing buildings
- In the future, flooding will become more severe because of
  - sea level rise
  - more frequent and intense rainstorms
  - more frequent and intense hurricanes
  - all of the above
- A significant challenge for coastal cities creating flood defenses is
  - it is hard to predict where flooding will happen
  - the cost of construction
  - we don't know how to build effective flood defenses
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Flood defenses protect areas from floods using "hard" barriers like walls or "natural" methods like wetlands. As climate change worsens, flooding is increasing and many cities need better defenses, but funding them is expensive.

Name

Date

Climate



# Food Waste Reduction

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. How much does food waste contribute to global greenhouse gas emissions?
  - a) 1/12
  - b) 7/12
  - c) 1/4
  - d) 1/3
- 2) So much food is being wasted because
  - a) big companies find it more profitable to throw food away than save it
  - b) pests eat the food before it is harvested
  - c) transportation and food storage present logistical challenges
  - d) all of the above
- 3) How much of the food grown each year is wasted?
  - a) 1/12
  - b) 7/12
  - c) 1/4
  - d) 1/3
4. Reducing food waste will
  - a) reduce hunger
  - b) help the environment
  - c) protect biodiversity
  - d) all of the above

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<https://daybreakgame.org/card/1055>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Food Waste Reduction

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1055>

1. How much does food waste contribute to global greenhouse gas emissions?
  - a) 1/12
  - b) 7/12
  - c) 1/4
  - d) 1/3
- 2) So much food is being wasted because
  - a) big companies find it more profitable to throw food away than save it
  - b) pests eat the food before it is harvested
  - c) transportation and food storage present logistical challenges
  - d) all of the above
- 3) How much of the food grown each year is wasted?
  - a) 1/12
  - b) 7/12
  - c) 1/4
  - d) 1/3
4. Reducing food waste will
  - a) reduce hunger
  - b) help the environment
  - c) protect biodiversity
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Food production makes up a quarter of greenhouse gas emissions, but almost a third is wasted by poor decisions and management. Reducing food waste will help the climate, reduce hunger, save money, and protect biodiversity.



Name

Date

Climate



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# Forest Restoration

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The best strategy for protecting forests is
  - a) planting new trees
  - b) cutting down old trees and planting young ones
  - c) preserving existing forests and letting them expand
  - d) introducing new species into existing forests
2. The benefits of restoring forests include
  - a) enriched ecosystems
  - b) clean air and water
  - c) habitat for endangered species
  - d) all of the above
- 3) Forest restoration helps reduce climate change by
  - a) increasing the Earth's albedo
  - b) absorbing greenhouse gases
  - c) subsidizing the logging industry
  - d) all of the above
4. Legal protections for restored forests are important to
  - a) ensure their long-term preservation
  - b) allow for their economic exploitation
  - c) provide lumber to combat the housing crisis
  - d) allow hunting and fishing

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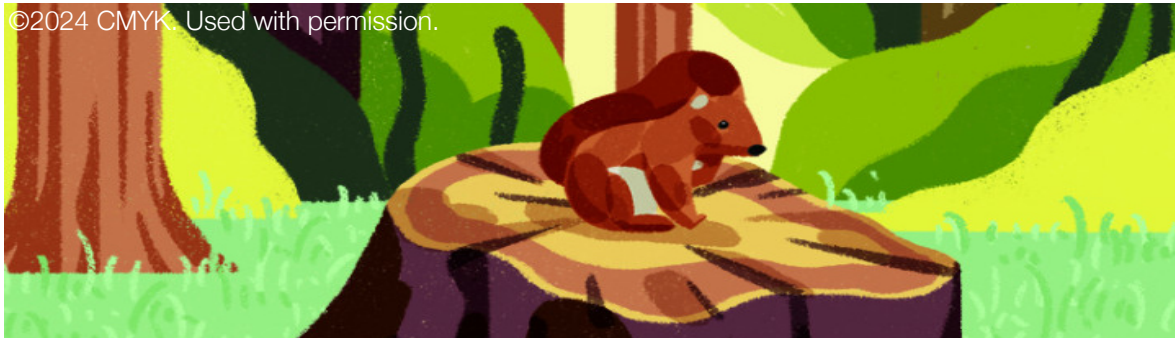
<https://daybreakgame.org/card/1037>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Forest Restoration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1037>

1. The best strategy for protecting forests is
  - a) planting new trees
  - b) cutting down old trees and planting young ones
  - c) preserving existing forests and letting them expand
  - d) introducing new species into existing forests
2. The benefits of restoring forests include
  - a) enriched ecosystems
  - b) clean air and water
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  - d) all of the above
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  - b) absorbing greenhouse gases
  - c) subsidizing the logging industry
  - d) all of the above
4. Legal protections for restored forests are important to
  - a) ensure their long-term preservation
  - b) allow for their economic exploitation
  - c) provide lumber to combat the housing crisis
  - d) allow hunting and fishing

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Forests store carbon and house complex ecosystems. Preserving and restoring them will reduce greenhouse emissions, support biodiversity, and provide clean air and water. Restoration creates jobs, but legal protections will prevent future land conversion.

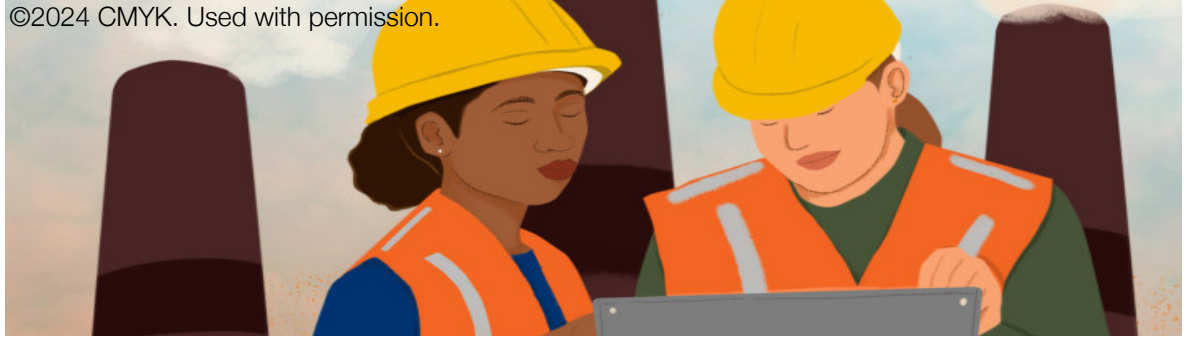
Name

Date

Climate



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# Fossil Fuel Nationalization

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1044>

## Short Answer

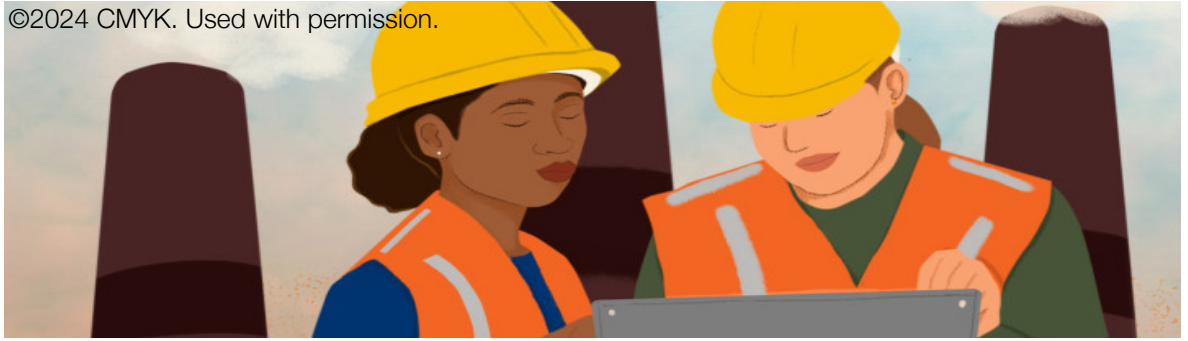
Summarize this project. Include a key benefit and one relevant point that supports it.

1. Fossil fuel nationalization means
  - a) privatizing fossil fuel industries
  - b) governments taking control of fossil fuel industries
  - c) selling fossil fuels industries to foreign investors
  - d) expanding fossil fuel production
2. Private fossil fuel companies resist the clean energy transition because
  - a) they are focused on maintaining profitability
  - b) they have no knowledge of clean technologies
  - c) they are owned by a consortium of governments
  - d) they have no influence over the energy sector
- 3) The profits from nationalized fossil fuel industries could help the environment by
  - a) being used to lower fossil fuel prices
  - b) being paid as a dividend to citizens
  - c) being invested in renewable energy and storage technologies
  - d) being given as a subsidy to investors
4. Nationalization would help decommission
  - a) wind farms
  - b) solar power plants
  - c) electrical distribution infrastructure
  - d) stranded fossil fuel infrastructure

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## Fossil Fuel Nationalization

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1044>

1. Fossil fuel nationalization means
  - a) privatizing fossil fuel industries
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  - a) being used to lower fossil fuel prices
  - b) being paid as a dividend to citizens
  - c) being invested in renewable energy and storage technologies
  - d) being given as a subsidy to investors
4. Nationalization would help decommission
  - a) wind farms
  - b) solar power plants
  - c) electrical distribution infrastructure
  - d) stranded fossil fuel infrastructure
5. Nationalization would allow governments to control fossil fuel industries, limiting their use, and promoting clean energy. By managing their decline, governments could reinvest profits in renewable energy, benefiting both workers and the environment.

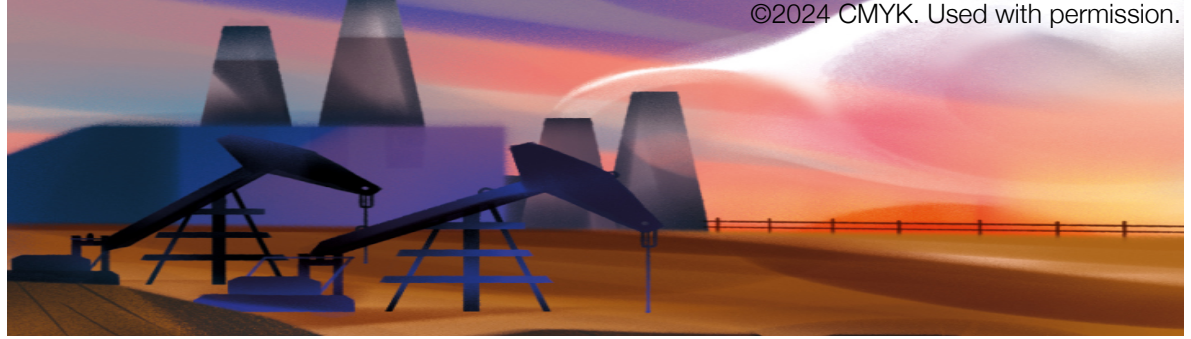
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Fossil Fuel Subsidies Ban

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Which of the following is *not* a fossil fuel subsidy?
  - a) discounts on energy bills for consumers
  - b) direct payments to companies that extract fossil fuels
  - c) subsidized bus fares
  - d) direct payments to companies that refine fossil fuels
- 2) The hidden costs of fossil fuel subsidies include
  - a) increased greenhouse gas emissions
  - b) poor health from air pollution
  - c) lower growth of renewable energy
  - d) all of the above
- 3) Fossil fuel subsidies mostly benefit
  - a) poor people who couldn't otherwise afford fossil fuels
  - b) wealthy people
  - c) governments which get increased tax revenue
  - d) all of the above
4. One of the reasons it is politically difficult to end fossil fuel subsidies is that
  - a) it might cause a short-term increase in energy prices
  - b) it would cost \$5.9 billion
  - c) it would require a constitutional change
  - d) none of the above

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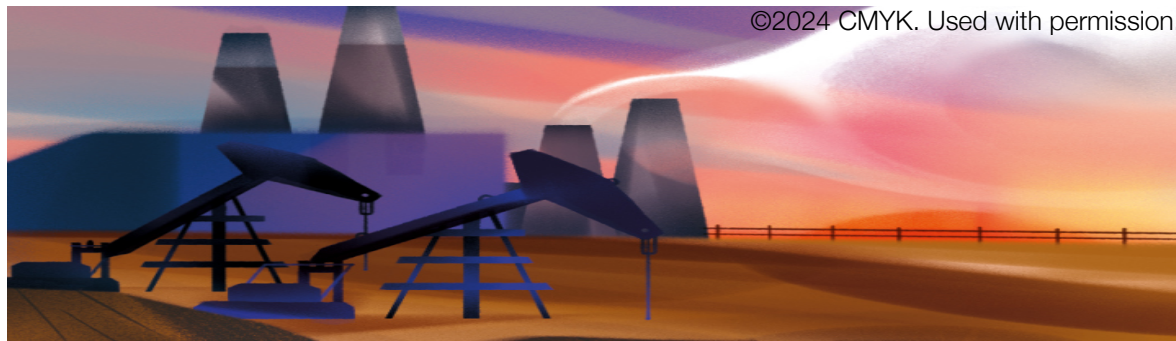


<https://daybreakgame.org/card/1007>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Fossil Fuel Subsidies Ban

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1007>

- Which of the following is *not* a fossil fuel subsidy?
  - discounts on energy bills for consumers
  - direct payments to companies that extract fossil fuels
  - subsidized bus fares
  - direct payments to companies that refine fossil fuels
- The hidden costs of fossil fuel subsidies include
  - increased greenhouse gas emissions
  - poor health from air pollution
  - lower growth of renewable energy
  - all of the above
- Fossil fuel subsidies mostly benefit
  - poor people who couldn't otherwise afford fossil fuels
  - wealthy people
  - governments which get increased tax revenue
  - all of the above
- One of the reasons it is politically difficult to end fossil fuel subsidies is that
  - it might cause a short-term increase in energy prices
  - it would cost \$5.9 billion
  - it would require a constitutional change
  - none of the above

### Short Answer

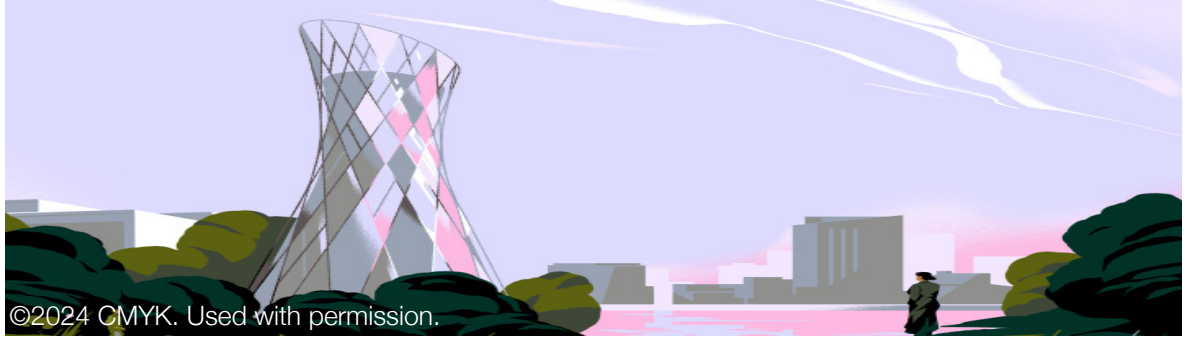
Summarize this project. Include a key benefit and one relevant point that supports it.

- Around the world, governments make fossil fuels cheaper through subsidies (\$5.9 trillion in 2020). This lowers energy costs but encourages fossil fuel use which damages the environment and slows the growth of renewable energy.

Name

Date

Climate



# Fourth Generation Nuclear

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Fourth generation nuclear plants are
  - a) modular and easier to manufacture
  - b) larger than previous designs
  - c) require more skilled operators than previous designs
  - d) produce more dangerous radioactive waste
2. The type of nuclear technology commonly used in fourth generation designs is
  - a) modular designs with new fusion reactors
  - b) revolutionary new unitary fission reactor chambers
  - c) modular designs with new fission reactors
  - d) all of the above
- 3) In terms of radiation, fourth generation nuclear plants
  - a) produce less concentrated radiation than earlier designs
  - b) are walk-away safe
  - c) require constant monitoring to contain leaks
  - d) all of the above
4. An obstacle to licensing fourth generation nuclear plants is
  - a) the lack of new reactor designs
  - b) the lack of demand for nuclear power
  - c) a lack of nuclear fuel processing capabilities
  - d) regulatory agencies are not set up to license new designs



<https://daybreakgame.org/card/1025>

## Short Answer

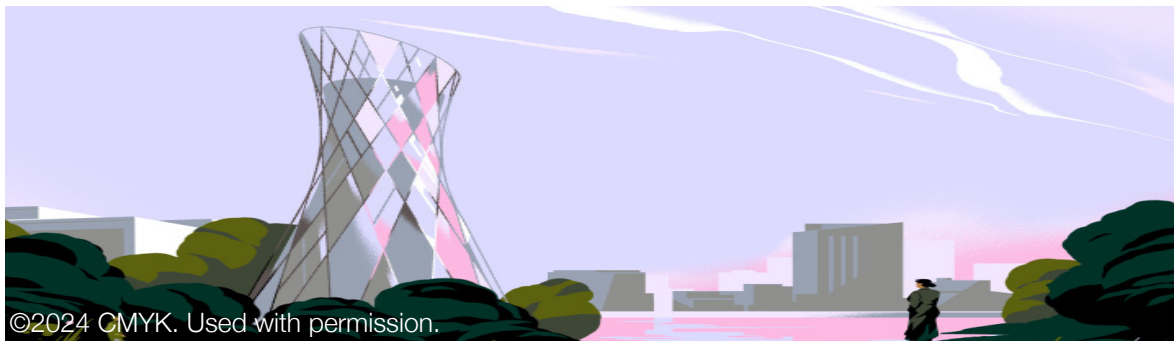
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Fourth Generation Nuclear

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1025>

- Fourth generation nuclear plants are
  - modular and easier to manufacture
  - larger than previous designs
  - require more skilled operators than previous designs
  - produce more dangerous radioactive waste
- The type of nuclear technology commonly used in fourth generation designs is
  - modular designs with new fusion reactors
  - revolutionary new unitary fission reactor chambers
  - modular designs with new fission reactors
  - all of the above
- In terms of radiation, fourth generation nuclear plants
  - produce less concentrated radiation than earlier designs
  - are walk-away safe
  - require constant monitoring to contain leaks
  - all of the above
- An obstacle to licensing fourth generation nuclear plants is
  - the lack of new reactor designs
  - the lack of demand for nuclear power
  - a lack of nuclear fuel processing capabilities
  - regulatory agencies are not set up to license new designs

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Fourth generation nuclear plants are safer, produce less waste, and are modular, making them easier to manufacture. Although testing new designs takes time, political support and funding can accelerate their use in fighting climate change.*

Name

Date

Climate



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## Geothermal Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1010>

1. Geothermal power plants
  - a) vent excess heat deep underground instead of into rivers
  - b) use hot water from deep underground to heat houses
  - c) use heat from magma deep underground to generate electricity
  - d) use hot water from deep underground to generate electricity
2. The energy stored in the Earth's crust as heat is
  - a) more than all fossil fuels
  - b) more than all fissionable material
  - c) more than our total energy needs
  - d) all of the above
- 3) Traditional geothermal wells are
  - a) drilled into natural magma reservoirs
  - b) drilled into natural steam reservoirs
  - c) found around the world
  - d) drilled into dry rock reservoirs
4. Geothermal well using heat from dry rock are not being built because
  - a) regulations are unwieldy
  - b) it takes a long time to get permits
  - c) there is a lack of funding
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Geothermal Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1010>

1. Geothermal power plants
  - a) vent excess heat deep underground instead of into rivers
  - b) use hot water from deep underground to heat houses
  - c) use heat from magma deep underground to generate electricity
  - d) use hot water from deep underground to generate electricity
2. The energy stored in the Earth's crust as heat is
  - a) more than all fossil fuels
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### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

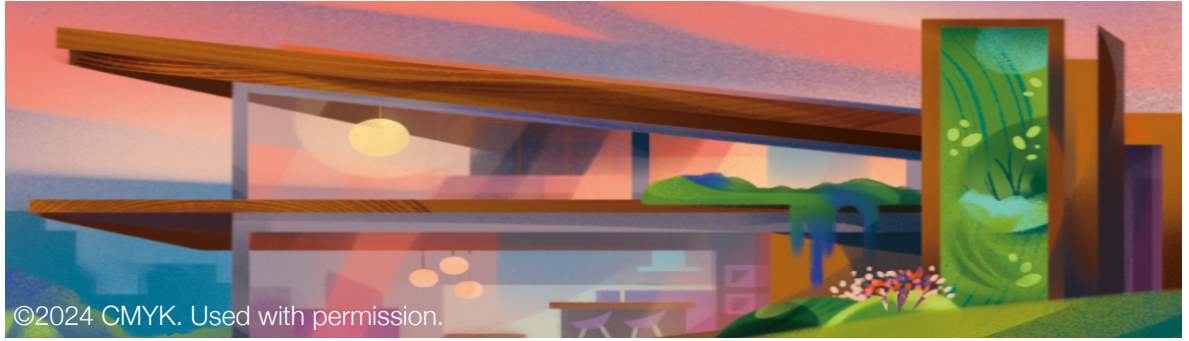
5. Geothermal plants generate continuous, emission-free electricity from underground heat, but provided only 0.5% of global power in 2020. Expansion is limited by resource scarcity, regulations, and funding challenges.



Name

Date

Climate



## Green Building Codes

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1094>

- Green building codes are intended to
  - make buildings taller
  - reduce the environmental impact of buildings
  - improve the appearance of buildings
  - enable buildings to be constructed faster
- The implementation of green building codes has been led by
  - national governments
  - cities and local governments
  - private companies
  - international organizations
- Green building codes reduce emissions by
  - using sustainable materials
  - repurposing or upgrading existing buildings
  - using renewable energy sources
  - all of the above
- Building are responsible for
  - 5% of global greenhouse gas emissions
  - 10% of global greenhouse gas emissions
  - 20% of global greenhouse gas emissions
  - 40% of global greenhouse gas emissions

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Green Building Codes

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1094>

1. Green building codes are intended to
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  - a) 5% of global greenhouse gas emissions
  - b) 10% of global greenhouse gas emissions
  - c) 20% of global greenhouse gas emissions
  - d) 40% of global greenhouse gas emissions

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Green building codes are rules that make buildings eco-friendly and healthier, focusing on energy efficiency and climate resilience. Buildings account for 40% of global emissions, so using sustainable materials and renewable energy is essential.

Name

Date

Climate



## Green Energy Transition

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main goal of a green energy transition is
  - a) increasing energy company profits
  - b) supporting investors and financial markets
  - c) reduce pollution by using clean energy
  - d) all of the above
2. Examples of renewable energy are
  - a) biomass and coal
  - b) natural gas and nuclear
  - c) geothermal and oil
  - d) wind and solar
- 3) To limit global heating, clean energy systems must be combined with
  - a) energy-saving measures
  - b) higher energy prices
  - c) increased energy production
  - d) all of the above
4. The green energy transition could be slowed by
  - a) consumer demand for renewable energy
  - b) investment in green technologies
  - c) support from businesses
  - d) fear of economic disruption



<https://daybreakgame.org/card/1043>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Green Energy Transition

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1043>

- The main goal of a green energy transition is
  - increasing energy company profits
  - supporting investors and financial markets
  - reduce pollution by using clean energy
  - all of the above
- Examples of renewable energy are
  - biomass and coal
  - natural gas and nuclear
  - geothermal and oil
  - wind and solar
- To limit global heating, clean energy systems must be combined with
  - energy-saving measures
  - higher energy prices
  - increased energy production
  - all of the above
- The green energy transition could be slowed by
  - consumer demand for renewable energy
  - investment in green technologies
  - support from businesses
  - fear of economic disruption
- A green energy transition means switching from fossil fuels to clean energy sources like wind and solar. This will help reduce pollution, create jobs, and make energy cheaper, but it requires investment in new technologies and infrastructure.

### Short Answer

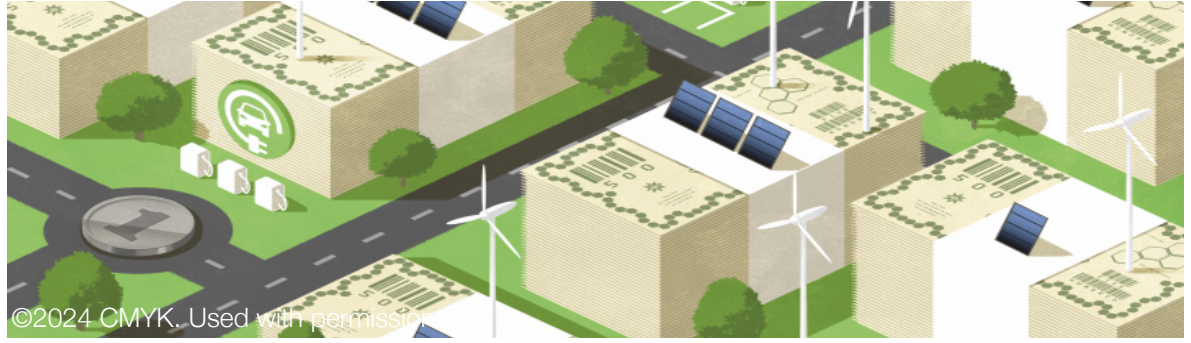
Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



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## Green Investment Bank

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1009>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Investors are hesitant to fund green investments because of a
  - a) lack of interest in green technology
  - b) focus on short-term profits and perceived risks
  - c) excessive competition in green markets
  - d) overconfidence in fossil fuels
2. Public banks reduce the risk of green investments by
  - a) avoiding innovations
  - b) focusing on short-term profits
  - c) patiently waiting for returns
  - d) discouraging private investors
- 3) Public banks affect private investment in green technology by
  - a) encouraging private co-investment
  - b) making private investors avoid green technology
  - c) competing with private banks for the same investments
  - d) limiting private investment opportunities
4. A crucial factor for the stability of public banks is
  - a) high interest rates
  - b) government support
  - c) constant competition with private banks
  - d) avoidance of green technology investments

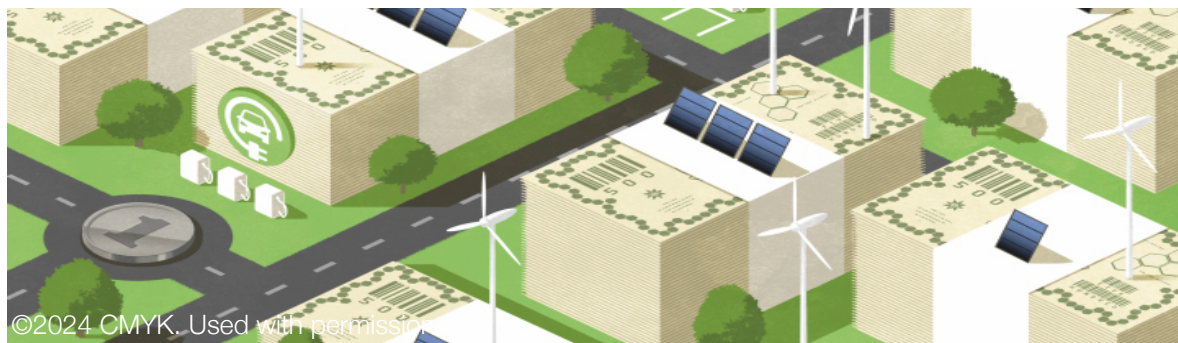
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## Green Investment Bank

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1009>

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  - a) high interest rates
  - b) government support
  - c) constant competition with private banks
  - d) avoidance of green technology investments

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Tackling the climate crisis requires trillions of dollars annually, but many investors are only focused on short-term profit focus. Public banks can offer cheaper loans and patient investments, reducing risks.

Name

Date

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## Green Quantitative Easing

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1008>

1. Quantitative easing is
  - a) selling government bonds to buy assets
  - b) raising taxes to buy back government bonds
  - c) cutting public spending and lowering taxes
  - d) creating money to buy financial assets
2. The main idea of green quantitative easing is
  - a) buying assets that fund fossil fuels
  - b) supporting only sustainable investments
  - c) buying assets that provide the best return on investment
  - d) replacing taxes with investments
- 3) Another central bank policy that would boost climate action is
  - a) introduce climate risk into their goals
  - b) base all lending decisions on market returns
  - c) subsidize energy production to boost the overall economy
  - d) all of the above
4. Green lending guidelines for banks would encourage
  - a) higher interest rates on loans
  - b) preferential rates on green loans
  - c) more investments in transnational projects
  - d) forgiveness of loans

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Green Quantitative Easing

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1008>

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  - d) all of the above
4. Green lending guidelines for banks would encourage
  - a) higher interest rates on loans
  - b) preferential rates on green loans
  - c) more investments in transnational projects
  - d) forgiveness of loans
5. After the 2007/8 financial crisis, central banks used quantitative easing to boost economies by creating money and buying financial assets. Green QE supports environmentally friendly investments, encouraging green jobs and sustainable growth.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Green Steel

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The hydrogen fuel for “green steel” is produced
  - a) with emissions-free electricity
  - b) by catalyzing fossil fuels
  - c) from coal and natural gas
  - d) as a byproduct from oil refineries
2. Currently, green steel production methods are more expensive because
  - a) they use more labour
  - b) they rely on expensive fossil fuels
  - c) they are not yet scaled for industrial use
  - d) they require complex recycling processes
- 3) A common practice that reduces the need for new steel is
  - a) mining new materials
  - b) recycling existing steel
  - c) extracting more raw minerals
  - d) building new factories and foundries
4. When making new products to reduce steel demand, we should prioritize
  - a) using coal-based materials
  - b) avoiding recycling materials
  - c) reusing and using bio-based materials
  - d) mining new minerals

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<https://daybreakgame.org/card/1068>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





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## Green Steel

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1068>

- The hydrogen fuel for “green steel” is produced
  - with emissions-free electricity
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  - they use more labour
  - they rely on expensive fossil fuels
  - they are not yet scaled for industrial use
  - they require complex recycling processes
- A common practice that reduces the need for new steel is
  - mining new materials
  - recycling existing steel
  - extracting more raw minerals
  - building new factories and foundries
- When making new products to reduce steel demand, we should prioritize
  - using coal-based materials
  - avoiding recycling materials
  - reusing and using bio-based materials
  - mining new minerals

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Steel production has a large climate cost due to heavy fossil fuel use. Researchers are developing greener methods like hydrogen-fueled and electric furnaces. Recycling, reusing, and retrofitting existing steel are crucial steps.



Name

Date

Climate



# Green Tech Exports

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Which country is currently the largest renewable energy investor and producer?
  - a) the European Union
  - b) the United States
  - c) China
  - d) india
2. Critics of China's green technology industries have raised concerns about
  - a) overproduction of fossil fuels
  - b) environmental harm from mineral extraction and worker treatment
  - c) lack of technological advancements
  - d) insufficient government support
- 3) The ability of Majority World countries to access cheaper green technology has
  - a) delayed their renewable energy projects
  - b) reduced their overall energy consumption
  - c) increased their use of fossil fuels
  - d) allowed them to implement renewable energy faster
4. Compared to green technologies, fossil fuel infrastructure requires more
  - a) rare minerals
  - b) renewable resources
  - c) common metals
  - d) organic materials



<https://daybreakgame.org/card/1209>

## Short Answer

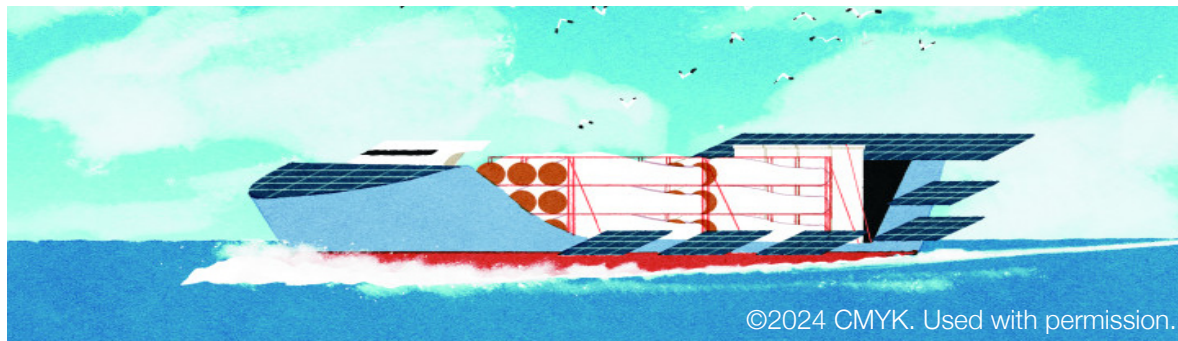
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Green Tech Exports

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1209>

- Which country is currently the largest renewable energy investor and producer?
  - the European Union
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  - China
  - india
- Critics of China's green technology industries have raised concerns about
  - overproduction of fossil fuels
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  - lack of technological advancements
  - insufficient government support
- The ability of Majority World countries to access cheaper green technology has
  - delayed their renewable energy projects
  - reduced their overall energy consumption
  - increased their use of fossil fuels
  - allowed them to implement renewable energy faster
- Compared to green technologies, fossil fuel infrastructure requires more
  - rare minerals
  - renewable resources
  - common metals
  - organic materials

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- China produces and exports green technologies like solar panels and electric vehicles. Chinese government support is reducing the cost of clean energy in developing countries. Mineral extraction for Chinese factories has raised concerns.

Name

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Climate



# Grid-Enhancing Tech

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main purpose of grid-enhancing technologies is to
  - a) increase grid capacity, efficiency, or reliability
  - b) build more transmission wires across the grid
  - c) enhance the ability of the grid to filter out dirty electricity
  - d) all of the above
2. Like highways, electrical grids often suffer from
  - a) construction
  - b) congestion
  - c) distraction
  - d) all of the above
- 3) Grid-enhancing tech receives less attention than wind and solar farms because
  - a) they are not as effective
  - b) they are less efficient
  - c) they are less visible and less known
  - d) they are less cost-effective
4. Grid-enhancing technologies are important to a clean energy system because
  - a) they reduce the cost of wind turbines
  - b) they transmit renewable energy quickly and cheaper
  - c) they enhance the efficiency of solar farms in overcast conditions
  - d) all of the above



<https://daybreakgame.org/card/1067>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Grid-Enhancing Tech

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1067>

- The main purpose of grid-enhancing technologies is to
  - increase grid capacity, efficiency, or reliability
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- Grid-enhancing technologies are important to a clean energy system because
  - they reduce the cost of wind turbines
  - they transmit renewable energy quickly and cheaper
  - they enhance the efficiency of solar farms in overcast conditions
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Grid-enhancing technologies improve the efficiency and reliability of electrical grids, helping deliver renewable energy more quickly and cheaply. They are vital for better managing electricity but receive less attention than wind and solar farms.

Name

Date

Climate



## Half Earth Rewilding

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main goal of the Half-Earth proposal is
  - a) to expand nature preserves to 50% of Earth's surface
  - b) to reduce pollution over 50% of Earth's surface
  - c) to turn 50% of Earth's surface over to agricultural production
  - d) none of the above
2. The term "Half-Earth" was coined by
  - a) Charles Darwin and Alfred Russel Wallace
  - b) E.O. Wilson and Tony Hiss
  - c) Jane Goodall and Sarah Blaffer Hrdy
  - d) David Attenborough
- 3) The Half-Earth idea was inspired by
  - a) urban development research
  - b) space exploration and near Earth imaging
  - c) island biogeography research
  - d) oceanographic research and economic analysis
4. Renewable energy systems pose a challenge to the Half-Earth goal because
  - a) they require a lot of space
  - b) they require a lot of mining to build infrastructure
  - c) they emit more carbon dioxide
  - d) they only work in sunny regions

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<https://daybreakgame.org/card/1098>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Half Earth Rewilding

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1098>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- The main goal of the Half-Earth proposal is
  - to expand nature preserves to 50% of Earth's surface
  - to reduce pollution over 50% of Earth's surface
  - to turn 50% of Earth's surface over to agricultural production
  - none of the above
- The term "Half-Earth" was coined by
  - Charles Darwin and Alfred Russel Wallace
  - E.O. Wilson and Tony Hiss
  - Jane Goodall and Sarah Blaffer Hrdy
  - David Attenborough
- The Half-Earth idea was inspired by
  - urban development research
  - space exploration and near Earth imaging
  - island biogeography research
  - oceanographic research and economic analysis
- Renewable energy systems pose a challenge to the Half-Earth goal because
  - they require a lot of space
  - they require a lot of mining to build infrastructure
  - they emit more carbon dioxide
  - they only work in sunny regions

- The Half-Earth goal aims to protect 50% of Earth's surface to prevent mass extinction. This will require addressing land use conflicts from meat production, renewable energy, and conservation's colonial past while supporting Indigenous

Name

Date

Climate



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## Heat Pumps

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1065>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. A heat pump
  - a) generates electricity from waste heat
  - b) moves heat from one place to another
  - c) stores heat so it can be used in the future
  - d) burns fossil fuels to generate heat
2. Globally, heating and cooling buildings uses
  - a) 5% of global energy consumption
  - b) 10% of global energy consumption
  - c) 15% of global energy consumption
  - d) 20% of global energy consumption
- 3) A heat pump is more efficient than most heat sources because
  - a) it doesn't need electricity to run
  - b) it generates its own heat
  - c) it uses fossil fuels more efficiently
  - d) it requires very little electricity to move a lot of heat
4. Heat pumps can reduce reliance on fossil fuels by
  - a) using energy from renewable sources
  - b) converting fossil fuels directly into electricity
  - c) storing energy for future use
  - d) all of the above

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## Heat Pumps

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1065>

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4. Heat pumps can reduce reliance on fossil fuels by
  - a) using energy from renewable sources
  - b) converting fossil fuels directly into electricity
  - c) storing energy for future use
  - d) all of the above
5. A heat pump uses electricity to move heat between spaces, making it efficient for heating and cooling. Heat pumps can run on renewable energy, saving money over time, though initial costs may still be high.

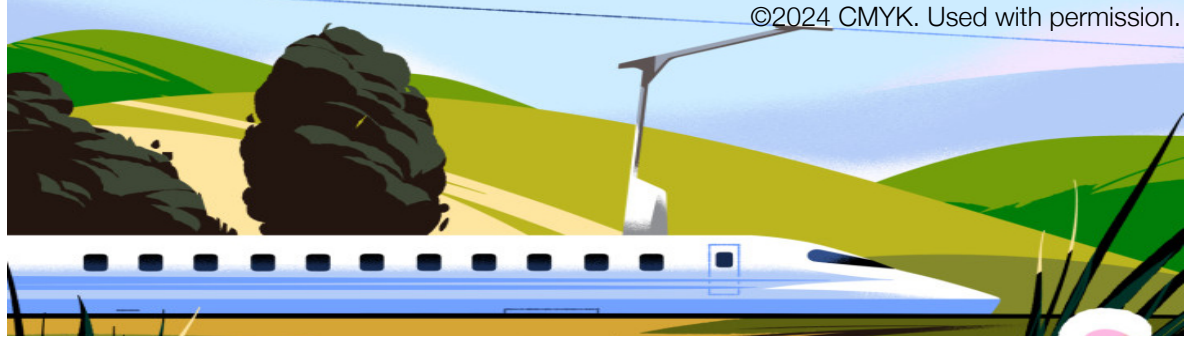
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# High Speed Rail

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1078>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Compared to planes, high speed rail can reduce greenhouse gas emissions by
  - a) 20%
  - b) 50%
  - c) 70%
  - d) 90%
2. High speed rail has been successfully deployed in
  - a) North America
  - b) China, Japan, and Europe
  - c) Africa and South America
  - d) Australia, China, and Japan
- 3) A challenge involved in building high speed rail is
  - a) it is less save than private vehicles
  - b) it requires new technological innovations
  - c) it requires new infrastructure
  - d) all of the above
4. High speed rail most benefits
  - a) dense urban areas
  - b) small towns
  - c) rural areas
  - d) all of the above

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## High Speed Rail

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Compared to planes, high speed rail can reduce greenhouse gas emissions by
  - 20%
  - 50%
  - 70%
  - 90%
- High speed rail has been successfully deployed in
  - North America
  - China, Japan, and Europe
  - Africa and South America
  - Australia, China, and Japan
- A challenge involved in building high speed rail is
  - it is less save than private vehicles
  - it requires new technological innovations
  - it requires new infrastructure
  - all of the above
- High speed rail most benefits
  - dense urban areas
  - small towns
  - rural areas
  - all of the above



<https://daybreakgame.org/card/1078>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- High-speed rail can reduce travel time and greenhouse gas emissions by up to 90% compared to other transport. It benefits the climate and urban centres but requires significant infrastructure, investment, and changes in behaviour



Name

Date

Climate



## Hydroelectric Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Hydropower is good for the environment because
  - it is free
  - it is renewable
  - it creates no greenhouse gas emissions
  - all of the above
- A hydropower generator's output is flexible, meaning
  - it can be configured to produce different kinds of power
  - power is transmitted by large cables which can be routed anywhere
  - the amount of power it produces can be easily adjusted
  - all of the above
- Large dams can cause problems such as
  - displacing lots of people
  - redirecting scarce water resources
  - harming fish and disrupting fisheries
  - all of the above
- Small in-stream hydropower projects
  - don't disrupt the river's flow
  - use small dams that fish can jump
  - are cheap to build
  - all of the above



<https://daybreakgame.org/card/1011>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Hydroelectric Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1011>

1. Hydropower is good for the environment because
  - a) it is free
  - b) it is renewable
  - c) it creates no greenhouse gas emissions
  - d) all of the above
2. A hydropower generator's output is flexible, meaning
  - a) it can be configured to produce different kinds of power
  - b) power is transmitted by large cables which can be routed anywhere
  - c) the amount of power it produces can be easily adjusted
  - d) all of the above
- 3) Large dams can cause problems such as
  - a) displacing lots of people
  - b) redirecting scarce water resources
  - c) harming fish and disrupting fisheries
  - d) all of the above
4. Small in-stream hydropower projects
  - a) don't disrupt the river's flow
  - b) use small dams that fish can jump
  - c) are cheap to build
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Hydropower is the leading source of low-carbon electricity, but

large dams can harm the environment and displace people.

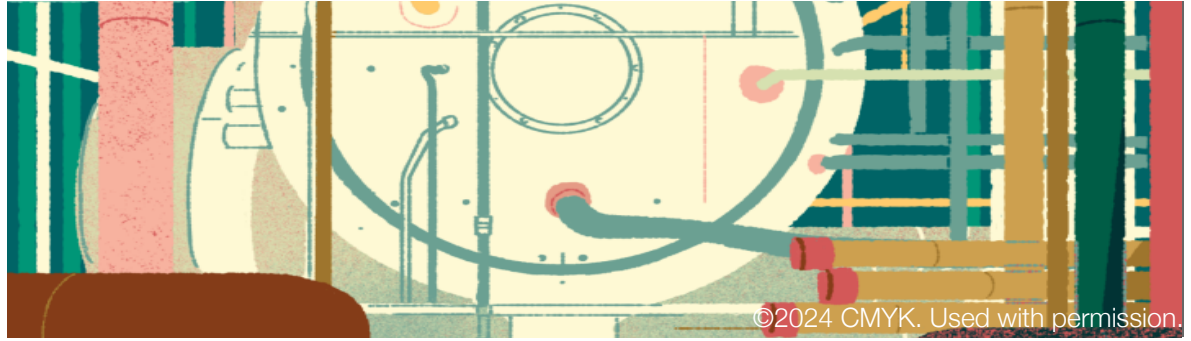
Smaller hydropower projects are less disruptive and help remote

areas access energy, though they are more expensive.

Name

Date

Climate



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# Hydrogen Power Factories

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



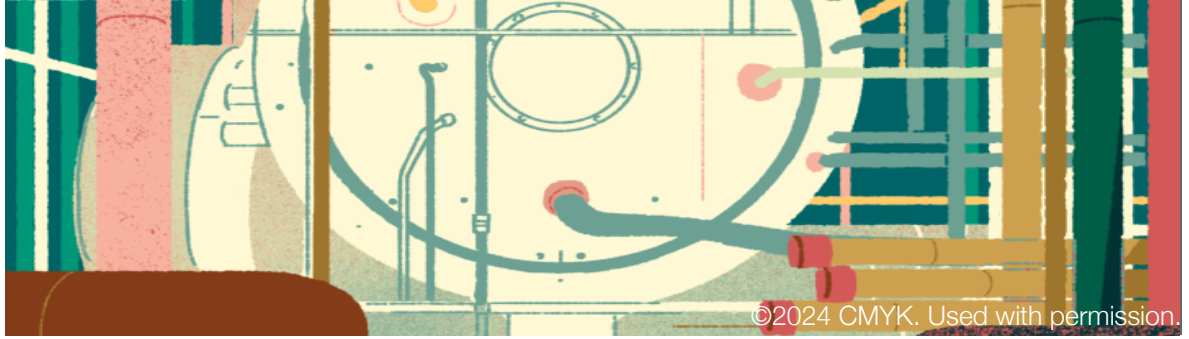
<https://daybreakgame.org/card/1072>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Grey hydrogen is
  - a) hydrogen that is purchased from the grey market
  - b) hydrogen that has no colour
  - c) hydrogen that is made using fossil fuels
  - d) none of the above
2. Green hydrogen is made by
  - a) electrolysing water using clean energy
  - b) refining biomass using green energy
  - c) refining natural gas using green energy
  - d) all of the above
- 3) Green hydrogen can be produced using
  - a) fossil fuels
  - b) nuclear power
  - c) wind and solar energy
  - d) natural gas
4. Green hydrogen is a good candidate for
  - a) agricultural processes
  - b) factory processes
  - c) mining processes
  - d) retail and commercial construction

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## Hydrogen Power Factories

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1072>

1. Grey hydrogen is
  - a) hydrogen that is purchased from the grey market
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  - c) hydrogen that is made using fossil fuels
  - d) none of the above
2. Green hydrogen is made by
  - a) electrolysing water using clean energy
  - b) refining biomass using green energy
  - c) refining natural gas using green energy
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- 3) Green hydrogen can be produced using
  - a) fossil fuels
  - b) nuclear power
  - c) wind and solar energy
  - d) natural gas
4. Green hydrogen is a good candidate for
  - a) agricultural processes
  - b) factory processes
  - c) mining processes
  - d) retail and commercial construction

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Switching factories from fossil fuels to hydrogen can reduce emissions. Green hydrogen, made with clean energy, produces only water. However, most hydrogen today comes from polluting sources, so green hydrogen should be used carefully in key sectors.

Name

Date

Climate



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# Inclusive Immigration

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Inclusive immigration means
  - a) allowing only certain people to move
  - b) ensuring everyone can move safely and prosper
  - c) reducing population growth by controlling immigration
  - d) ensuring that immigrants to a country are provided with free homes and jobs
2. People move to another country to
  - a) escape peace
  - b) find better food
  - c) find new opportunities
  - d) avoid socializing
- 3) An essential support for immigrants does not include
  - a) healthcare access
  - b) safe housing
  - c) education facilities
  - d) internet access
4. Educating people about immigration helps
  - a) increase xenophobic violence
  - b) encourage prejudice
  - c) counter false narratives
  - d) all of the above

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<https://daybreakgame.org/card/1108>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Inclusive Immigration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1108>

1. Inclusive immigration means
  - a) allowing only certain people to move
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  - c) reducing population growth by controlling immigration
  - d) ensuring that immigrants to a country are provided with free homes and jobs
2. People move to another country to
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  - b) find better food
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- 3) An essential support for immigrants does not include
  - a) healthcare access
  - b) safe housing
  - c) education facilities
  - d) internet access
4. Educating people about immigration helps
  - a) increase xenophobic violence
  - b) encourage prejudice
  - c) counter false narratives
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Inclusive immigration means allowing everyone to move safely and receive support to settle in a new country. Increasing quotas and providing rights can help immigrants thrive; combating xenophobia and promoting fair policies benefits society.

Name

Date

Climate



## Indigenous People's Tenure

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1036>

1. Indigenous people are often experts in
  - a) agricultural machinery
  - b) ecological systems
  - c) exploration of new lands
  - d) all of the above
2. Supporting indigenous control of their lands helps protect
  - a) ecosystems and climate balance
  - b) recreational hunting and fishing
  - c) tourism and luxury resorts
  - d) all of the above
- 3) When ecosystems are poorly managed
  - a) more jobs are created
  - b) financial markets exceed expectations
  - c) more greenhouse gases are released
  - d) all of the above
4. Indigenous peoples' ability to manage their lands is threatened by
  - a) agricultural development
  - b) government regulations
  - c) resource extraction
  - d) tourism

### Short Answer

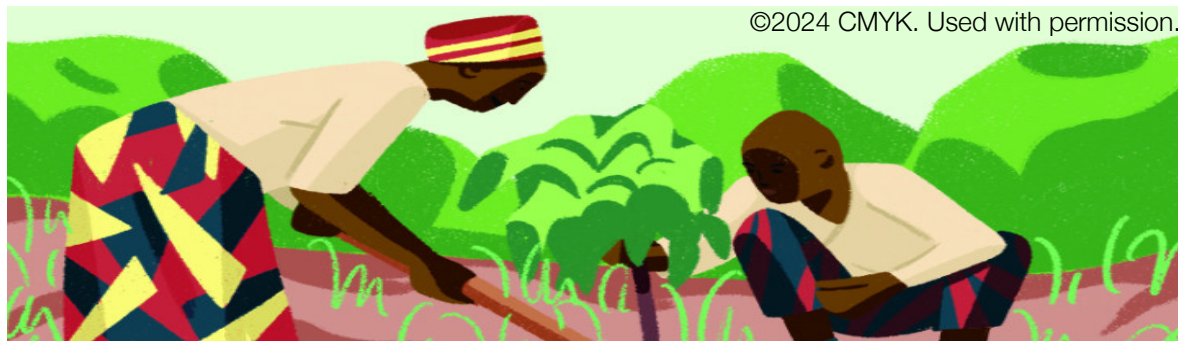
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Indigenous People's Tenure

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Indigenous people are often experts in
  - a) agricultural machinery
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  - d) all of the above
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  - d) all of the above
- 3) When ecosystems are poorly managed
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  - b) financial markets exceed expectations
  - c) more greenhouse gases are released
  - d) all of the above
4. Indigenous peoples' ability to manage their lands is threatened by
  - a) agricultural development
  - b) government regulations
  - c) resource extraction
  - d) tourism

5. Indigenous Peoples possess valuable ecological knowledge and have long protected their lands. Supporting their land rights preserves ecosystems and combats climate change. Protecting indigenous land rights is both a moral and pragmatic decision.



<https://daybreakgame.org/card/1036>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Industrial Electrification

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1069>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Industrial electrification involves
  - a) replacing water with electricity
  - b) replacing appliances like gas stoves with ones that run on electricity
  - c) switching industries from fossil fuels to electricity
  - d) all of the above
2. An industrial process that can be electrified is
  - a) melting glass
  - b) printing books
  - c) synthesizing chemicals
  - d) all of the above
- 3) Many industrial activities are currently powered by
  - a) solar panels
  - b) hydropower
  - c) wind turbines
  - d) fossil fuels
4. Cement production would benefit from electrifying
  - a) quarrying of limestone
  - b) grinding of limestone
  - c) calcination of limestone
  - d) all of the above

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## Industrial Electrification

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1069>

- Industrial electrification involves
  - replacing water with electricity
  - replacing appliances like gas stoves with ones that run on electricity
  - switching industries from fossil fuels to electricity
  - all of the above
- An industrial process that can be electrified is
  - melting glass
  - printing books
  - synthesizing chemicals
  - all of the above
- Many industrial activities are currently powered by
  - solar panels
  - hydropower
  - wind turbines
  - fossil fuels
- Cement production would benefit from electrifying
  - quarrying of limestone
  - grinding of limestone
  - calcination of limestone
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Industrial electrification replaces fossil fuels with electricity for processes like melting glass and making steel. This can reduce pollution. With research, most industrial processes could switch to electricity, cutting down fossil fuel use.



Name

Date

Climate



# Integrated Planning Solar

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Integrated planning includes
  - a) placing solar panels on underused urban space like rooftops and parking lots
  - b) designing buildings for energy efficiency
  - c) taking microgrid infrastructure into account
  - d) all of the above
2. Taking solar energy into account during city planning
  - a) can maximize its usefulness
  - b) will make planning more expensive
  - c) will make it harder to install solar panels
  - d) can have negative consequences
- 3) Holistic planning means
  - a) focusing attention and resources on each part of a project in isolation
  - b) filling in the holes in an existing plan
  - c) taking the whole system into account rather than planning each part separately
  - d) none of the above
4. Integrating solar
  - a) can be done by individuals on their own
  - b) requires involving many people, including experts
  - c) is best done by manufacturers of solar panels
  - d) is cheap and easy

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<https://daybreakgame.org/card/1019>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Integrated Planning Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1019>

1. Integrated planning includes
  - a) placing solar panels on underused urban space like rooftops and parking lots
  - b) designing buildings for energy efficiency
  - c) taking microgrid infrastructure into account
  - d) all of the above
2. Taking solar energy into account during city planning
  - a) can maximize its usefulness
  - b) will make planning more expensive
  - c) will make it harder to install solar panels
  - d) can have negative consequences
- 3) Holistic planning means
  - a) focusing attention and resources on each part of a project in isolation
  - b) filling in the holes in an existing plan
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4. Integrating solar
  - a) can be done by individuals on their own
  - b) requires involving many people, including experts
  - c) is best done by manufacturers of solar panels
  - d) is cheap and easy

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Integrated planning means placing solar panels in sunny spots like rooftops and parking lots and considering building design and energy efficiency. It reduces greenhouse gases, improves air quality, and boosts local economies, but requires careful coordination.

Name

Date

Climate



# Long Range Transmission

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1133>

1. Long range transmission helps renewable energy by
  - a) store solar energy
  - b) balancing the supply of intermittent sources
  - c) generating wind power
  - d) all of the above
2. A key challenge in building long range transmission infrastructure is
  - a) too much funding
  - b) lack of sufficient renewable energy
  - c) insufficient attention and resources
  - d) urban density
- 3) During extreme weather events, long range transmission helps prevent
  - a) fossil fuel use
  - b) climate change
  - c) large scale blackouts
  - d) more electricity demand
4. The need for more infrastructure can be reduced by
  - a) fossil fuels
  - b) coal power plants
  - c) increased power usage
  - d) energy storage

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Long Range Transmission

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1133>

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  - c) large scale blackouts
  - d) more electricity demand
4. The need for more infrastructure can be reduced by
  - a) fossil fuels
  - b) coal power plants
  - c) increased power usage
  - d) energy storage

5. Long range transmission carries electricity across long distances. It's vital for climate resilience, but building the necessary infrastructure remains a challenge that needs more attention and support.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



## Low Eco-Impact Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1013>

1. Low eco-impact solar farms avoid
  - a) levelling land
  - b) destroying topsoil
  - c) clearing vegetation
  - d) all of the above
2. A big disadvantage of solar energy is that
  - a) solar panels require a large area per megawatt
  - b) solar panels must be mounted on level ground
  - c) vibrations from solar panels scare animals
  - d) all of the above
- 3) Low eco-impact solar panels are
  - a) coloured to blend in with the natural landscape
  - b) installed over ground seeded with native vegetation
  - c) covered with vines and native vegetation
  - d) all of the above
4. The advantages of low eco-impact solar include
  - a) it is much cheaper than conventional solar
  - b) it is suitable for use in mountains and deserts
  - c) a reduction in the amount of land used exclusively for solar energy
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Low Eco-Impact Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1013>

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  - a) levelling land
  - b) destroying topsoil
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  - d) all of the above
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  - a) solar panels require a large area per megawatt
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  - a) it is much cheaper than conventional solar
  - b) it is suitable for use in mountains and deserts
  - c) a reduction in the amount of land used exclusively for solar energy
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Low eco-impact solar farms preserve topsoil and plant native  
vegetation to keep the land productive. They may use grazing  
animals, allowing solar energy production alongside farming,  
reducing the overall land required for solar farms.

Name

Date

Climate



# Low Eco-Impact Wind

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Low eco-impact wind farms are sited to avoid impacts on
  - a) local plants
  - b) local animals
  - c) local communities
  - d) all of the above
2. Getting away from fossil fuels will require
  - a) land for renewable energy production
  - b) subsidies because renewable energy is more expensive to produce
  - c) empty fields for the wind farms
  - d) reducing food production
- 3) Low eco-impact wind farms are carefully planned to avoid
  - a) highways
  - b) migratory routes
  - c) dairy farms
  - d) all of the above
4. Low eco-impact wind farms are
  - a) padded so they don't injure birds
  - b) painted to blend in with the natural landscape
  - c) built from recycled materials
  - d) designed to boost local economies

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<https://daybreakgame.org/card/1012>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Low Eco-Impact Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Low eco-impact wind farms are sited to avoid impacts on
  - a) local plants
  - b) local animals
  - c) local communities
  - d) all of the above
2. Getting away from fossil fuels will require
  - a) land for renewable energy production
  - b) subsidies because renewable energy is more expensive to produce
  - c) empty fields for the wind farms
  - d) reducing food production
- 3) Low eco-impact wind farms are carefully planned to avoid
  - a) highways
  - b) migratory routes
  - c) dairy farms
  - d) all of the above
4. Low eco-impact wind farms are
  - a) padded so they don't injure birds
  - b) painted to blend in with the natural landscape
  - c) built from recycled materials
  - d) designed to boost local economies

5. Low eco-impact wind farms protect wildlife by carefully locating wind farms and using technology to protect birds. They also help local economies by supplementing existing land use like farming.



<https://daybreakgame.org/card/1012>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

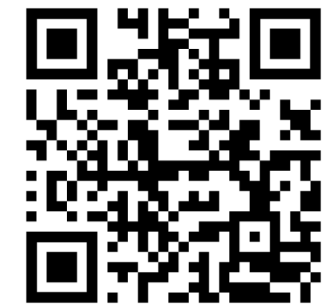
Climate



# Luxury Consumption Tax

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



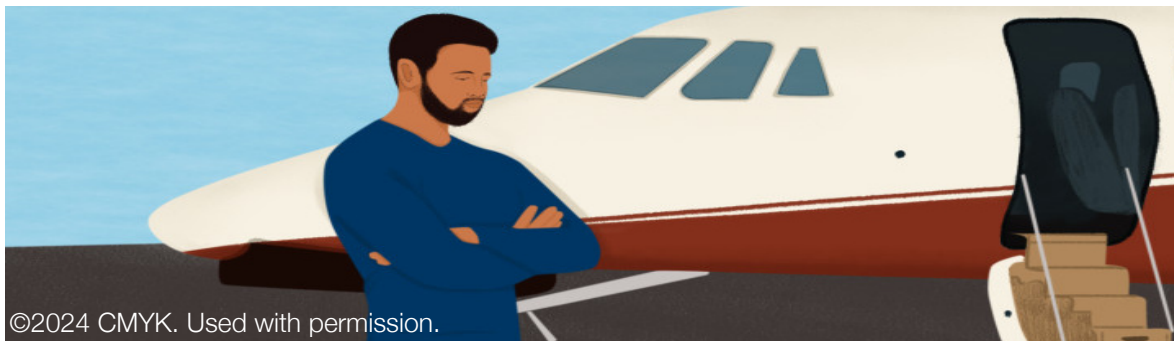
<https://daybreakgame.org/card/1054>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Wealthier people contribute more to the climate emergency by
  - a) using more water
  - b) flying more and driving larger cars
  - c) building more homes
  - d) producing more food
2. The global carbon budget is
  - a) the amount of money spent on renewable energy
  - b) the limit on greenhouse gas emissions to prevent dangerous temperature rises
  - c) the total amount of fossil fuels left on Earth
  - d) none of the above
- 3) The poorest 50% of humanity causes less emissions than the richest
  - a) 1%
  - b) 5%
  - c) 10%
  - d) 20%
4. Luxury taxes need global coordination to
  - a) uniformly lower the price of luxury goods
  - b) increase global trade in luxury goods
  - c) prevent luxury consumers moving their purchases to other places
  - d) all of the above

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## Luxury Consumption Tax

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1054>

- Wealthier people contribute more to the climate emergency by
  - using more water
  - flying more and driving larger cars
  - building more homes
  - producing more food
- The global carbon budget is
  - the amount of money spent on renewable energy
  - the limit on greenhouse gas emissions to prevent dangerous temperature rises
  - the total amount of fossil fuels left on Earth
  - none of the above
- The poorest 50% of humanity causes less emissions than the richest
  - 1%
  - 5%
  - 10%
  - 20%
- Luxury taxes need global coordination to
  - uniformly lower the price of luxury goods
  - increase global trade in luxury goods
  - prevent luxury consumers moving their purchases to other places
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Wealthier people contribute more to the climate crisis through luxury activities like flying and driving larger cars. Taxing them could reduce emissions and fund clean technologies, but will need global coordination and design to avoid harming poorer communities.



Name

Date

Climate



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# Major Nuclear Program

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A major nuclear program is
  - a) a single large nuclear power plant
  - b) a coordinated project involving many nuclear power plants
  - c) a nuclear research facility
  - d) none of the above
2. France and Sweden build many nuclear plants in
  - a) 5 years
  - b) 10–15 years
  - c) 20–30 years
  - d) 50 years
- 3) Many nuclear plants have been successfully build in
  - a) China, India, and Brazil
  - b) USA, UK, and Australia
  - c) Germany, Russia, and Japan
  - d) France, Sweden, and Canada
4. As well as requiring funding, a major nuclear program will require
  - a) faster construction techniques
  - b) the buildout of green energy infrastructure
  - c) overcoming regulatory and public challenges
  - d) all of the above

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<https://daybreakgame.org/card/1031>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Major Nuclear Program

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A major nuclear program is
  - a) a single large nuclear power plant
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  - c) a nuclear research facility
  - d) none of the above
2. France and Sweden build many nuclear plants in
  - a) 5 years
  - b) 10–15 years
  - c) 20–30 years
  - d) 50 years
- 3) Many nuclear plants have been successfully build in
  - a) China, India, and Brazil
  - b) USA, UK, and Australia
  - c) Germany, Russia, and Japan
  - d) France, Sweden, and Canada
4. As well as requiring funding, a major nuclear program will require
  - a) faster construction techniques
  - b) the buildout of green energy infrastructure
  - c) overcoming regulatory and public challenges
  - d) all of the above

5. Building many nuclear power plants through large national or international programs will lower fossil fuel use. Countries like France and Sweden have done this in the past, but such projects are costly, face regulatory challenges, and raise environmental concerns.



<https://daybreakgame.org/card/1031>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

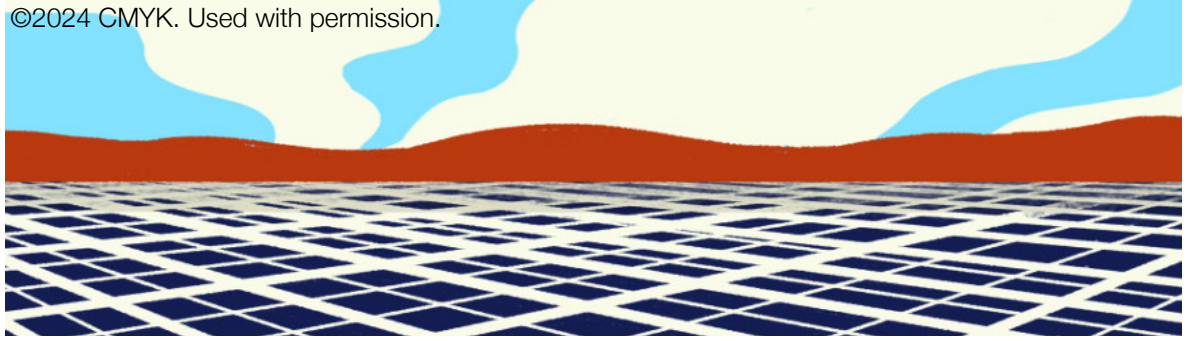
Name

Date

Climate



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# Major Solar Program

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A major solar program would not involve
  - a) significant government investment in building large solar power plants
  - b) research and funding for new solar technologies
  - c) installing gigantic solar power panels on tall towers
  - d) simplifying permitting processes
2. A major solar program would include developing technologies such as
  - a) energy storage systems
  - b) robust power grids
  - c) increased transmission capabilities
  - d) all of the above
- 3) Part of a major solar program could include
  - a) tax incentives to help homeowners and organizations install solar panels
  - b) adding wind turbines to existing solar farms
  - c) raising existing solar panels higher to catch more sunlight
  - d) all of the above
4. Currently, wind and solar power plants
  - a) are a small fraction of new electricity generation being built
  - b) are a minority of new electricity generation being built
  - c) are a small majority of new electricity generation being built
  - d) are a vast majority of new electricity generation being built

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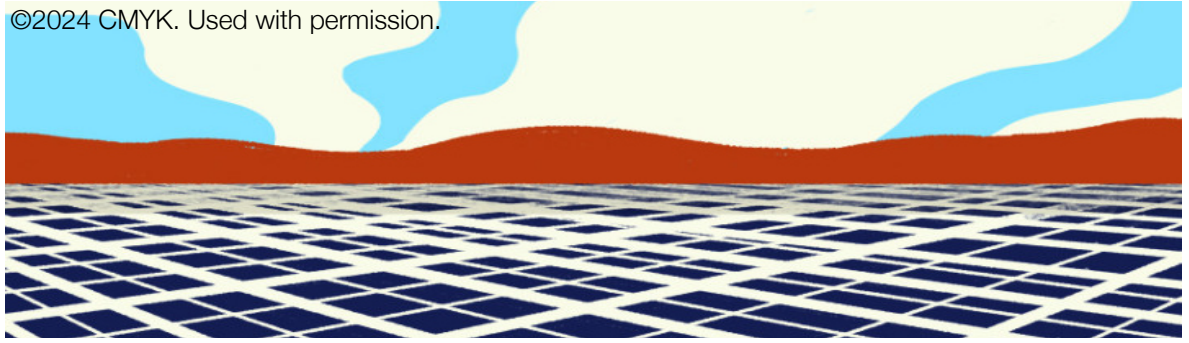
<https://daybreakgame.org/card/1029>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Major Solar Program

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1029>

1. A major solar program would not involve
  - a) significant government investment in building large solar power plants
  - b) research and funding for new solar technologies
  - c) installing gigantic solar power panels on tall towers
  - d) simplifying permitting processes
2. A major solar program would include developing technologies such as
  - a) energy storage systems
  - b) robust power grids
  - c) increased transmission capabilities
  - d) all of the above
- 3) Part of a major solar program could include
  - a) tax incentives to help homeowners and organizations install solar panels
  - b) adding wind turbines to existing solar farms
  - c) raising existing solar panels higher to catch more sunlight
  - d) all of the above
4. Currently, wind and solar power plants
  - a) are a small fraction of new electricity generation being built
  - b) are a minority of new electricity generation being built
  - c) are a small majority of new electricity generation being built
  - d) are a vast majority of new electricity generation being built

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. A Major Solar Program would boost solar energy through large plants, funding new technology, and installation incentives. It would improve energy storage and transmission, reduce emissions, lower costs, create jobs, and enhance energy security.

Name

Date

Climate



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## Mangrove Restoration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Mangroves thrive in waterlogged soil and salt water because of
  - a) special nutrients in the soil
  - b) being a single plant species
  - c) adaptations to the environment
  - d) access to fresh water
2. Mangroves do not
  - a) stabilize shorelines
  - b) clean water
  - c) increase soil erosion
  - d) provide habitat for animals
3. Compared to tropical forest, mangroves store
  - a) no carbon
  - b) less carbon
  - c) the same amount of carbon
  - d) more carbon
4. Mangroves are being destroyed because of
  - a) fishing and hunting
  - b) tourism and agriculture
  - c) mining and logging
  - d) shipping and aviation

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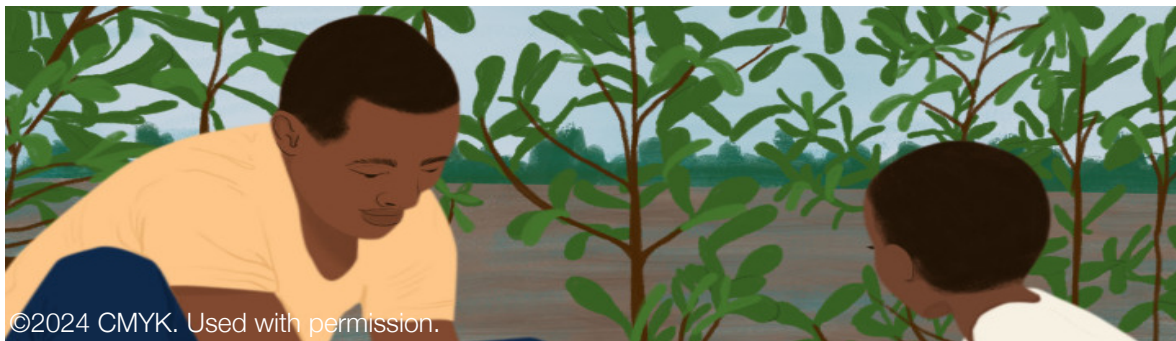


<https://daybreakgame.org/card/1041>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





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## Mangrove Restoration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1041>

1. Mangroves thrive in waterlogged soil and salt water because of
  - a) special nutrients in the soil
  - b) being a single plant species
  - c) adaptations to the environment
  - d) access to fresh water
2. Mangroves do not
  - a) stabilize shorelines
  - b) clean water
  - c) increase soil erosion
  - d) provide habitat for animals
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  - b) less carbon
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4. Mangroves are being destroyed because of
  - a) fishing and hunting
  - b) tourism and agriculture
  - c) mining and logging
  - d) shipping and aviation

### Short Answer

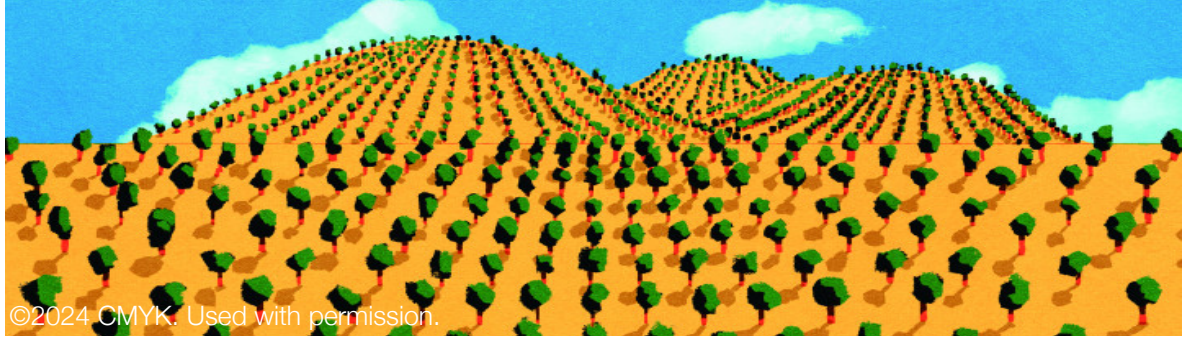
Summarize this project. Include a key benefit and one relevant point that supports it.

5. Mangroves are found in tropical and subtropical coastal areas, providing habitats, stabilizing shorelines, and storing significant carbon.
- Agriculture, tourism, and construction have destroyed many mangroves.
- Restoring them is possible, but rising sea levels may complicate efforts.

Name

Date

Climate



# Massive Tree Farms

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Trees reduce climate warming by
  - a) absorbing sunlight that would otherwise warm the Earth
  - b) absorbing greenhouse gases from the air
  - c) storing heat underground in their roots
  - d) all of the above
2. Massive tree planting can cause problems such as
  - a) affecting people's livelihoods
  - b) reducing the ability of ecosystems to cope with change
  - c) desecrating sacred spaces
  - d) all of the above
- 3) Planting concentrations of a single species
  - a) makes the forest more vulnerable to pests and disease
  - b) enables the use of the most productive species
  - c) makes a forest easier to care for because there is less variation
  - d) creates a stronger forest because trees don't compete with their own species
4. Strategic tree planting means
  - a) avoiding planting trees on land better suited to other uses
  - b) planting a variety of native trees rather than a single species
  - c) mixing trees with farm crops
  - d) all of the above

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<https://daybreakgame.org/card/1039>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Massive Tree Farms

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1039>

1. Trees reduce climate warming by
  - a) absorbing sunlight that would otherwise warm the Earth
  - b) absorbing greenhouse gases from the air
  - c) storing heat underground in their roots
  - d) all of the above
2. Massive tree planting can cause problems such as
  - a) affecting people's livelihoods
  - b) reducing the ability of ecosystems to cope with change
  - c) desecrating sacred spaces
  - d) all of the above
- 3) Planting concentrations of a single species
  - a) makes the forest more vulnerable to pests and disease
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  - a) avoiding planting trees on land better suited to other uses
  - b) planting a variety of native trees rather than a single species
  - c) mixing trees with farm crops
  - d) all of the above

### Short Answer

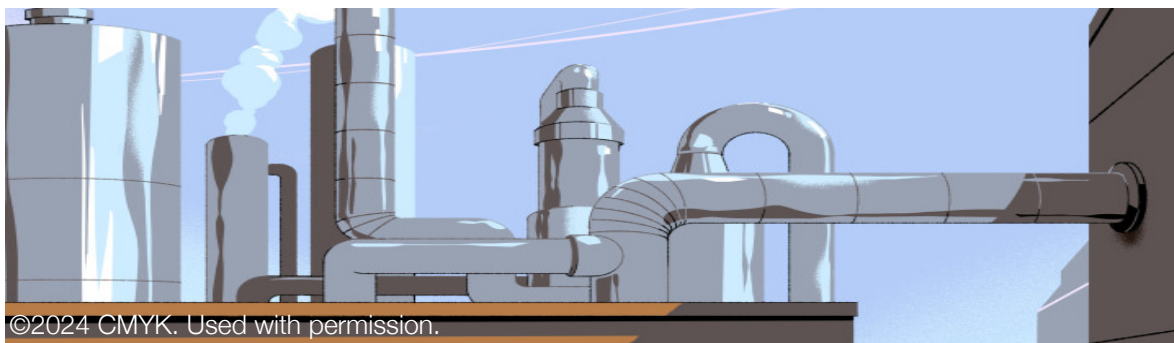
Summarize this project. Include a key benefit and one relevant point that supports it.

5. Trees absorb CO<sub>2</sub>, helping to combat climate change. Mass tree planting can cause problems but using land wisely, mixing trees with crops, & planting native species ensures benefits to both the environment and local communities.

Name

Date

Climate



# Methane Removal

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1120>

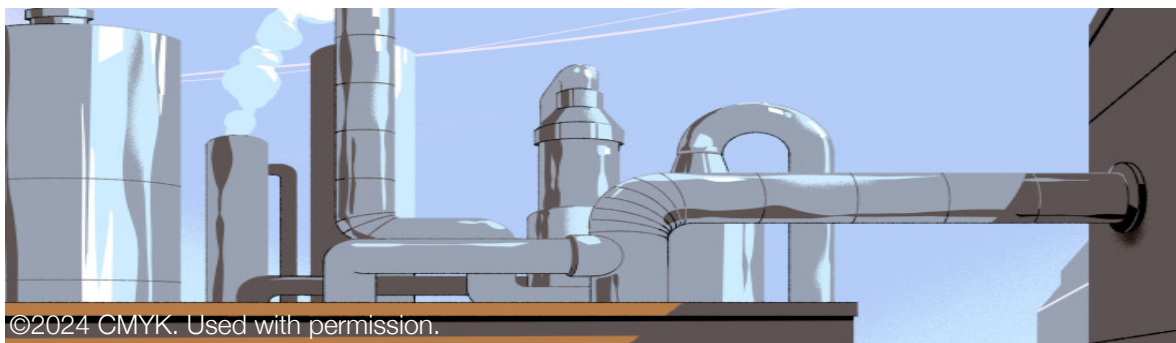
1. Compared to carbon dioxide, methane traps
  - a) 10 times more heat
  - b) 50 times more heat
  - c) 80 times more heat
  - d) 180 times more heat
2. In the Arctic, methane is being released by
  - a) forest fires
  - b) melting permafrost
  - c) agricultural activities
  - d) industrial activities
- 3) Directly capturing methane is challenging because
  - a) methane is low in concentration
  - b) methane has too high a molecular weight
  - c) methane dissolves quickly in water
  - d) methane does not contribute to global warming
4. An existing solution to reduce methane emissions is
  - a) stopping all industrial activities
  - b) burning methane in the atmosphere
  - c) storing methane emissions in underground tanks
  - d) cutting methane emissions at the source

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- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Methane Removal

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1120>

1. Compared to carbon dioxide, methane traps
  - a) 10 times more heat
  - b) 50 times more heat
  - c) 80 times more heat
  - d) 180 times more heat
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  - c) methane dissolves quickly in water
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4. An existing solution to reduce methane emissions is
  - a) stopping all industrial activities
  - b) burning methane in the atmosphere
  - c) storing methane emissions in underground tanks
  - d) cutting methane emissions at the source

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Methane is a powerful greenhouse gas, trapping more heat than carbon dioxide. Methane removal efforts aim to reduce its warming impact, but these technologies are still underdeveloped and require more research and funding.



Name

Date

Climate



# Microfactories

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1071>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Microfactories reduce transportation emissions by
  - a) using electric vehicles
  - b) being located closer to raw materials and customers
  - c) being located near major shipping hubs
  - d) completely avoiding transportation by selling directly to customers
2. Compared to traditional factories, microfactories
  - a) require more space
  - b) require the same space
  - c) require less space
  - d) can fit in a standard shipping container
- 3) Microfactories can take advantage of local conditions by
  - a) hiring local workers
  - b) using local renewable energy
  - c) buying from local suppliers
  - d) all of the above
4. Microfactories can be easily scaled because
  - a) they can adjust the number of products they produce
  - b) they specialize in one type of product
  - c) they have a fixed size
  - d) all of the above

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## Microfactories

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1071>

1. Microfactories reduce transportation emissions by
  - a) using electric vehicles
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4. Microfactories can be easily scaled because
  - a) they can adjust the number of products they produce
  - b) they specialize in one type of product
  - c) they have a fixed size
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Microfactories are small factories that create products for local markets. They require fewer resources, create local jobs, and reduce transportation emissions by being closer to raw materials and customers, making them more environmentally friendly.

Name

Date

Climate



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# Microgrids

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A microgrid is a
  - a) national power grid
  - b) wireless power network
  - c) small electrical transportation system
  - d) small-scale electrical power network
2. Microgrids are usually get their energy from
  - a) solar panels and wind turbines
  - b) hydroelectric dams
  - c) coal and natural gas
  - d) stand-alone diesel generators
- 3) Microgrids are useful in rural and isolated communities because they
  - a) are based on existing infrastructure
  - b) are easier to build than fossil-energy infrastructure
  - c) they need constant maintenance
  - d) they use imported energy
4. Microgrids are often a good choice for rural communities because because
  - a) they are resilient to disruptions
  - b) it is easier to add renewable capability
  - c) less power is lost to long-distance transmission
  - d) all of the above



<https://daybreakgame.org/card/1095>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Microgrids

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1095>

- A microgrid is a
  - national power grid
  - wireless power network
  - small electrical transportation system
  - small-scale electrical power network
- Microgrids are usually get their energy from
  - solar panels and wind turbines
  - hydroelectric dams
  - coal and natural gas
  - stand-alone diesel generators
- Microgrids are useful in rural and isolated communities because they
  - are based on existing infrastructure
  - are easier to build than fossil-energy infrastructure
  - they need constant maintenance
  - they use imported energy
- Microgrids are often a good choice for rural communities because because
  - they are resilient to disruptions
  - it is easier to add renewable capability
  - less power is lost to long-distance transmission
  - all of the above

### Short Answer

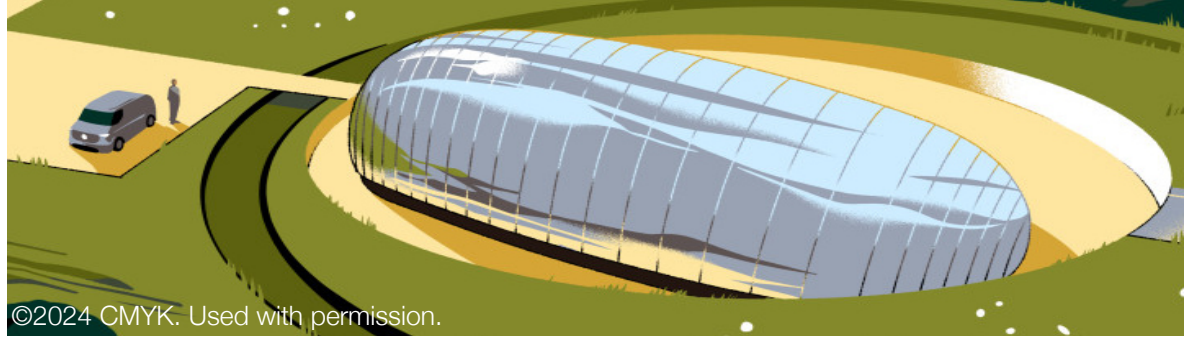
Summarize this project. Include a key benefit and one relevant point that supports it.

- Microgrids are small power networks that generate and distribute energy. They are resilient to disruptions and are useful in isolated communities. Governments can help support the growth of microgrids through policies and standards.*

Name

Date

Climate



# Modular Nuclear

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The primary goal of modular nuclear plants is
  - a) making nuclear power affordable and scalable
  - b) increasing uranium mining
  - c) replacing solar energy use
  - d) increasing profits for the nuclear industry
2. Traditional nuclear plants are expensive to build because of
  - a) lack of uranium fuel
  - b) unique designs
  - c) excessive government subsidies
  - d) high energy demand
- 3) Modular nuclear plants are constructed
  - a) mostly underground
  - b) with custom designs tailored to their locations
  - c) in factories and shipped to sites
  - d) all of the above
4. Most modular nuclear power plant designs are
  - a) first generation
  - b) second generation
  - c) third generation
  - d) fourth generation



<https://daybreakgame.org/card/1023>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

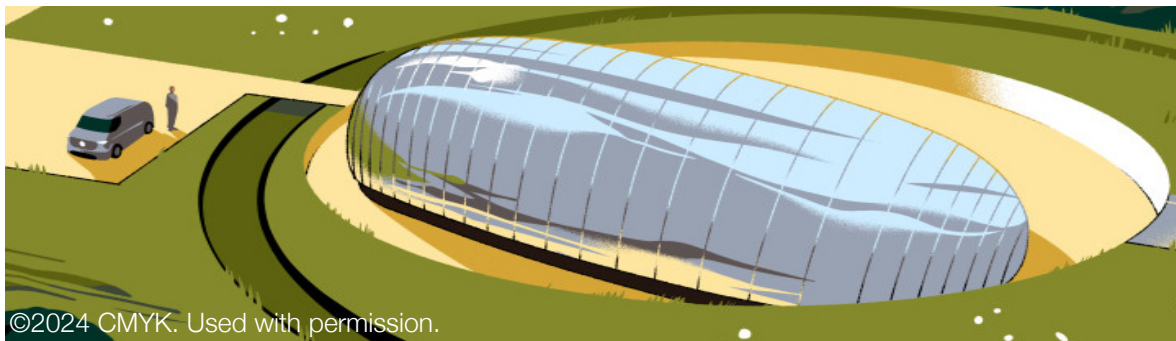
5. \_\_\_\_\_

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## Modular Nuclear

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1023>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- The primary goal of modular nuclear plants is
  - making nuclear power affordable and scalable
  - increasing uranium mining
  - replacing solar energy use
  - increasing profits for the nuclear industry
- Traditional nuclear plants are expensive to build because of
  - lack of uranium fuel
  - unique designs
  - excessive government subsidies
  - high energy demand
- Modular nuclear plants are constructed
  - mostly underground
  - with custom designs tailored to their locations
  - in factories and shipped to sites
  - all of the above
- Most modular nuclear power plant designs are
  - first generation
  - second generation
  - third generation
  - fourth generation

- Modular nuclear plants aim to make nuclear power cheaper and faster to build by building identical units. Although they offer safety advancements, they face ecological concerns, regulatory hurdles, and opposition, limiting their widespread adoption.

Name

Date

Climate



# Nature Restoration

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The main goal of nature restoration policies is to
  - a) increase land available for urban development
  - b) improve ecosystem health
  - c) increase the productivity of agricultural areas
  - d) all of the above
2. Nature restoration efforts can benefit
  - a) forests and grasslands
  - b) wetlands and shorelines
  - c) freshwater and marine environments
  - d) all of the above
- 3) A U.S. Restoration program mentioned in the text is the
  - a) Decade on Ecosystem Restoration
  - b) Land and Water Conservation Fund
  - c) Green New Deal
  - d) Bureau of Land Management
4. Restoration efforts can improve urban ecosystems by
  - a) reducing green spaces to allow more housing
  - b) expanding green spaces and reducing pesticide use
  - c) feeding wildlife like rats and raccoons
  - d) building more golf courses to encourage exercise

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<https://daybreakgame.org/card/1092>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Nature Restoration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1092>

- The main goal of nature restoration policies is to
  - increase land available for urban development
  - improve ecosystem health
  - increase the productivity of agricultural areas
  - all of the above
- Nature restoration efforts can benefit
  - forests and grasslands
  - wetlands and shorelines
  - freshwater and marine environments
  - all of the above
- A U.S. Restoration program mentioned in the text is the
  - Decade on Ecosystem Restoration
  - Land and Water Conservation Fund
  - Green New Deal
  - Bureau of Land Management
- Restoration efforts can improve urban ecosystems by
  - reducing green spaces to allow more housing
  - expanding green spaces and reducing pesticide use
  - feeding wildlife like rats and raccoons
  - building more golf courses to encourage exercise

### Short Answer

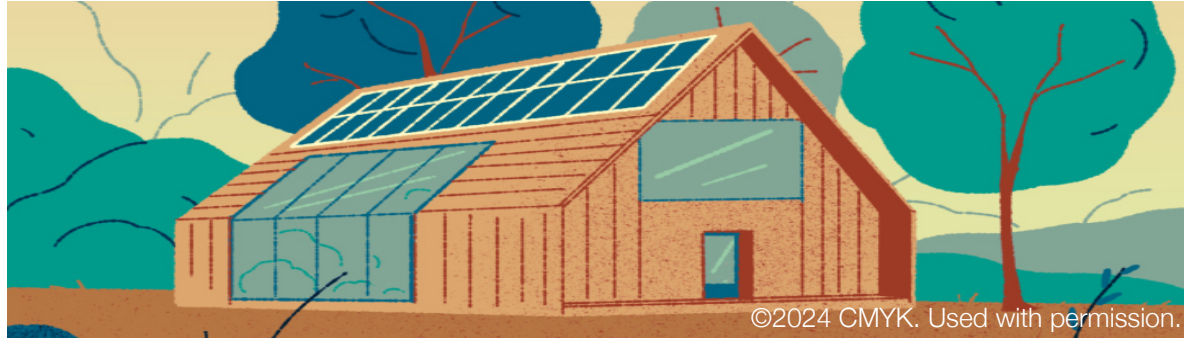
Summarize this project. Include a key benefit and one relevant point that supports it.

- Nature restoration policies heal damaged ecosystems, like forests and wetlands, by replanting, cleaning water, and reintroducing species. This benefits biodiversity, reduces climate impacts, and can support local economies and health.

Name

Date

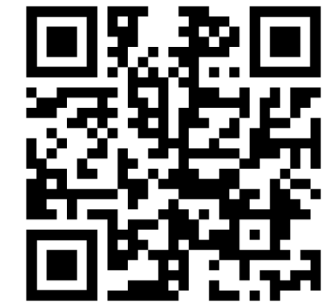
Climate



## Net-Zero Buildings

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1063>

1. In 2021, buildings were responsible for
  - a) 1/4 of global energy usage
  - b) 1/3 of global energy usage
  - c) 1/2 of global energy usage
  - d) 2/3 of global energy usage
2. One way to reduce energy use in buildings is
  - a) installing green or cool roofs
  - b) adding insulation and high-performance windows
  - c) using timers to control heating and cooling systems
  - d) all of the above
- 3) Green roofs are covered with
  - a) green plants
  - b) green solar panels
  - c) green shingles
  - d) any of the above
4. A benefit of reusing materials from deconstructed buildings is that it
  - a) increases economic growth
  - b) reduces the need for new materials
  - c) increases biodiversity
  - d) all of the above

### Short Answer

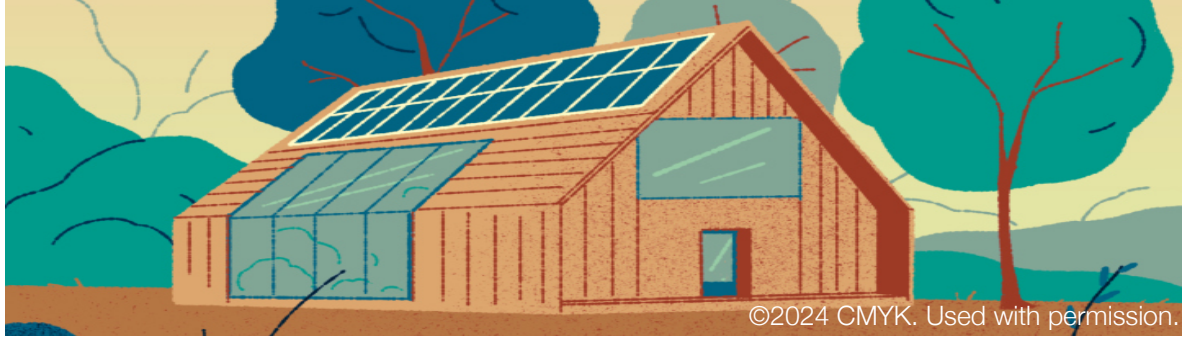
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Net-Zero Buildings

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1063>

1. In 2021, buildings were responsible for
  - a) 1/4 of global energy usage
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  - a) increases economic growth
  - b) reduces the need for new materials
  - c) increases biodiversity
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Buildings use a lot of energy, often from fossil fuels. Smart designs like insulation, solar panels, and green roofs reduce energy use and emissions. Reusing materials and sustainable building practices also help cut greenhouse gas emissions.



Name

Date

Climate



## Nutrient Management

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1057>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

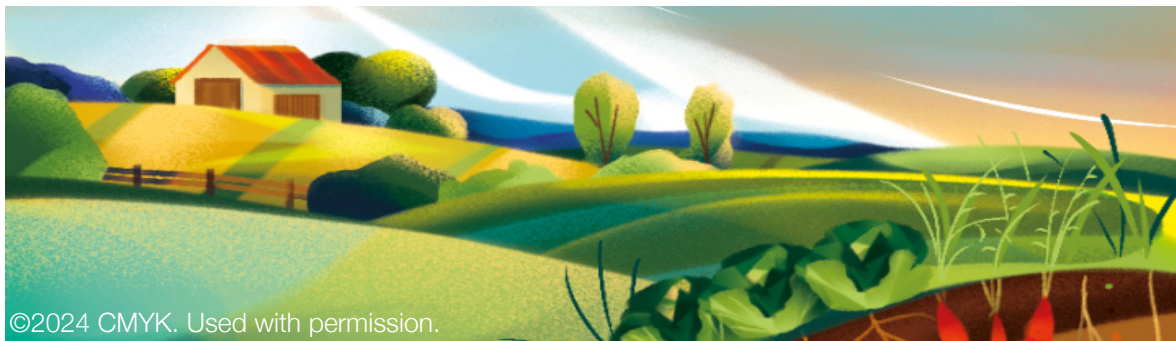
1. The nutrients essential for plant growth are
  - a) calcium, magnesium, and zinc
  - b) nitrogen, phosphorus, and potassium
  - c) iron, copper, and manganese
  - d) oxygen, hydrogen, and carbon
2. Adding too many nutrients to fields can cause
  - a) deforestation
  - b) desertification
  - c) soil erosion
  - d) waterway pollution
- 3) A farming practice commonly used to manage nutrients is
  - a) monocultures
  - b) synthetic fertilizers
  - c) crop rotation
  - d) herbicide application
4. Industrial farming commonly uses
  - a) monoculture
  - b) composting
  - c) cover cropping
  - d) all of the above

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## Nutrient Management

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1057>

- The nutrients essential for plant growth are
  - calcium, magnesium, and zinc
  - nitrogen, phosphorus, and potassium
  - iron, copper, and manganese
  - oxygen, hydrogen, and carbon
- Adding too many nutrients to fields can cause
  - deforestation
  - desertification
  - soil erosion
  - waterway pollution
- A farming practice commonly used to manage nutrients is
  - monocultures
  - synthetic fertilizers
  - crop rotation
  - herbicide application
- Industrial farming commonly uses
  - monoculture
  - composting
  - cover cropping
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Nutrient management balances nutrients by practices like crop rotation and composting build healthy soils which promote healthy plant growth while excessive synthetic fertilizers in industrial farming can cause soil and water pollution.

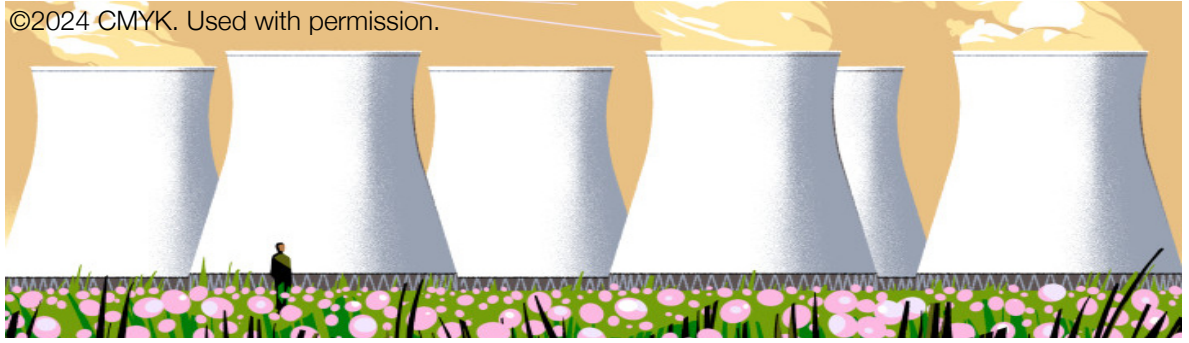
Name

Date

Climate



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## Nuclear Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. The fuel used by nuclear power plants is
  - a) coal
  - b) oil
  - c) uranium
  - d) all of the above
2. An advantage of existing nuclear power plants is that
  - a) they are cheap to run
  - b) they provide reliable baseload power
  - c) they produce no waste
  - d) all of the above
- 3) Modular nuclear power plants are intended to address
  - a) cost and timescale issues
  - b) water usage issues
  - c) noise concerns
  - d) all of the above
4. Skeptics of nuclear power prefer investing in
  - a) fossil fuels
  - b) hydropower
  - c) wind and solar
  - d) modular plants



<https://daybreakgame.org/card/1016>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Nuclear Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- The fuel used by nuclear power plants is
  - coal
  - oil
  - uranium
  - all of the above
- An advantage of existing nuclear power plants is that
  - they are cheap to run
  - they provide reliable baseload power
  - they produce no waste
  - all of the above
- Modular nuclear power plants are intended to address
  - cost and timescale issues
  - water usage issues
  - noise concerns
  - all of the above
- Skeptics of nuclear power prefer investing in
  - fossil fuels
  - hydropower
  - wind and solar
  - modular plants



<https://daybreakgame.org/card/1016>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Nuclear power plants generate carbon-free electricity. Concerns include slow construction, high costs, and harmful waste. While nuclear energy offers reliable power, critics prefer investment in renewable sources like wind and solar with storage.

Name

Date

Climate



## Offshore Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1030>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Wind farms are being built offshore because
  - a) winds there are stronger and more consistent
  - b) there is a lot of space there
  - c) it is a proven technology
  - d) all of the above
2. In ten years the cost of offshore wind
  - a) has stayed constant
  - b) has dropped a little
  - c) is about half what it used to be
  - d) is about double what it used to be
- 3) To encourage offshore wind, governments have
  - a) set targets for the installation of offshore wind farms
  - b) subsidized companies to build offshore wind farms
  - c) built publicly owned offshore wind farms
  - d) all of the above
4. New technologies for offshore wind include
  - a) floating turbines to protect marine wildlife
  - b) painting turbines to blend in with the sea
  - c) giant turbines to gather more wind
  - d) all of the above

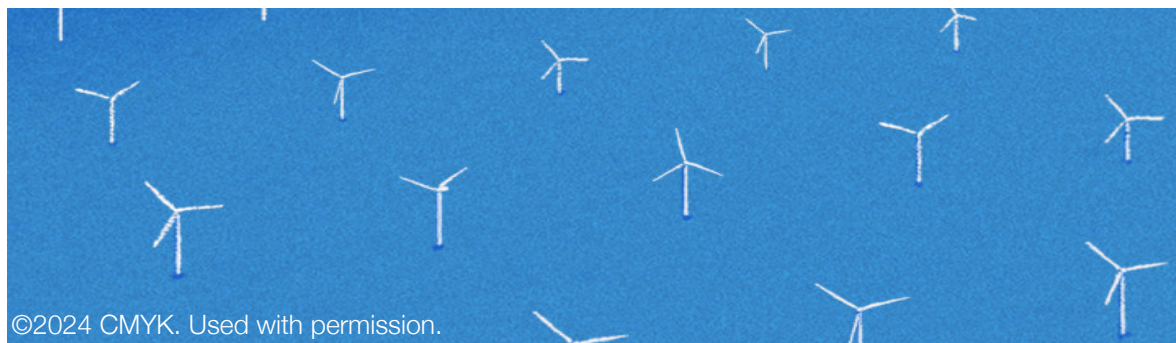
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## Offshore Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1030>

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  - b) painting turbines to blend in with the sea
  - c) giant turbines to gather more wind
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Offshore wind uses large turbines at sea to generate zero-carbon electricity. It is more expensive to build, but winds are stronger there. Innovations like floating turbines minimize impacts on marine life. Continued support is essential for growth.

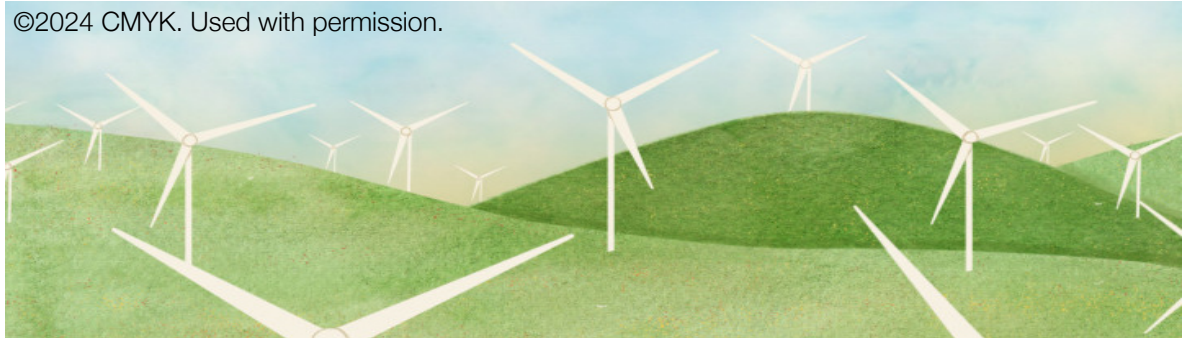
Name

Date

Climate



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## Onshore Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1021>

### Short Answer

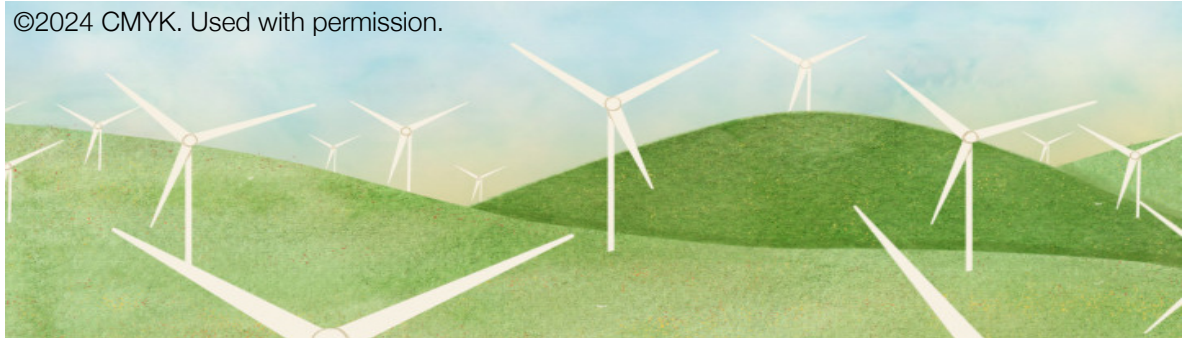
Summarize this project. Include a key benefit and one relevant point that supports it.

1. Onshore wind refers to
  - a) wind turbines installed on the shore, where winds are stronger than inland
  - b) wind turbines manufactured within the country, by onshore manufacturers
  - c) wind turbines installed on land
  - d) all of the above
2. Compared to solar panels, wind turbines are
  - a) cheaper to install but more expensive to run
  - b) cheaper to install and cheaper to run
  - c) more expensive to install but cheaper to run
  - d) more expensive to install and more expensive to run
- 3) Wind turbines are tall because
  - a) wind speeds increase as altitude increases
  - b) birds don't fly very high
  - c) it removes them from sight-lines, so people don't complain about them
  - d) they are more efficient if they are closer to the sun
4. Governments first started subsidizing wind farms in the 1970s because
  - a) it was windier back then, so they were more efficient
  - b) oil embargoes increased the price of oil
  - c) they were trying to prevent climate change
  - d) all of the above

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## Onshore Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



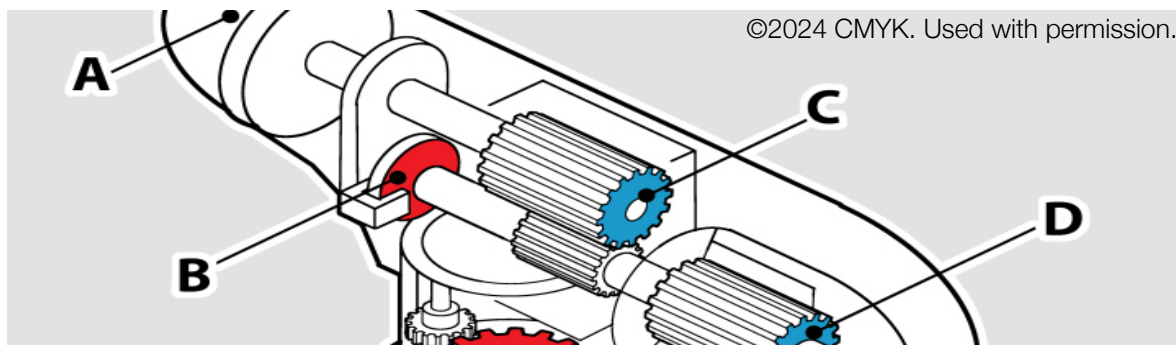
<https://daybreakgame.org/card/1021>

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  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Onshore wind uses land-based turbines to generate emission-free electricity. It needs consistent wind and can't be near cities. It's expensive to install, but cost-effective and cheaper to run than solar. Public support is rising, and governments can invest directly or encourage private investment through subsidies.



## Patents Regulations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



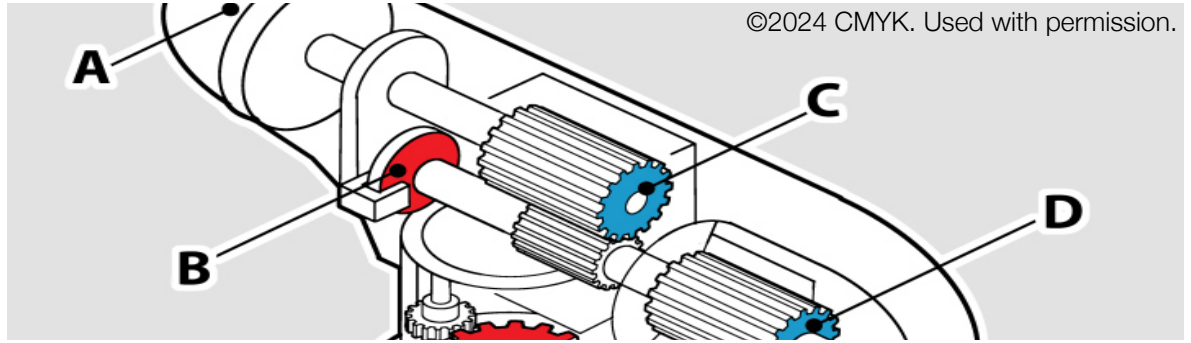
<https://daybreakgame.org/card/1051>

1. Patents are considered important for technological innovation because
  - a) they guarantee a lifetime of profits
  - b) they provide inventors with time-limited monopoly to profit from their inventions
  - c) they make new technologies free for everyone
  - d) all of the above
2. A concern about patents in relation to climate technologies is that they might
  - a) make technologies too expensive
  - b) be too hard to file
  - c) prevent technologies from spreading quickly enough
  - d) encourage collaboration
- 3) Attempts at patent reform are hindered by
  - a) industry groups who see patents as crucial for profits
  - b) lack of interest from inventors
  - c) increased public awareness
  - d) support from all political parties
4. According to the description, politicians should
  - a) leave patents as they are, because the system is working well
  - b) extend the length of patent protection to incentivize innovation
  - c) repeal patents that relate to climate emergency technologies
  - d) promote ideas around collaboration and shared knowledge

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### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Patents Regulations

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1051>

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  - a) leave patents as they are, because the system is working well
  - b) extend the length of patent protection to incentivize innovation
  - c) repeal patents that relate to climate emergency technologies
  - d) promote ideas around collaboration and shared knowledge

5. Reforming patent laws can help accelerate green technology development. Patents encourage innovation, but also slow the spread of crucial climate technologies. Laws should be reformed to balance innovation with access.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



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## Peatland Rewetting

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Compared to Earth's forests, peatlands contain
  - a) half as much carbon
  - b) the same amount of carbon
  - c) twice as much carbon
  - d) three times as much carbon
2. Peatlands are commonly destroyed for
  - a) agriculture, fuel use, and building space
  - b) fishing and recreational activities
  - c) mining and tourism
  - d) road construction and logging
- 3) The first priority of peatland conservation is
  - a) building infrastructure
  - b) expanding urban areas
  - c) preventing further peatland loss
  - d) increasing eco-tourism
4. Consumers can contribute to peatland protection by
  - a) supporting the use of peat as a sustainable biofuel
  - b) boycotting products made from peat
  - c) using peat as biomass in their gardens
  - d) pressuring food companies not to destroy peatlands for crops



<https://daybreakgame.org/card/1038>

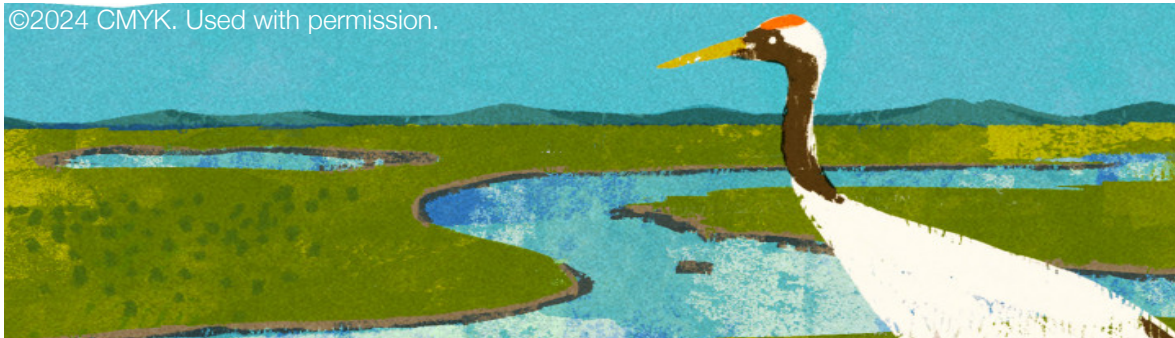
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Peatland Rewetting

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1038>

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  - supporting the use of peat as a sustainable biofuel
  - boycotting products made from peat
  - using peat as biomass in their gardens
  - pressuring food companies not to destroy peatlands for crops

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Peatlands, ecosystems that store vast amounts of carbon and support biodiversity, are under threat from human activities. Protecting and restoring them through policy, consumer pressure, and awareness is essential for climate stability and ecological preservation.

Name

Date

Climate



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# Petrol and Diesel Phaseout

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1074>

1. An alternative to using fossil fuel-powered vehicles is
  - a) walking and bicycling
  - b) driving larger cars with more room for passengers
  - c) building wider roads to ease congestion
  - d) all of the above
2. Remote work can help reduce greenhouse gas emissions by
  - a) increasing travel distances
  - b) reducing the need for commuting
  - c) saving companies money on office rent
  - d) all of the above
- 3) Moving to greener transportation options will require
  - a) altering infrastructure
  - b) changing mindsets
  - c) providing incentives
  - d) all of the above
4. Regulations that would encourage greener transportation are being avoided by
  - a) the agriculture industry
  - b) the automobile industry
  - c) the entertainment industry
  - d) the technology industry

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Petrol and Diesel Phaseout

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



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  - a) the agriculture industry
  - b) the automobile industry
  - c) the entertainment industry
  - d) the technology industry

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. In 2018, most cars used petrol or diesel, contributing to climate change. Shifting to electric vehicles, mass transit, walking, and remote work can cut emissions, improve air quality, and create healthier, more sustainable communities.



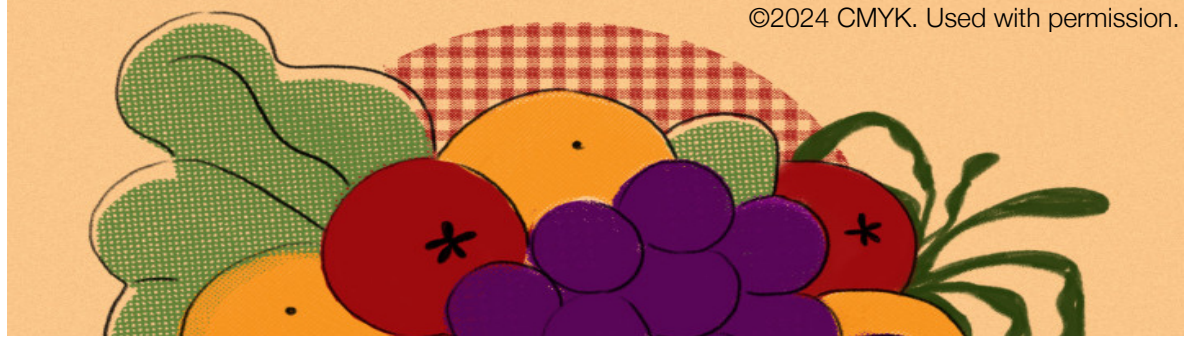
Name

Date

Climate



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## Plant-Rich Diets

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A plant-rich diet means eating
  - a) lots of raw vegetables
  - b) fish instead of meat
  - c) very little or no animal products
  - d) lots of milk and cheese
2. Meat and dairy production cause this percentage of greenhouse gas emissions
  - a) 14.5%
  - b) 25-40%
  - c) 63%
  - d) 70%
- 3) The production of meat and dairy is linked to
  - a) a majority of agricultural land use
  - b) deforestation
  - c) biodiversity loss
  - d) all of the above
4. The most problematic food products are
  - a) eggs and chicken
  - b) red meat
  - c) farmed fish and shrimp
  - d) cheese and milk

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<https://daybreakgame.org/card/1056>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Plant-Rich Diets

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

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  - 63%
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  - a majority of agricultural land use
  - deforestation
  - biodiversity loss
  - all of the above
- The most problematic food products are
  - eggs and chicken
  - red meat
  - farmed fish and shrimp
  - cheese and milk



<https://daybreakgame.org/card/1056>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Eating a plant-rich diets causes less greenhouse gas emissions and deforestation than eating meat and dairy. They can be encouraged by public education, offering plant-based options in public spaces, and supporting farmers changing to sustainable food production.

Name

Date

Climate



## Pollution Reduction

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1082>

1. The vast majority of pollution-related death take place
  - a) in the Majority World
  - b) in the Minority World
  - c) near major disasters
  - d) everywhere; deaths are uniformly distributed
2. The percentage of wastewater that is discharged without being treated is
  - a) 50%
  - b) 60%
  - c) 72%
  - d) 80%
- 3) The best way to reduce pollution is to
  - a) plant more trees to absorb pollutants
  - b) limit pollutant releases into the environment
  - c) reduce the cost of green energy to consumers
  - d) use advanced anti-pollution technologies
4. Individuals can help reduce pollution by
  - a) increasing their meat consumption
  - b) expanding their energy consumption
  - c) using public transportation
  - d) all of the above

### Short Answer

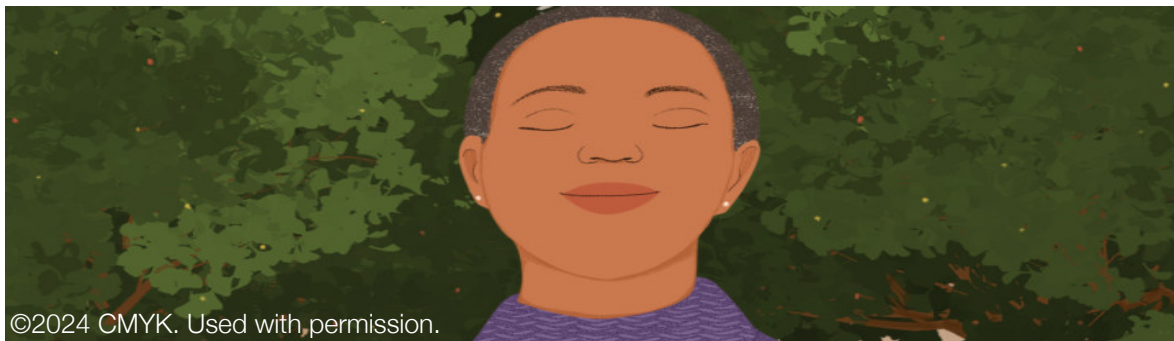
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Pollution Reduction

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1082>

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  - use advanced anti-pollution technologies
- Individuals can help reduce pollution by
  - increasing their meat consumption
  - expanding their energy consumption
  - using public transportation
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Pollution caused 1 in 6 deaths worldwide in 2019. Reducing pollution requires governments, industries, and individuals to work together by limiting emissions, adopting cleaner technologies, and making lifestyle changes.

Name

Date

Climate



# Recovery Coordination

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Recovery coordination is
  - a) the process of preventing disasters
  - b) managing disaster recovery and rebuilding
  - c) planning disaster evacuations
  - d) predicting future emergencies
2. Recovery coordination prevents
  - a) communication failures
  - b) duplicated work
  - c) financial losses
  - d) all of the above
- 3) A key to successful recovery coordination systems is
  - a) highly structured plans and processes
  - b) centralized control and coordination
  - c) flexibility and responsiveness
  - d) all of the above
4. Recovery coordination is essential
  - a) when multiple groups are involved
  - b) during every emergency
  - c) after natural disasters
  - d) all of the above

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<https://daybreakgame.org/card/1106>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Recovery Coordination

### Multiple Choice

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  - c) flexibility and responsiveness
  - d) all of the above
4. Recovery coordination is essential
  - a) when multiple groups are involved
  - b) during every emergency
  - c) after natural disasters
  - d) all of the above
5. Recovery coordination is safely managing disaster aftermath efforts. It promotes communication, transparency, and flexibility, involving all affected groups. Effective coordination helps improve future resilience strategies.



<https://daybreakgame.org/card/1106>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



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# Recovery Investments

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1105>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Recovery investments are
  - a) spending plans by private businesses to recover from an emergency
  - b) investments by private businesses to help the economy after an emergency
  - c) spending plans by governments to help communities after an emergency
  - d) tax cuts for businesses affected by an emergency
2. Recovery investments are most effective when they
  - a) incorporate priorities like resilience and fairness
  - b) are implemented after extensive study and consultation
  - c) prioritize reducing the tax burden
  - d) all of the above
- 3) When lobbyists are involved in recovery investments,
  - a) they may prevent governments from making decisions
  - b) they may use the situation to push for their policies
  - c) they help create fair regulations
  - d) they stop recovery investments from happening
4. When recovery investments lack strong regulation
  - a) they are more successful
  - b) they can reinforce the system that caused the crisis
  - c) they eliminate corruption and waste
  - d) all of the above

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## Recovery Investments

### Multiple Choice

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<https://daybreakgame.org/card/1105>

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  - a) they are more successful
  - b) they can reinforce the system that caused the crisis
  - c) they eliminate corruption and waste
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Recovery investments are government spending after emergencies to help rebuild communities and businesses. They are most effective when incorporating broader goals; weak regulations or self-serving political agendas reduce their impact or lead to unfair outcomes.

Name

Date

Climate



# Recovery Policies

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1104>

1. Recovery policies are
  - a) rules to reduce taxes to fund recovery
  - b) initiatives to help communities recover from emergencies
  - c) methods to stop businesses from over-expanding during emergencies
  - d) all of the above
2. A benefit of effective recovery policies is
  - a) they can allow communities to rebuild better and more resilient
  - b) they can support local businesses thus preserving employment
  - c) they can help people reconnect socially
  - d) all of the above
- 3) After the 2008 Global Financial Crisis, a common criticism was that
  - a) regulations went too far
  - b) regulations did not go far enough
  - c) no new regulations were introduced
  - d) policies only helped businesses
4. Recovery policies are less effective when they
  - a) are not sufficiently funded
  - b) invest in the systems that caused the disaster
  - c) involve weak regulations
  - d) all of the above

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Recovery Policies

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1104>

- Recovery policies are
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  - policies only helped businesses
- Recovery policies are less effective when they
  - are not sufficiently funded
  - invest in the systems that caused the disaster
  - involve weak regulations
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Recovery policies help communities recover from emergencies and can rebuild areas to be more resilient. Effective policies often address broader priorities; weak ones may fail to prevent future problems. Governments and businesses play crucial roles.



Name

Date

Climate



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# Reforestation

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1217>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Reforestation means
  - a) planting trees in areas without trees such as deserts and grasslands
  - b) planting trees in public and private land in cities and suburbs
  - c) helping trees grow in areas where they once grew
  - d) all of the above
2. Among the benefits of trees are
  - a) they absorb greenhouse gas emissions
  - b) they absorb pollutants
  - c) they help prevent landslides
  - d) all of the above
- 3) One problem with planting trees is that
  - a) they take up too much space in cities
  - b) it takes away time and attention from reducing emissions
  - c) too many trees means we won't have enough space for farms to feed people
  - d) more trees means more forest fires which will increase air pollution
4. Reforestation is less important than preventing forests being cleared because
  - a) new forests absorb less greenhouses gases than existing forests already store
  - b) new forests have less biodiversity than existing forests
  - c) original forests are important to Indigenous communities
  - d) all of the above

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## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1217>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Reforestation means
  - planting trees in areas without trees such as deserts and grasslands
  - planting trees in public and private land in cities and suburbs
  - helping trees grow in areas where they once grew
  - all of the above
- Among the benefits of trees are
  - they absorb greenhouse gas emissions
  - they absorb pollutants
  - they help prevent landslides
  - all of the above
- One problem with planting trees is that
  - they take up too much space in cities
  - it takes away time and attention from reducing emissions
  - too many trees means we won't have enough space for farms to feed people
  - more trees means more forest fires which will increase air pollution
- Reforestation is less important than preventing forests being cleared because
  - new forests absorb less greenhouse gases than existing forests already store
  - new forests have less biodiversity than existing forests
  - original forests are important to Indigenous communities
  - all of the above

- Reforestation regenerates lost tree cover. Trees absorb greenhouse gases and support ecosystems. The EU plans to plant 3 billion trees by 2030, but protecting existing forests and reducing fossil fuel use are also essential.

Name

Date

Climate



# Regenerative Agriculture

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1091>

1. Regenerative agriculture means
  - a) replanting farms in places where they used to be
  - b) cogenerating electricity on farms using agricultural waste products
  - c) farming that causes less ecological damage
  - d) farming that restores the original ecosystem
2. Examples of regenerative agriculture include
  - a) rotating crops
  - b) reducing tillage
  - c) applying compost
  - d) all of the above
- 3) Regenerative agriculture works because it
  - a) uses sustainable energy to power equipment, rather than fossil fuels
  - b) increases organic matter in soil, which improves fertility and strengthens plants
  - c) relies on different pollinators than regular agriculture
  - d) all of the above
4. Among the public goods provided by regenerative farming practices is
  - a) increasing carbon sequestration
  - b) improving soil fertility
  - c) cleaner air and water
  - d) all of the above

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Regenerative Agriculture

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1091>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Regenerative agriculture means
  - a) replanting farms in places where they used to be
  - b) cogenerating electricity on farms using agricultural waste products
  - c) farming that causes less ecological damage
  - d) farming that restores the original ecosystem
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  - a) rotating crops
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  - d) all of the above
4. Among the public goods provided by regenerative farming practices is
  - a) increasing carbon sequestration
  - b) improving soil fertility
  - c) cleaner air and water
  - d) all of the above

5. Growing food causes deforestation, emissions, and biodiversity loss.

Regenerative agriculture practices like crop rotation and composting

improve soil health and resilience. Policies and subsidies that support

these practices result in cleaner air, water, and healthier soils.

Name

Date

Climate



# Resilience Volunteers

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Resilience volunteers
  - a) organize parties for emergency workers
  - b) sell goods to raise funds for disaster relief
  - c) support disaster relief and build resilient structures
  - d) all of the above
2. In the context of resilience volunteering, “maladaptation” is
  - a) successful adaptations to climate disasters
  - b) actions that unintentionally increase vulnerability
  - c) building strong defences against climate disasters
  - d) avoiding climate work altogether
- 3) Resilience volunteers are typically
  - a) paid professional
  - b) ordinary people
  - c) government officials
  - d) celebrities
4. A benefits of resilience volunteering is
  - a) it increases the use of emergency funds
  - b) it reduces the need for climate action
  - c) it prevents climate disasters from happening
  - d) it helps communities recover faster

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<https://daybreakgame.org/card/1207>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





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## Resilience Volunteers

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1207>

1. Resilience volunteers
  - a) organize parties for emergency workers
  - b) sell goods to raise funds for disaster relief
  - c) support disaster relief and build resilient structures
  - d) all of the above
2. In the context of resilience volunteering, “maladaptation” is
  - a) successful adaptations to climate disasters
  - b) actions that unintentionally increase vulnerability
  - c) building strong defences against climate disasters
  - d) avoiding climate work altogether
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  - d) celebrities
4. A benefits of resilience volunteering is
  - a) it increases the use of emergency funds
  - b) it reduces the need for climate action
  - c) it prevents climate disasters from happening
  - d) it helps communities recover faster

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Resilience volunteers are people who help tackle climate emergencies by supporting disaster relief, building resilient structures, and raising awareness. Volunteering can fill resource gaps, helping communities recover faster.



Name

Date

Climate



# Resource Redistribution

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Resource redistribution refers to
  - a) transferring resources between countries
  - b) promoting tourism in the Majority World
  - c) increasing global trade
  - d) decreasing greenhouse gas emissions
2. A key benefit of resource redistribution in the context of climate change is that
  - a) it counteracts increasing emissions from low-income countries
  - b) it reduces trade barriers allowing the rational application of market principles
  - c) it helps vulnerable communities adapt to climate change
  - d) it promotes efficient global shipping
- 3) Flexible, democratically managed finance helps communities by
  - a) allowing communities to choose how to best use funds
  - b) enhancing international trade links
  - c) improving career advancement opportunities for local youth
  - d) all of the above
4. A challenge to resource redistribution is
  - a) easy access to finance for vulnerable nations
  - b) high emissions in low-income countries
  - c) weak international law and governance mechanisms
  - d) all of the above



<https://daybreakgame.org/card/1050>

## Short Answer

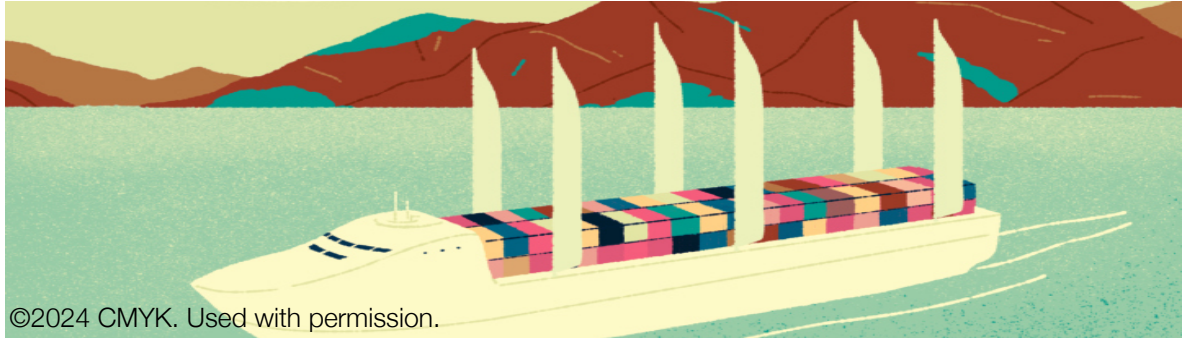
Summarize this project. Include a key benefit and one relevant point that supports it.

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## Resource Redistribution

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1050>

1. Resource redistribution refers to
  - a) transferring resources between countries
  - b) promoting tourism in the Majority World
  - c) increasing global trade
  - d) decreasing greenhouse gas emissions
2. A key benefit of resource redistribution in the context of climate change is that
  - a) it counteracts increasing emissions from low-income countries
  - b) it reduces trade barriers allowing the rational application of market principles
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  - c) improving career advancement opportunities for local youth
  - d) all of the above
4. A challenge to resource redistribution is
  - a) easy access to finance for vulnerable nations
  - b) high emissions in low-income countries
  - c) weak international law and governance mechanisms
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Resource redistribution involves transferring resources such as money to help vulnerable communities adapt to climate change.  
It addresses climate inequality by providing funds to those least responsible for the climate crisis but most affected by it.

Name

Date

Climate



## Rewilding

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1093>

1. Rewilding commonly involves
  - a) building access roads
  - b) encouraging recreational wilderness activities
  - c) removing pollutants and contamination
  - d) constructing fences
2. Rewilding benefits local communities by
  - a) increasing urban development
  - b) improving flood protection and water quality
  - c) increasing property values
  - d) all of the above
- 3) If reintroduced species lack enough predators
  - a) they might become extinct
  - b) they will migrate to other areas
  - c) they overpopulate and disrupt the ecosystem
  - d) they will prey on each other
4. Rewilding can be hindered by
  - a) lack of communication with local communities
  - b) insufficient rainfall
  - c) insufficient return on investment
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Rewilding

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1093>

1. Rewilding commonly involves
  - a) building access roads
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4. Rewilding can be hindered by
  - a) lack of communication with local communities
  - b) insufficient rainfall
  - c) insufficient return on investment
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Rewilding restores ecosystems to a natural state by removing human activities, benefiting species diversity and communities. Proper planning and community involvement avoid potential harm and ensure successful conservation efforts.



Name

Date

Climate



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# Scale Up Recovery Support

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1107>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Adequate recovery support is important to
  - a) prevent emergencies from occurring
  - b) expanding recovery efforts and funds quickly
  - c) reducing taxes
  - d) all of the above
2. One benefit of well-coordinated recovery efforts is
  - a) increased emergency frequency
  - b) better long-term resilience
  - c) lengthened recovery times
  - d) all of the above
- 3) Recovery efforts can be hindered by
  - a) increased taxes
  - b) lack of public support
  - c) too much planning
  - d) limited emergency responders
4. Public involvement in recovery planning is important to
  - a) ensure plans are effective and accepted
  - b) increase bureaucracy
  - c) reduce the number of responders
  - d) all of the above

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## Scale Up Recovery Support

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1107>

- Adequate recovery support is important to
  - prevent emergencies from occurring
  - expanding recovery efforts and funds quickly
  - reducing taxes
  - all of the above
- One benefit of well-coordinated recovery efforts is
  - increased emergency frequency
  - better long-term resilience
  - lengthened recovery times
  - all of the above
- Recovery efforts can be hindered by
  - increased taxes
  - lack of public support
  - too much planning
  - limited emergency responders
- Public involvement in recovery planning is important to
  - ensure plans are effective and accepted
  - increase bureaucracy
  - reduce the number of responders
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Rapidly scaling up recovery support helps communities recover from emergencies. While essential, recovery support does not replace addressing root causes like climate change and social inequalities.

Name

Date

Climate



# Small Scale Onshore Wind

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1022>

1. Small scale onshore wind turbines generate
  - a) less than 100 kW
  - b) exactly 100 kW
  - c) more than 100 kW
  - d) information not given in the description
2. Compared to large turbines, small scale onshore wind turbines
  - a) require less land
  - b) cost less money
  - c) can operate in remote locations
  - d) all of the above
- 3) Limitation on small scale onshore wind include
  - a) the amount of power they generate depends on the wind speed
  - b) they must be located away from buildings, trees, and other obstacles
  - c) they can't operate if the winds are too weak
  - d) all of the above
4. The most significant factor limiting small scale onshore wind in the Majority World is
  - a) the turbines aren't very efficient
  - b) installation costs are relatively high
  - c) it is too expensive to run them
  - d) none of the above

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Small Scale Onshore Wind

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1022>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Small scale onshore wind turbines generate
  - less than 100 kW
  - exactly 100 kW
  - more than 100 kW
  - information not given in the description
- Compared to large turbines, small scale onshore wind turbines
  - require less land
  - cost less money
  - can operate in remote locations
  - all of the above
- Limitation on small scale onshore wind include
  - the amount of power they generate depends on the wind speed
  - they must be located away from buildings, trees, and other obstacles
  - they can't operate if the winds are too weak
  - all of the above
- The most significant factor limiting small scale onshore wind in the Majority World is
  - the turbines aren't very efficient
  - installation costs are relatively high
  - it is too expensive to run them
  - none of the above

- Small-scale onshore wind turbines, producing under 100kW, offer a cost-effective green energy solution, especially in remote areas. Wind conditions affect their efficiency. While technology is improving, costs must decrease for broader use, especially in developing regions.

Name

Date

Climate



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# Social Movements

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A social movement is
  - a) a large number of people working to change society
  - b) a large number of people marching in the same direction
  - c) a very large street protest
  - d) none of the above
2. An example of a social movement is
  - a) Black Lives Matter
  - b) debt rebellions
  - c) anticolonial struggles
  - d) all of the above
- 3) Besides street protests, social movements also involve
  - a) academics analyzing evidence
  - b) lawyers fighting for justice in the courts
  - c) charities providing on-the-ground support
  - d) all of the above
4. A 'tipping point' means
  - a) the movement to spread tipping to occupations that traditionally are untipped
  - b) the moment a series of small changes add up to a large significant change
  - c) the common term for the fulcrum of a lever
  - d) none of the above

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<https://daybreakgame.org/card/1004>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Social Movements

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1004>

1. A social movement is
  - a) a large number of people working to change society
  - b) a large number of people marching in the same direction
  - c) a very large street protest
  - d) none of the above
2. An example of a social movement is
  - a) Black Lives Matter
  - b) debt rebellions
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- 3) Besides street protests, social movements also involve
  - a) academics analyzing evidence
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4. A 'tipping point' means
  - a) the movement to spread tipping to occupations that traditionally are untipped
  - b) the moment a series of small changes add up to a large significant change
  - c) the common term for the fulcrum of a lever
  - d) none of the above
5. Movements are people pushing together for social change. Protests and activism are their face, but they also research, legal action, and policy work. Making an impact takes years, and to create lasting change organizers must understand how different issues are connected.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





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## Soil Education

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Over 90% of the world's soil could become degraded by
  - a) 2030
  - b) 2050
  - c) 2075
  - d) 2100
2. Biodiversity in fields can be boosted by
  - a) monocultures
  - b) agroforestry
  - c) summer fallowing
  - d) urban development
- 3) A strategy to help restore degraded land is
  - a) reforestation
  - b) urbanization
  - c) monoculture farming
  - d) all of the above
4. Healthy soil helps combat climate change by
  - a) producing more chemical fertilizers
  - b) promoting monoculture farming
  - c) storing carbon
  - d) all of the above

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<https://daybreakgame.org/card/1116>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Soil Education

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

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  - a) 2030
  - b) 2050
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  - d) urban development
- 3) A strategy to help restore degraded land is
  - a) reforestation
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  - c) monoculture farming
  - d) all of the above
4. Healthy soil helps combat climate change by
  - a) producing more chemical fertilizers
  - b) promoting monoculture farming
  - c) storing carbon
  - d) all of the above

5. Soil is essential for life but is being degraded by modern agriculture, deforestation, and pollution. Protecting soil health through practices like reforestation and agroecology can prevent greenhouse gas emissions and support biodiversity.



<https://daybreakgame.org/card/1116>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



## Solar Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1014>

1. Solar power plants produce electricity from
  - a) sunlight
  - b) water
  - c) wind
  - d) all of the above
2. Solar photovoltaic panels produce electricity using
  - a) mirrors
  - b) semiconductors
  - c) turbines
  - d) all of the above
- 3) Wind and solar power plants use energy storage to
  - a) reduce emissions
  - b) lower costs
  - c) manage the variability of energy generation
  - d) all of the above
4. A concentrated solar power plant focuses sunlight on a receiver using
  - a) mirrors
  - b) photovoltaic panels
  - c) turbines
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Solar Plants

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1014>

- Solar power plants produce electricity from
  - sunlight
  - water
  - wind
  - all of the above
- Solar photovoltaic panels produce electricity using
  - mirrors
  - semiconductors
  - turbines
  - all of the above
- Wind and solar power plants use energy storage to
  - reduce emissions
  - lower costs
  - manage the variability of energy generation
  - all of the above
- A concentrated solar power plant focuses sunlight on a receiver using
  - mirrors
  - photovoltaic panels
  - turbines
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Solar power converts sunlight into electricity. It's renewable, clean, and increasingly cheaper. Solar energy complements wind power, and energy storage solutions help manage the variability of both sources.*

Name

Date

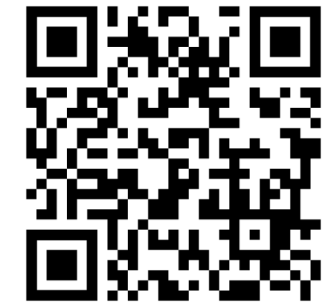
Climate



# Solar R+D

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1110>

1. Research and development for solar power began in the
  - a) 1920s
  - b) 1950s
  - c) 1980s
  - d) 2000s
2. Thin-film solar cells are made from
  - a) expensive materials
  - b) rare materials
  - c) inexpensive materials
  - d) transuranic elements
- 3) Scientists are experimenting with less impactful materials in solar panels to
  - a) make them more expensive
  - b) increase their size
  - c) lower their environmental footprint
  - d) make them more profitable
4. The type of solar cell that combines different types of materials is
  - a) thin-film cells
  - b) tandem cells
  - c) thick-film cells
  - d) standard cells

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Solar R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1110>

- Research and development for solar power began in the
  - 1920s
  - 1950s
  - 1980s
  - 2000s
- Thin-film solar cells are made from
  - expensive materials
  - rare materials
  - inexpensive materials
  - transuranic elements
- Scientists are experimenting with less impactful materials in solar panels to
  - make them more expensive
  - increase their size
  - lower their environmental footprint
  - make them more profitable
- The type of solar cell that combines different types of materials is
  - thin-film cells
  - tandem cells
  - thick-film cells
  - standard cells
- Solar power research and development have greatly improved the efficiency and affordability of solar panels since the 1950s. Today, solar cells can reach up to 40% efficiency, offering cleaner and cheaper energy solutions.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Special Drawing Rights

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Special drawing rights are
  - a) loans given to individuals
  - b) emergency funds given to countries
  - c) investments in companies in disaster areas
  - d) emergency grants for education
2. During the Covid pandemic special drawing rights were most beneficial to
  - a) Majority World countries
  - b) European countries
  - c) wealthy countries
  - d) all countries
- 3) Multilateral development banks are
  - a) special banks that only fund private companies
  - b) special banks set up by countries to invest in society's development
  - c) institutions for private wealth management
  - d) special banks that deal with education funding
4. Wealthier countries keep their drawing rights in reserve
  - a) to fund education projects
  - b) in case of an emergency
  - c) to invest in private businesses
  - d) to balance their budgets

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<https://daybreakgame.org/card/1219>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Special Drawing Rights

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- Special drawing rights are
  - loans given to individuals
  - emergency funds given to countries
  - investments in companies in disaster areas
  - emergency grants for education
- During the Covid pandemic special drawing rights were most beneficial to
  - Majority World countries
  - European countries
  - wealthy countries
  - all countries
- Multilateral development banks are
  - special banks that only fund private companies
  - special banks set up by countries to invest in society's development
  - institutions for private wealth management
  - special banks that deal with education funding
- Wealthier countries keep their drawing rights in reserve
  - to fund education projects
  - in case of an emergency
  - to invest in private businesses
  - to balance their budgets

- The IMF provided \$660 billion in special drawing rights to help countries during the COVID-19 pandemic. Many argue that unused funds from wealthy nations should be redistributed to poorer countries to address climate emergencies.



<https://daybreakgame.org/card/1219>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Supply Chain Resilience

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1089>

1. "Supply chain" means
  - a) everything between the manufacture of a product and its final user
  - b) the route goods travel between factory and consumer
  - c) a contract between a factory and its suppliers that 'locks in' pricing
  - d) none of the above
2. The route blocked by a ship in 2021 which disrupted global shipping was the
  - a) Panama Canal
  - b) Rideau Canal
  - c) St. Lawrence Seaway
  - d) Suez Canal
- 3) Supply chains can be disrupted by
  - a) worsening climate
  - b) ecological shocks
  - c) conflict
  - d) all of the above
4. Supply chains can be made more resilient by
  - a) using stronger ships that can withstand natural disasters
  - b) transporting goods on airplanes instead of ships
  - c) shortening them by moving production closer to consumption
  - d) all of the above

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Supply Chain Resilience

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1089>

- “Supply chain” means
  - everything between the manufacture of a product and its final user
  - the route goods travel between factory and consumer
  - a contract between a factory and its suppliers that ‘locks in’ pricing
  - none of the above
- The route blocked by a ship in 2021 which disrupted global shipping was the
  - Panama Canal
  - Rideau Canal
  - St. Lawrence Seaway
  - Suez Canal
- Supply chains can be disrupted by
  - worsening climate
  - ecological shocks
  - conflict
  - all of the above
- Supply chains can be made more resilient by
  - using stronger ships that can withstand natural disasters
  - transporting goods on airplanes instead of ships
  - shortening them by moving production closer to consumption
  - all of the above
- Climate change is disrupting the supply chains, causing higher prices and global impacts. Strengthening them involves reducing risks, shortening routes, or moving production closer, while considering the effects on communities that rely on them.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date

Climate



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## Systemic Risk Planning

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1081>

1. A risk that emerges from an entire system is
  - a) an isolated risk
  - b) a localized risk
  - c) a global risk
  - d) a systemic risk
2. Food systems are vulnerable to climate change because
  - a) food is produced too quickly
  - b) they rely on too many crops
  - c) they rely on a small number of crops
  - d) they exist on every continent
- 3) One way to reduce systemic risks in food systems is by
  - a) increasing food waste
  - b) growing fewer crops
  - c) diversifying food supply chains
  - d) relying on artificial fertilizers
4. Food systems can be made more resilient by minimizing
  - a) transportation
  - b) crop diversity
  - c) food waste
  - d) emissions from shipping

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Systemic Risk Planning

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1081>

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  - d) relying on artificial fertilizers
4. Food systems can be made more resilient by minimizing
  - a) transportation
  - b) crop diversity
  - c) food waste
  - d) emissions from shipping

5. Systemic risks, like those seen in air travel and financial crises, are also present in food systems. Lowering climate risks requires reducing these vulnerabilities by diversifying food sources, minimizing waste, and ensuring fairer distribution.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

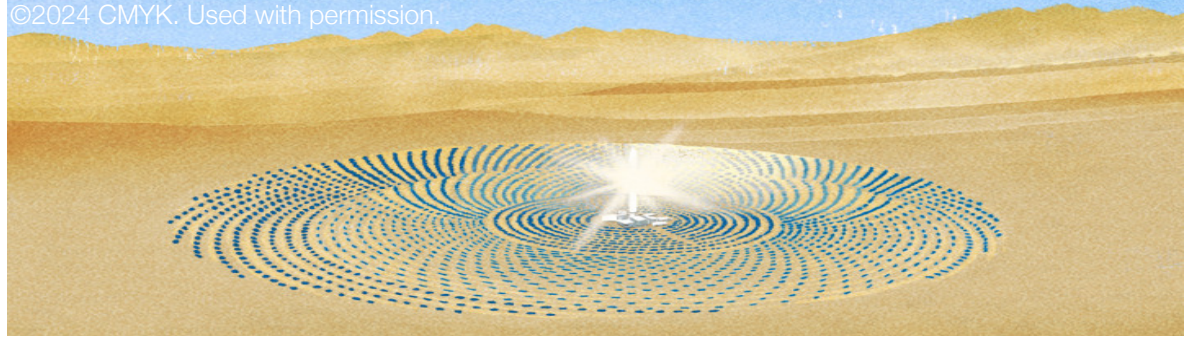
Name

Date

Climate



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## Thermal Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1017>

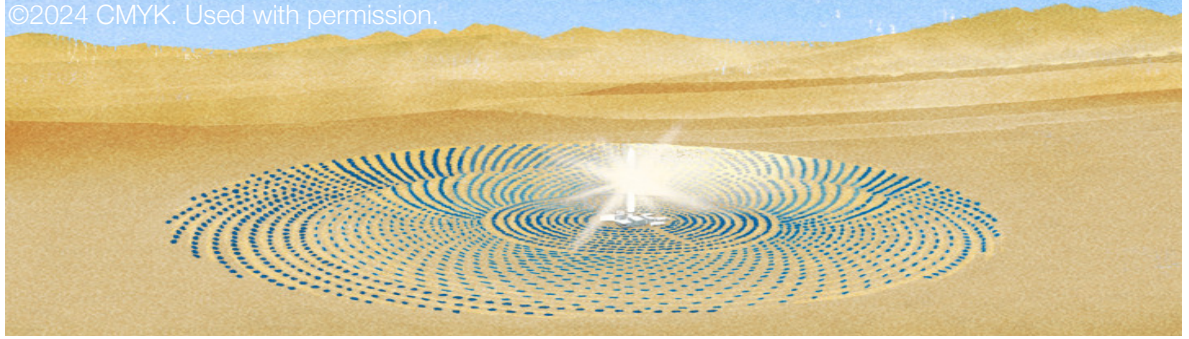
1. Thermal solar plants
  - a) boil water to make steam that spins a turbine to generate electricity
  - b) use mirrors to concentrate solar energy on solar cells
  - c) convert heat directly into electricity
  - d) boil water to make steam to heat people's homes
2. Advantages of thermal solar include
  - a) it is cheap to run
  - b) heat can be stored and used later
  - c) heat can be used for other purposes, such as making steel and cement
  - d) all of the above
- 3) Disadvantages of thermal solar include
  - a) it requires a lot of land
  - b) it needs lots of water
  - c) it is expensive to build
  - d) all of the above
4. The adoption of solar thermal plants would be increased by
  - a) building small plants and gradually expanding them
  - b) governmental support
  - c) cutting forests to make more clear land for solar thermal plants
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

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## Thermal Solar

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1017>

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  - b) governmental support
  - c) cutting forests to make more clear land for solar thermal plants
  - d) all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Thermal solar energy heats water to generate steam and produce electricity using sunlight. It stores heat efficiently and can replace fossil fuels but needs a lot of land and water. It's expensive to install but cheap to run.



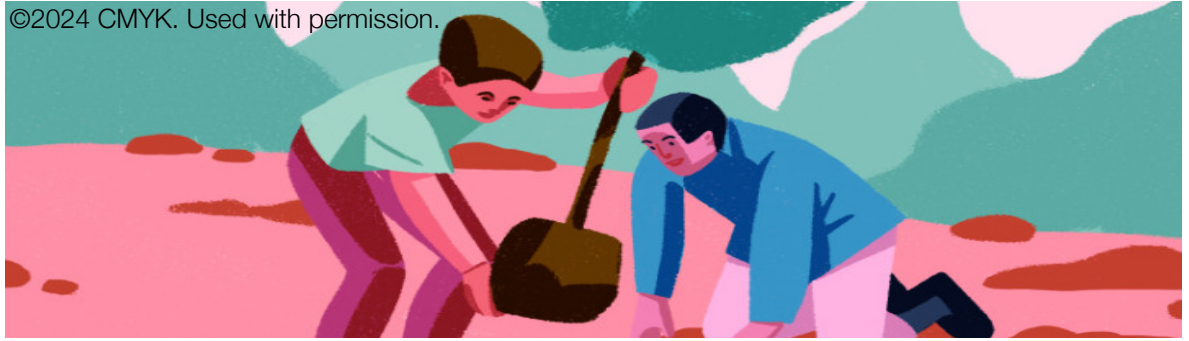
Name

Date

Climate



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## Tree Farms

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1035>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

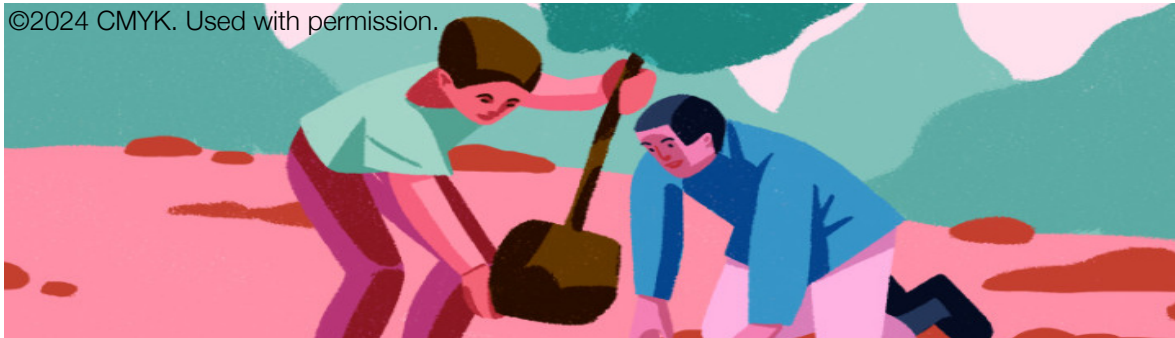
1. A benefit from planting trees on former farmland or industrial sites is it
  - a) removes carbon dioxide from the air
  - b) provides recreational opportunities for expanding suburbs
  - c) lowers the Earth's albedo
  - d) all of the above
2. When leaves and twigs decompose, the carbon they contain is
  - a) released into the air
  - b) stored in the soil
  - c) converted to liquid
  - d) none of the above
- 3) Tree farms reduce pressure on wild forests by
  - a) producing paper products
  - b) producing more oxygen
  - c) providing wood for construction
  - d) providing habitat for endangered species
4. Tree farms are not a replacement for
  - a) urban developments
  - b) industrial sites
  - c) native ecosystems
  - d) farmland

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## Tree Farms

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A benefit from planting trees on former farmland or industrial sites is it
  - a) removes carbon dioxide from the air
  - b) provides recreational opportunities for expanding suburbs
  - c) lowers the Earth's albedo
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  - c) converted to liquid
  - d) none of the above
- 3) Tree farms reduce pressure on wild forests by
  - a) producing paper products
  - b) producing more oxygen
  - c) providing wood for construction
  - d) providing habitat for endangered species
4. Tree farms are not a replacement for
  - a) urban developments
  - b) industrial sites
  - c) native ecosystems
  - d) farmland
5. Planting trees on former farmland or industrial sites helps remove carbon, improve soil, and reduce flood risks. Tree farms shouldn't replace native ecosystems or be counted as forests, and their carbon storage must consider eventual tree degradation and emissions.



<https://daybreakgame.org/card/1035>

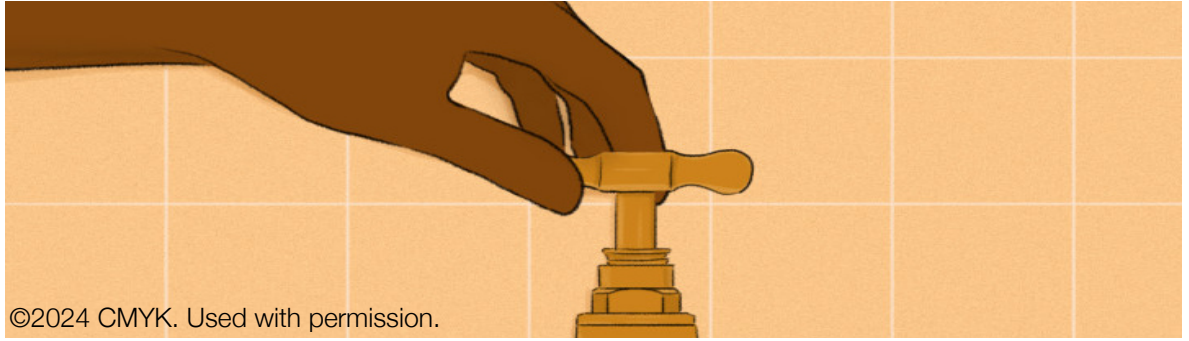
### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Universal Basic Services

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Universal basic services are
  - a) only available to employed people
  - b) private services offered to anyone who can pay for them
  - c) free public services that meet everyone's basic needs
  - d) free accounting and bookkeeping services offered to businesses
2. An example of something included in a universal basic service would be
  - a) free internet
  - b) free healthcare and transport
  - c) free private school education
  - d) free vacations
- 3) Compared to private alternatives, public services tend to
  - a) produce more greenhouse gas emissions
  - b) produce fewer greenhouse gas emissions
  - c) have the same environmental impact
  - d) be more profitable
4. In many parts of the world, public services are being
  - a) = expanded rapidly
  - b) = cut and sold off
  - c) = becoming more luxurious
  - d) = receiving more funding

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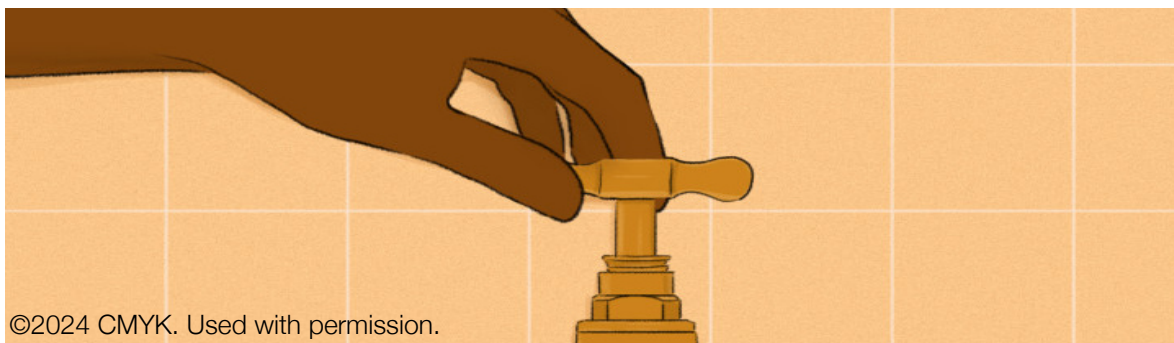
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<https://daybreakgame.org/card/1090>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Universal Basic Services

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1090>

1. Universal basic services are
  - a) only available to employed people
  - b) private services offered to anyone who can pay for them
  - c) free public services that meet everyone's basic needs
  - d) free accounting and bookkeeping services offered to businesses
2. An example of something included in a universal basic service would be
  - a) free internet
  - b) free healthcare and transport
  - c) free private school education
  - d) free vacations
- 3) Compared to private alternatives, public services tend to
  - a) produce more greenhouse gas emissions
  - b) produce fewer greenhouse gas emissions
  - c) have the same environmental impact
  - d) be more profitable
4. In many parts of the world, public services are being
  - a) = expanded rapidly
  - b) = cut and sold off
  - c) = becoming more luxurious
  - d) = receiving more funding
5. Universal Basic Services ensure everyone's basic needs, like housing, healthcare, and transport, are met. They reduce inequality and environmental impacts by providing free, low-emission services, offering an alternative to private, carbon-intensive lifestyles.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



# Universal Healthcare

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. According to the WHO, the biggest health threat facing humanity is
  - a) climate emergency
  - b) food scarcity
  - c) lack of healthcare
  - d) war
2. Universal access to healthcare is important during the climate emergency because
  - a) it increases government revenue to deal with climate change
  - b) it protects people from health threats caused by climate change
  - c) it counts as climate emergency funding to meet international commitments
  - d) all of the above
- 3) Fossil fuel pollution causes
  - a) less than 1% of global deaths
  - b) 1% of global deaths
  - c) over 10% of global deaths
  - d) over 50% of global deaths
4. Health has been placed at the forefront of their climate emergency strategies by
  - a) no governments
  - b) few governments
  - c) many governments
  - d) all governments

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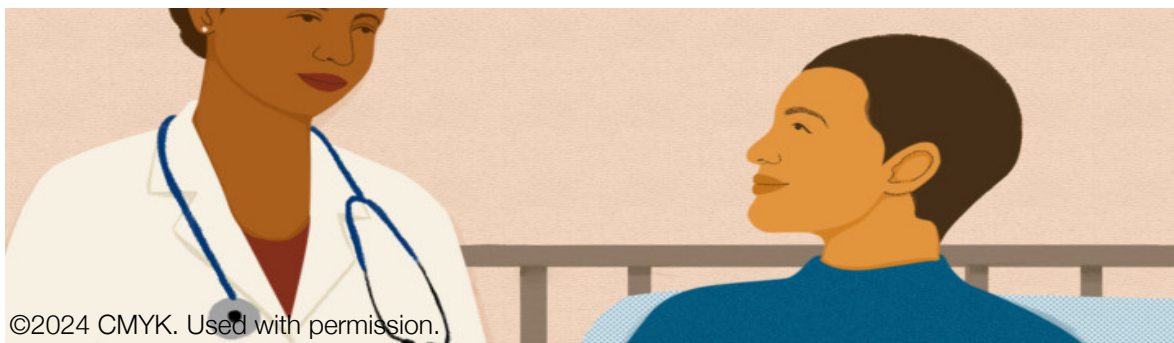
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<https://daybreakgame.org/card/1097>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



## Universal Healthcare

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1097>

- According to the WHO, the biggest health threat facing humanity is
  - climate emergency
  - food scarcity
  - lack of healthcare
  - war
- Universal access to healthcare is important during the climate emergency because
  - it increases government revenue to deal with climate change
  - it protects people from health threats caused by climate change
  - it counts as climate emergency funding to meet international commitments
  - all of the above
- Fossil fuel pollution causes
  - less than 1% of global deaths
  - 1% of global deaths
  - over 10% of global deaths
  - over 50% of global deaths
- Health has been placed at the forefront of their climate emergency strategies by
  - no governments
  - few governments
  - many governments
  - all governments

- The World Health Organization warns that the climate crisis is the biggest health threat. Universal healthcare access can protect vulnerable people, and reducing fossil fuels can save lives and lower healthcare burdens by preventing pollution-related deaths.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



Name

Date



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# Universal Public Transport

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. Examples of universal public transit include
  - a) bicycles and electric scooters
  - b) buses and trains
  - c) cars and motorcycles
  - d) all of the above
2. Governments can encourage more people to use public transit by
  - a) subsidizing fares
  - b) improving speeds
  - c) making it more convenient
  - d) all of the above
- 3) Public transit systems reduce greenhouse gas emissions because
  - a) they carry multiple passengers per vehicle, which is more efficient
  - b) they use renewable energy so have no emissions at all
  - c) they get better fuel mileage than private cars
  - d) none of the above
4. The benefit of dedicated routes for public transport vehicles is
  - a) they are cheaper to construct than regular roads
  - b) they allow fast, unimpeded transit despite crowded roads
  - c) they can be shared with bicycles and scooters
  - d) all of the above

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<https://daybreakgame.org/card/1076>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.



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## Universal Public Transport

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1076>

- Examples of universal public transit include
  - bicycles and electric scooters
  - buses and trains
  - cars and motorcycles
  - all of the above
- Governments can encourage more people to use public transit by
  - subsidizing fares
  - improving speeds
  - making it more convenient
  - all of the above
- Public transit systems reduce greenhouse gas emissions because
  - they carry multiple passengers per vehicle, which is more efficient
  - they use renewable energy so have no emissions at all
  - they get better fuel mileage than private cars
  - none of the above
- The benefit of dedicated routes for public transport vehicles is
  - they are cheaper to construct than regular roads
  - they allow fast, unimpeded transit despite crowded roads
  - they can be shared with bicycles and scooters
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Public transit can reduce greenhouse gas emissions by carrying many people, making it more eco-friendly than private cars. Convenient, fast, and affordable public transport can encourage widespread use and reduce car dependence.

Name

Date

Climate



## Vertical Farming

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



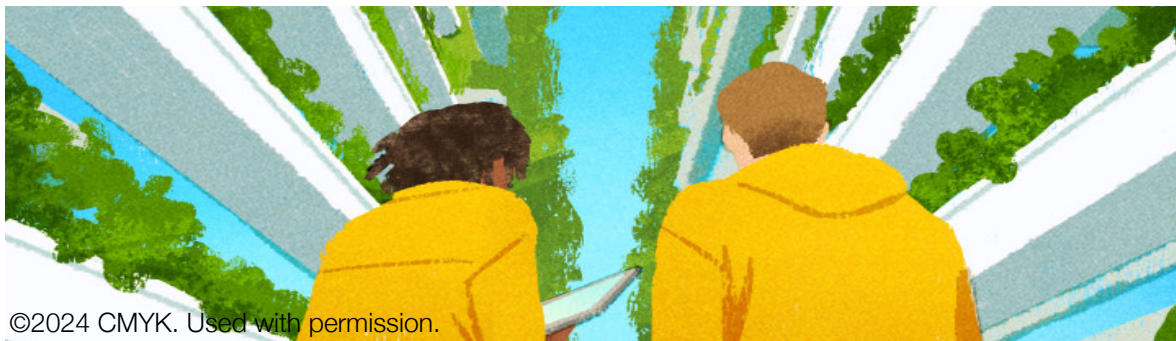
<https://daybreakgame.org/card/1059>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. The main idea behind vertical farming is
  - a) growing crops in the upper levels of tall buildings
  - b) intensively growing crops in stacks indoors
  - c) replacing traditional farming with greenhouses
  - d) growing crops in underground tunnels
2. Vertical farms are not suited to growing
  - a) corn, rice, and wheat
  - b) lettuce and tomatoes
  - c) herbs and microgreens
  - d) strawberries and blueberries
3. One benefit of vertical farms is that
  - a) they use land that would not otherwise be used for anything
  - b) they need less water and agricultural chemicals than traditional farms
  - c) they can be located far away from cities where they don't bother people
  - d) all of the above
4. The climate impact of vertical farming depends on
  - a) the location of the farm
  - b) the type of vegetables grown
  - c) the energy source used to power the farm
  - d) the number of levels in the farm

5. \_\_\_\_\_
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## Vertical Farming

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- The main idea behind vertical farming is
  - growing crops in the upper levels of tall buildings
  - intensively growing crops in stacks indoors
  - replacing traditional farming with greenhouses
  - growing crops in underground tunnels
- Vertical farms are not suited to growing
  - corn, rice, and wheat
  - lettuce and tomatoes
  - herbs and microgreens
  - strawberries and blueberries
- One benefit of vertical farms is that
  - they use land that would not otherwise be used for anything
  - they need less water and agricultural chemicals than traditional farms
  - they can be located far away from cities where they don't bother people
  - all of the above
- The climate impact of vertical farming depends on
  - the location of the farm
  - the type of vegetables grown
  - the energy source used to power the farm
  - the number of levels in the farm



<https://daybreakgame.org/card/1059>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- vertical farming grows crops indoors in stacked layers, reducing land, water, and pesticide use. However, it consumes a lot of energy and is limited in crop types. Its climate impact depends on energy sources and effective management.



Name

Date

Climate



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# Walkable Cities

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

1. A benefit of designing spaces for pedestrians instead of cars is
  - a) more space for parking lots
  - b) a larger market for cars
  - c) improved social interactions
  - d) all of the above
2. A key step in boosting walkability is
  - a) widening roads
  - b) building more parking lots
  - c) locating destinations near each other
  - d) reducing public transport
- 3) Pedestrian-friendly spaces will reduce
  - a) water pollution
  - b) air pollution
  - c) soil erosion
  - d) all of the above
4. Creating attractive walking paths
  - a) makes walking enjoyable
  - b) distracts drivers
  - c) reduces the need for sidewalks
  - d) all of the above

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<https://daybreakgame.org/card/1077>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.





## Walkable Cities

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1077>

- A benefit of designing spaces for pedestrians instead of cars is
  - more space for parking lots
  - a larger market for cars
  - improved social interactions
  - all of the above
- A key step in boosting walkability is
  - widening roads
  - building more parking lots
  - locating destinations near each other
  - reducing public transport
- Pedestrian-friendly spaces will reduce
  - water pollution
  - air pollution
  - soil erosion
  - all of the above
- Creating attractive walking paths
  - makes walking enjoyable
  - distracts drivers
  - reduces the need for sidewalks
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Most modern cities prioritize cars, but walking reduces emissions, noise and congestion while improving health and social interactions.  
Cities need safe, convenient, and attractive walking paths, while offering transport options for people with limited mobility.

Name

Date

Climate



# Wellbeing Budget

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1052>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. GDP stands for
  - a) Gross Development Process
  - b) General Domestic Plan
  - c) Gross Domestic Product
  - d) Global Development Program
2. Many governments assume increasing GDP
  - a) decreases wellbeing
  - b) has no impact on wellbeing
  - c) increases wellbeing
  - d) happens automatically
- 3) Focussing on GDP growth is problematic because
  - a) it ignores the positive effects of pollution
  - b) it always leads to lower wellbeing
  - c) it overlooks impacts on mental health and the environment
  - d) all of the above
4. A challenge of current government budget cycles is that
  - a) they are too long
  - b) they focus on short-term goals
  - c) they are too flexible
  - d) they always prioritize wellbeing

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## Wellbeing Budget

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1052>

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  - a) Gross Development Process
  - b) General Domestic Plan
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  - c) it overlooks impacts on mental health and the environment
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4. A challenge of current government budget cycles is that
  - a) they are too long
  - b) they focus on short-term goals
  - c) they are too flexible
  - d) they always prioritize wellbeing

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Governments often focus on increasing GDP, but GDP growth doesn't always increase wellbeing. Some governments now prioritize wellbeing in their budgets, but short-term political cycles make long-term investment difficult.

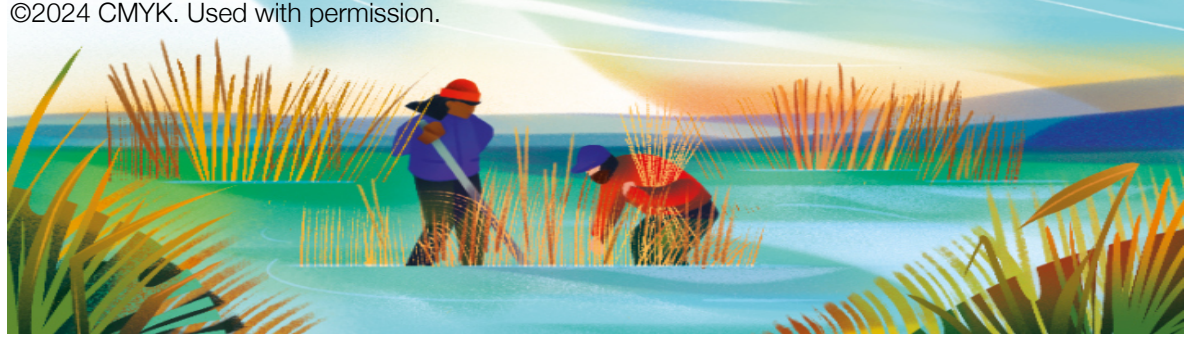
Name

Date

Climate



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# Wetland Restoration

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1040>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Wetlands are
  - a) land that has been flooded
  - b) land where the soil is waterlogged
  - c) the parts of the coast where the tides come in and out
  - d) wastelands that are useless until they are developed
2. The plants that grow in wetlands
  - a) clean water
  - b) stabilize the soil
  - c) absorb carbon from the air and store it
  - d) all of the above
- 3) Wetlands store large amounts of carbon
  - a) in layers of partly-decayed vegetation
  - b) dissolved in the water
  - c) in the stems and roots of plants
  - d) in the leaves and roots of plants
4. Restoring and protecting wetlands will
  - a) result in large methane emissions, warming the Earth
  - b) improve their ability to absorb and store greenhouse gases for short times
  - c) support the wellbeing of people and ecosystems
  - d) increases the risks of flooding

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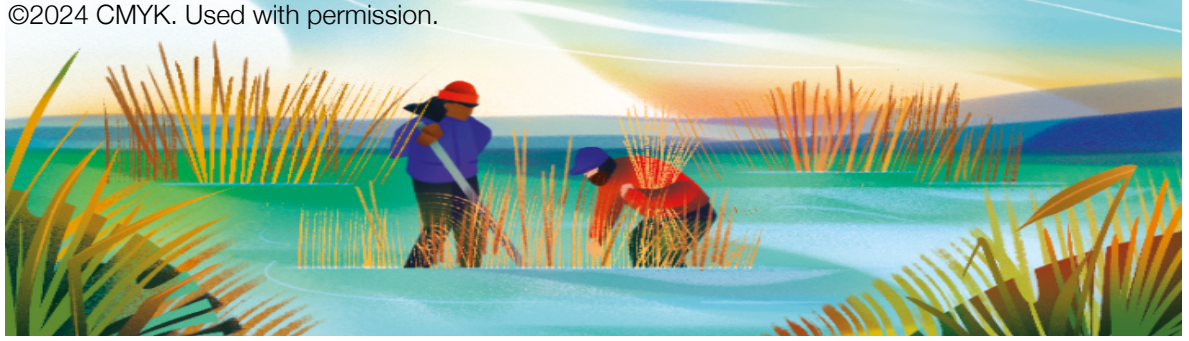
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## Wetland Restoration

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1040>

1. Wetlands are
  - a) land that has been flooded
  - b) land where the soil is waterlogged
  - c) the parts of the coast where the tides come in and out
  - d) wastelands that are useless until they are developed
2. The plants that grow in wetlands
  - a) clean water
  - b) stabilize the soil
  - c) absorb carbon from the air and store it
  - d) all of the above
- 3) Wetlands store large amounts of carbon
  - a) in layers of partly-decayed vegetation
  - b) dissolved in the water
  - c) in the stems and roots of plants
  - d) in the leaves and roots of plants
4. Restoring and protecting wetlands will
  - a) result in large methane emissions, warming the Earth
  - b) improve their ability to absorb and store greenhouse gases for short times
  - c) support the wellbeing of people and ecosystems
  - d) increases the risks of flooding

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Wetlands filter water, reduce erosion, and store significant amounts of carbon. Protecting and restoring them absorbs greenhouse gases, reducing climate change and supporting biodiversity and human well-being.



Name

Date

Climate

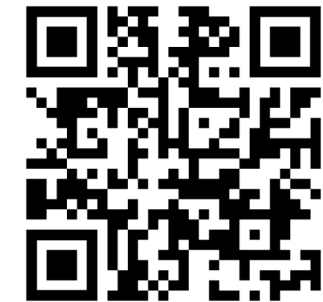


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# Wilderness Protection

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1086>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. Human activities impact wilderness areas by
  - a) making them more beautiful
  - b) creating new species
  - c) shrinking and degrading ecosystems
  - d) making them more productive
2. Legal protections help wilderness areas by
  - a) supporting the logging industry
  - b) improving transportation infrastructure such as roads
  - c) preventing industrial activities from damaging ecosystems
  - d) all of the above
- 3) The main threat to wilderness areas is
  - a) agriculture
  - b) logging
  - c) mining
  - d) all of the above
4. Businesses lobby to deregulate wilderness areas to
  - a) protect wildlife
  - b) increase conservation areas
  - c) build more green spaces
  - d) exploit resources for profit

5. \_\_\_\_\_

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## Wilderness Protection

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1086>

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  - d) all of the above
4. Businesses lobby to deregulate wilderness areas to
  - a) protect wildlife
  - b) increase conservation areas
  - c) build more green spaces
  - d) exploit resources for profit
5. wilderness areas, vital for biodiversity and climate mitigation,  
are shrinking due to human activity. Legal protections and global  
cooperation can help preserve these ecosystems, offering local  
communities alternative livelihoods to logging and mining.

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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## Wind R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1111>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

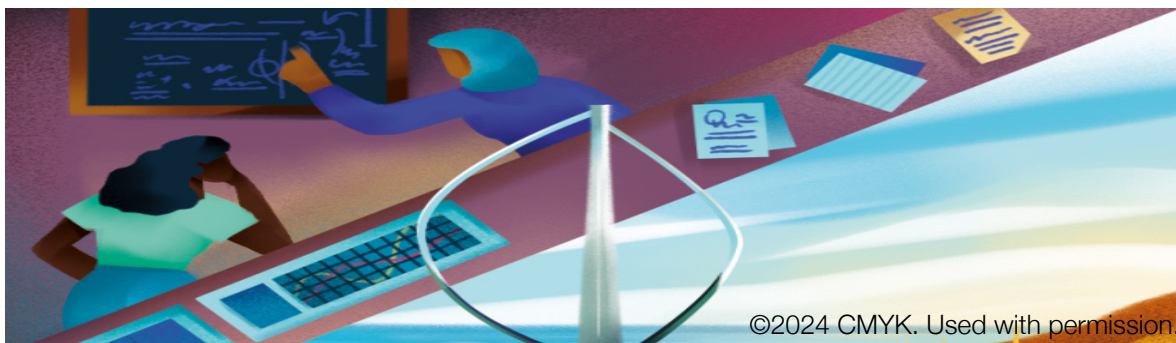
1. Research and development in wind energy is intended to
  - a) reduce wind turbine costs
  - b) make solar energy more efficient
  - c) increase grid resilience
  - d) all of the above
2. Maintenance on offshore wind turbines might be reduced by R&D on
  - a) water filtration systems
  - b) sensors and monitoring systems
  - c) geothermal cooling systems
  - d) all of the above
- 3) Wind turbines can generate more energy from the same amount of wind by
  - a) using smaller blades
  - b) operating at night
  - c) improving turbine efficiency
  - d) all of the above
4. A challenge facing offshore wind energy is
  - a) too much solar energy competition
  - b) expensive installation and maintenance
  - c) inefficient energy storage
  - d) all of the above

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## Wind R+D

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1111>

- Research and development in wind energy is intended to
  - reduce wind turbine costs
  - make solar energy more efficient
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  - all of the above
- A challenge facing offshore wind energy is
  - too much solar energy competition
  - expensive installation and maintenance
  - inefficient energy storage
  - all of the above

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

- Research and development can make wind energy more efficient, reliable, and cheaper by improving turbine designs, materials, and technology. This could reduce costs, increase energy generation, and lower environmental impacts.

Name

Date

Climate



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## Women and Girls' education

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1034>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. According to the text, a fundamental human right is access to
  - a) clean water
  - b) education
  - c) healthcare
  - d) housing
2. Education impacts women's role in their communities by
  - a) preventing them from becoming leaders
  - b) limiting their involvement
  - c) reducing their decision-making abilities
  - d) enabling them to become active members
- 3) The benefits of better education for women and girls do not include
  - a) better health
  - b) more job opportunities
  - c) less political involvement
  - d) active community participation
4. In relation to climate change, educating women and girls
  - a) discourages them from joining climate action efforts
  - b) reduces their awareness of environmental issues
  - c) enables them to develop low-carbon technologies
  - d) all of the above

5. \_\_\_\_\_  
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## Women and Girls' education

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.

- According to the text, a fundamental human right is access to
  - clean water
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- The benefits of better education for women and girls do not include
  - better health
  - more job opportunities
  - less political involvement
  - active community participation
- In relation to climate change, educating women and girls
  - discourages them from joining climate action efforts
  - reduces their awareness of environmental issues
  - enables them to develop low-carbon technologies
  - all of the above

- Access to education is a fundamental human right, but many women and girls are denied it. Education promotes gender equality, improves health, and empowers women to contribute to society, including climate action and economic development.



<https://daybreakgame.org/card/1034>

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

Name

Date

Climate



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# Women's Empowerment

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1222>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. The violation of women's rights occurs
  - a) only in developing countries
  - b) only in certain industries
  - c) only in public life
  - d) across all countries and industries
2. Migrant women's access to healthcare and work is frequently limited by
  - a) lack of interest
  - b) high education levels
  - c) visa barriers and lack of translation support
  - d) excessive job opportunities
3. Empowering women in the face of the climate emergency is important because
  - a) women often cause environmental issues
  - b) many women are vulnerable due to existing gender inequalities
  - c) women do not cause climate change
  - d) women are unaffected by the climate emergency
4. Women often struggle to migrate when affected by climate change because
  - a) they prefer to stay in their homes
  - b) they are not aware of climate risks
  - c) they have limited financial resources and employment access
  - d) migration laws prevent women from moving

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## Women's Empowerment

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1222>

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  - c) they have limited financial resources and employment access
  - d) migration laws prevent women from moving

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Women's empowerment is essential for achieving gender equality, economic development, and climate resilience.  
Addressing healthcare, education, and legal protections, while respecting cultural differences, is key to empowering women.

Name

Date

Climate



# Youth Climate Movement

## Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1223>

## Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

1. The main focus of the youth climate movement is
  - a) developing new technologies
  - b) promoting eco-tourism
  - c) advocating stronger climate action
  - d) building new schools
2. An example of a global youth climate movement is
  - a) Fridays for Future
  - b) the Red Cross (and Red Crescent)
  - c) World Wildlife Fund
  - d) Greenpeace
- 3) One way to help the youth climate movement is
  - a) limiting their access to decision-making processes
  - b) providing platforms for youth advocates to voice their concerns
  - c) waiting for them to grow up
  - d) giving them tax credits
4. The youth climate movement demands
  - a) more taxes on education
  - b) stronger climate policies
  - c) less investment in renewable energy
  - d) focus on eco-tourism development

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## Youth Climate Movement

### Multiple Choice

For each question, select the best answer from the four alternatives. Answer based on the information in the project description.



<https://daybreakgame.org/card/1223>

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  - d) focus on eco-tourism development

### Short Answer

Summarize this project. Include a key benefit and one relevant point that supports it.

5. Youth-led organizations raise awareness and influence governments despite limited resources and political power. Supporting youth activists and involving them in decision-making can help address the climate emergency's impacts on young people.



# Master Pages Project Cards

## **Printing Instructions**

These are single-sided pages that contain most of the information from the online pages for project cards. They are intended for situations where students don't have online access.

I print and laminate a class set so that my students can refer to them without using their phones.



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**Adaptation Programs**

Discard one face up Crisis card

REQUIRES: 4 Regulation tags (represented by four 'B' icons)

LIMIT: Once per round

1/100

## Gameplay Notes

You must have at least 4 Regulation tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then discard 1 face up Crisis card.

You may take this action once per round.

# Adaptation Programs

Climate adaptation is the process of preparing and adjusting to the impacts of the climate emergency. Adaptation programs are necessary across many sectors and can include things like training for emergencies and to run new, resilient systems, new regenerative agricultural programmes, developing infrastructure and land use practices based on ecosystems, changing how we design buildings and plan cities, creating early warning systems, and adopting climate-resilient health systems.

Climate adaptation is necessary to reduce the harm the climate emergency will have on individuals and communities. Adaptation can be done at all levels, but communities play a particularly important role in climate adaptation. This is because the climate emergency will impact our local areas, so local solutions and new ways of living will be necessary. These are best designed by the people who will live with them.

Climate adaptation is currently underfunded and under-prioritized compared to climate mitigation (reducing greenhouse gas emissions). Adaptation programs also have the potential to increase global inequities if they are designed and implemented poorly. For example, if systems to prevent overheating are only installed in wealthy areas, low income communities will be more at risk from rising temperatures.

Governments must pursue equitable and evidence-based adaptation programs, centring local communities and considering intersecting equality, housing, health, and societal challenges. To ensure that those affected by these schemes are involved in their development, and for money to be allocated effectively, more accessible funding opportunities are needed to direct funds to the communities that need it most.

Lack of coordination between organizations, governments, and communities on adaptation programs is a serious barrier to effective adaptation programs. More research is also needed into the design of robust, intersectional adaptation programs across different contexts.



## Take Action







- ▶ Ask your local government if they have adaptation and emergency plans in place, and advocate for them to create these with the community if they haven't.
- ▶ Contribute to community science resilience tools - such as publicly accessible maps of cool spaces and free drinking fountains that people can use during heatwaves.
- ▶ Consider whether the changing climate is affecting, or will affect, your work, and lead on plans to adapt to these changes.




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**Adaptation Projects**

 →  Discard one face up Crisis card

REQUIRES      

LIMIT Once per round



1101

## Gameplay Notes

You must have at least 4 Incentive tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then discard 1 face up Crisis card.

You may take this action once per round.

# Adaptation Projects

Climate adaptation is the process of preparing and adjusting to the impacts of the climate emergency. Adaptation programs are necessary across many sectors and can include things like training for emergencies and to run new, resilient systems, new regenerative agricultural programmes, developing infrastructure and land use practices based on ecosystems, changing how we design buildings and plan cities, creating early warning systems, and adopting climate-resilient health systems.

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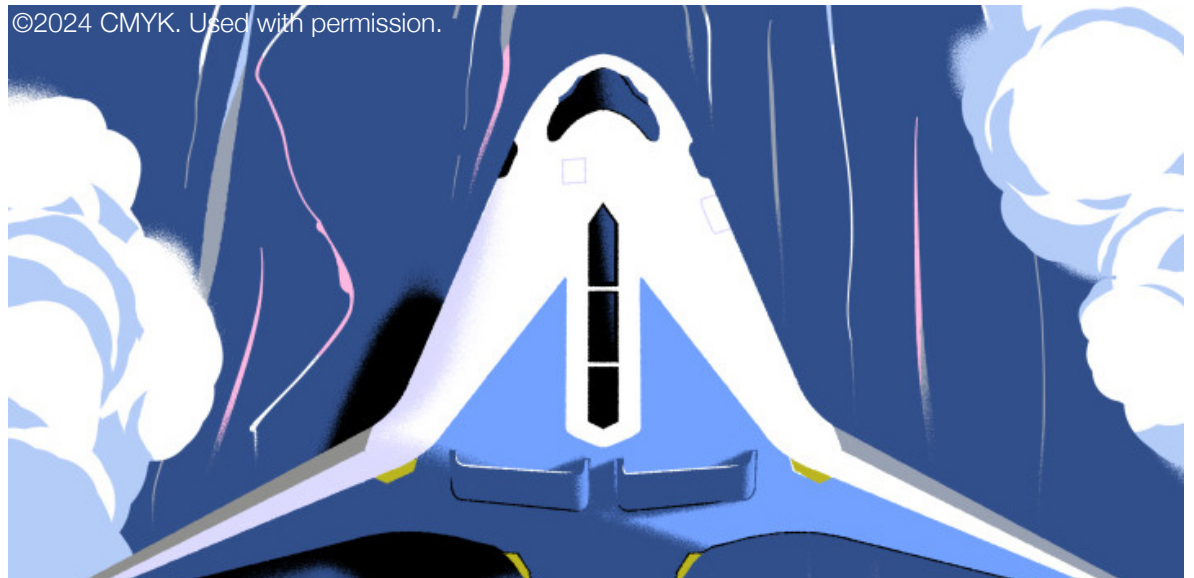
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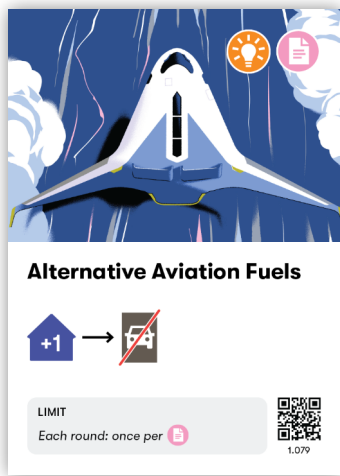
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## Take Action

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- ▶ Consider whether the changing climate is affecting, or will affect, your work, and lead on plans to adapt to these changes.



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## Alternative Aviation Fuels

Traveling by plane and using goods shipped by air are mainstays of life for many people today. Both, however, carry an outsized climate burden. Burning jet fuel not only produces greenhouse gas emissions, it also contributes to the climate emergency in the form of atmosphere-altering soot, nitrous oxides and contrails. Humans and freight air travel each year is responsible for 4% of humanity's total climate-warming impact.

Cutting back on flying is the most important way to eliminate these emissions. The vast majority of flights are taken by wealthy individuals and for work travel, so frequent flier levies and bans on short haul flights are essential, coupled with investment in rail infrastructure and decent, affordable public transport options. Goods should be shipped by boat instead of plane where possible.

There is ongoing research into developing chemicals made from renewable materials that can substitute conventional jet fuel. Options being tested include biofuels made from plants, jet fuel made from industrial waste, and hydrogen fuel produced from zero-emissions electricity sources.

Alternative fuels are currently far more expensive than conventional fossil-based fuels. There are also numerous technical hurdles that need to be overcome to adopt them commercially — with safety, of course, being paramount.

### Take Action

- ▶ Avoid flying, take holidays close to home and get your employer to let you take the train.
- ▶ Learn more about and campaign for a frequent-flier levy, and encourage policymakers to ban short-haul flights when a train alternative exists.
- ▶ Campaign for politicians to publish plans for the decarbonisation of flying and push back on airport expansion initiatives while these are not in place.
- ▶ Call for better international and domestic rail infrastructure and affordable, effective public transport networks to help people to travel by land. When run and subsidized by governments these can be designed to ensure fair fares and decent coverage.

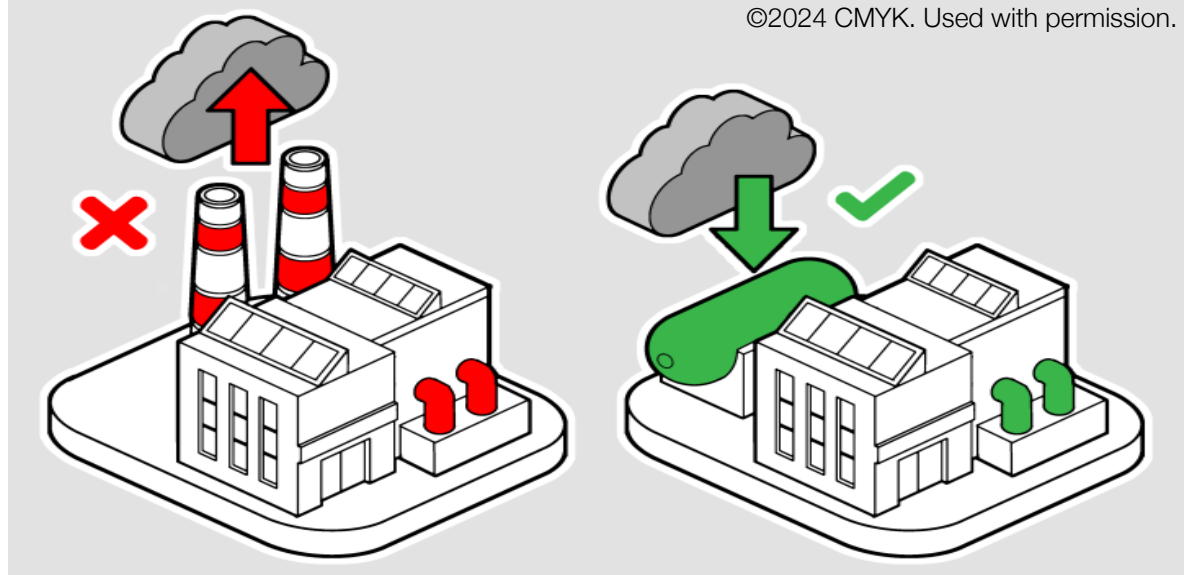
### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Transportation Emissions token from your player board.

You may take this action once per Regulation tag in this card's stack each round.

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## Alternative Cement

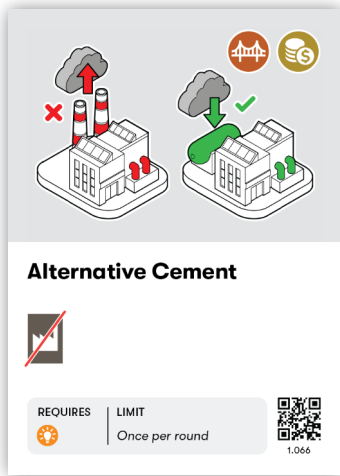
Cement is the second-most widely used substance in the world after water. But manufacturing cement produces billions of tonnes of greenhouse gas emissions each year because its ingredients are heated to extremely high temperatures, requiring lots of energy that often comes from burning fossil fuels. Most of the greenhouse gas emissions from cement are produced during the chemical process of it being formed. Greenhouse gas emissions are also produced by transporting and extracting its ingredients.

To reduce emissions from cement production, researchers are developing alternative ingredients, including volcanic ash, recycled glass, and industrial waste products that can substitute for conventional cement ingredients such as limestone and clay. Others are focusing on making cement using renewable energy, and capturing some of the greenhouse gas emissions produced rather than releasing it to the atmosphere.

But cement and concrete also have serious water, pollution and toxicity impacts. City planners, architects, and engineers can reuse and repurpose existing buildings, structures and materials, and use alternative low-carbon materials like sustainably-sourced timber, to avoid using cement and concrete at all. These options give us cleaner ways to ensure that future generations have sufficient space to work and live in.

### Take Action

- ▶ If you're planning a construction project that would use concrete, challenge your architectural team to consider whether there are existing buildings or materials that could be used instead. If you can't avoid using concrete, source a low-carbon cement mix.
- ▶ Campaign for your local building regulations to include phase-out dates for toxic materials like cement and concrete.
- ▶ Write a letter to the editor of a media outlet you follow, asking them to cover the climate impacts of cement and local architectural projects that use damaging materials.



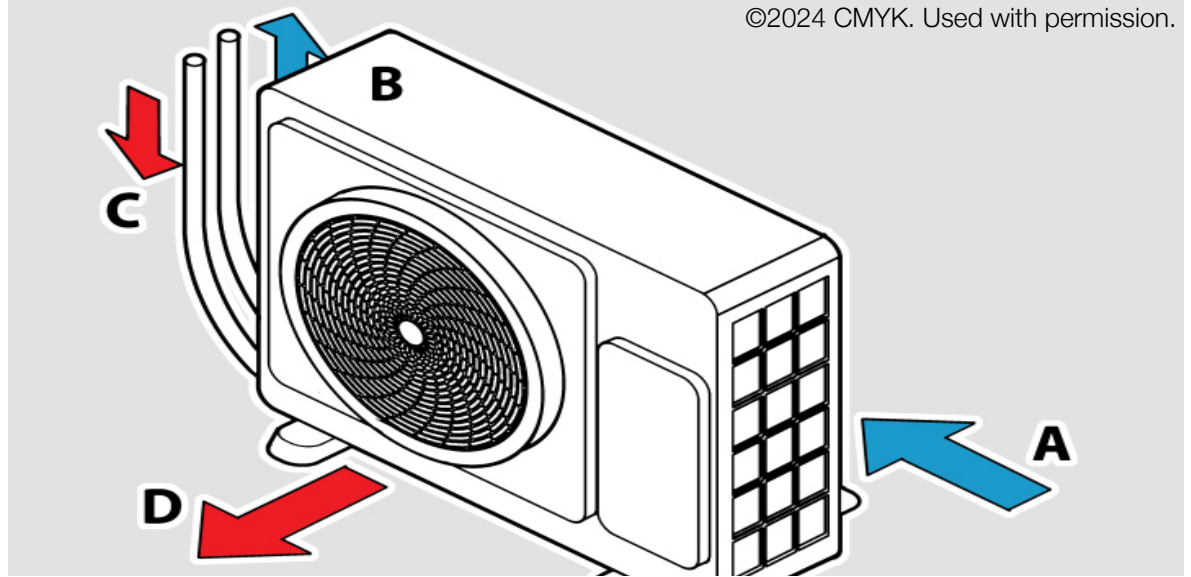
### Gameplay Notes

You must have 1 Innovation tag in this card's stack to take this action.

- ▶ Remove 1 Industry Emissions token from your player board.

You may take this action once per round.





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## Alternative Refrigerants

Conventional refrigerators, air conditioners, and other cooling devices use chemicals called hydrofluorocarbons (HFCs) or hydrochlorofluorocarbons (HCFCs) to remove heat from a space. Refrigerants repeatedly change from liquid to gas in a closed piping system as they transfer heat into a space being warmed and out of a space being cooled. The climate challenge is that no “closed” system is perfectly, permanently sealed. When these substances escape into the air — which they too often do — they produce a significant global heating effect

In 2016, the Kigali Amendment to the Montreal Protocol was published, under which countries agreed to phase out the use of HFCs. But despite this amendment, many of these chemicals remain in (and leak out of) devices today, including HCFCs.

The good news is that substitutes exist, including ammonia, carbon dioxide, propane, and isobutane. Researchers and companies continue to look for new alternatives as well. Where HCFCs are used as refrigerants, we have better techniques for installation, maintenance, and end-of-life disposal that can minimize their leakage into the atmosphere. The faster we can replace and safely recycle the HFCs still in use, the less their ultimate adverse impact on the climate will be. And if we increase the energy efficiency of cooling systems, so much the better.

### Take Action

- ▶ Encourage local restaurants, grocery stores, schools, etc., to identify what kinds of refrigerants they use and to select low-global warming potential refrigerants when available.
- ▶ Encourage your government representatives to create incentives for recycling and replacing conventional refrigerants and to phase out harmful refrigerants.
- ▶ If you are considering having refrigerant-containing equipment installed or removed from your home, such as air conditioning and heat pump units, ask your technician what procedures they follow for refrigerant charging and disposal, and follow the manufacturer's recommendations for preventive maintenance to save yourself money and spare the climate if a leak does occur.

**Alternative Refrigerants**

2-3 Regulation tags : →

4+ Regulation tags : → or

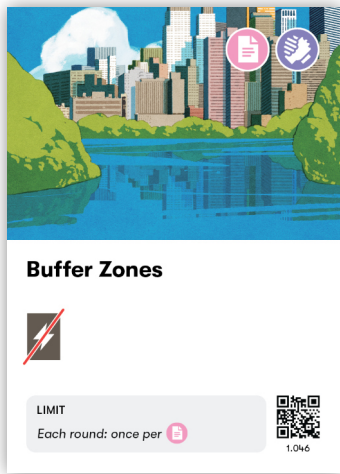
LIMIT  
Each round: once per

1.070

### Gameplay Notes

- ▶ If there are 2–3 Regulation tags in this card's stack, discard 1 card from your hand and remove 1 Buildings Emissions token from your player board. If you have 4 or more Regulation tags in this card's stack, discard 1 card from your hand and remove 1 Buildings or Industry Emissions token from your player board.

You may take this action once per Infrastructure tag in this card's stack each round.



## Buffer Zones

Buffer zones are areas that physically separate industrial and agricultural zones from communities or precious ecosystems. They are often either green spaces (such as parks and trees) or wet spaces (such as lakes and streams).

Buffer zones often absorb greenhouse gas emissions, helping tackle the climate emergency. They protect communities from industrial processes that have harmful byproducts, although most byproducts should not be allowed to contaminate land and ecosystems at all. Buffer zones increase local water security by preventing harmful byproducts of industrial and agricultural activities from tainting water sources. They also improve air quality by keeping pesticides, dust, and other emissions away from people and ecosystems.

Buffer zones can be managed by local authorities and councils, who should know which areas are at risk and have connections with different local groups and landowners. They may need support from government agencies responsible for agriculture, green spaces and environmental quality. Working with local groups to ensure that buffer zones are designed with their local knowledge and priorities in mind is essential.

Industry groups and companies affected by buffer zones may protest having to pay to manage and maintain buffer zones. Buffer zones are also no replacement for ending harmful pollution and dangerous industrial processes in the first place. Buffer zones may be easier to set up on public land and in areas where local planning or development control regulations enable politicians to require buffer zones to be created.

## Take Action

- ▶ Attend public hearings and file comments in public proceedings advocating for strong industrial waste and pollution regulations, and buffer zone requirements as a last resort where harmful industrial byproducts can't be avoided.
- ▶ Work with your local community to design good buffer zones that will be practical for local people, around industrial sites.
- ▶ Report harmful industrial activities to environmental regulators and local authorities.

## Gameplay Notes

- ▶ When you take this action, remove 1 Dirty Energy token from your player board.

You may take this action once per Regulation tag in this card's stack each round.



## Carbon Capture and Storage

Carbon capture and storage refers to the removal of some or all carbon dioxide (CO<sub>2</sub>) from an energy generation process, like from burning coal in a factory, and storing the CO<sub>2</sub> permanently so it cannot be released into the atmosphere. It is usually concentrated and stored underground. This technology can be applied to any source that burns fossil fuels for energy, including power plants, heat sources in heavy manufacturing, or fuel refineries.

Carbon capture and storage is a very new technology, and as of 2021 it only captures 45 metric tons of CO<sub>2</sub> a year, which represents less than 0.1% of global emissions. This technology would need to scale up dramatically in order to be effective.




Carbon capture faces several obstacles: chiefly, that carbon capture technology requires significant financial investment to put in place and needs a source of electricity to operate. Many critics of carbon capture and storage worry that investing in this solution may come at the expense of investments in renewable energy by prolonging our use of fossil fuels and siphoning away funding.

Still, it may be necessary to use carbon capture and storage for at least several decades to lessen the impact of fossil fuels while we transition to clean sources of electricity. Fortunately, there are efficiencies appearing in this field — some engineers have come up with a novel way to produce electricity using CO<sub>2</sub> captured from fossil gas (sometimes called 'natural' gas) and then store the CO<sub>2</sub>.

### Take Action


- ▶ Advocate for research and investment in appropriately scaled carbon offsetting projects, managed transparently and with protections against corporate land buy-ups and any siphoning of funds from other mitigation activities.
- ▶ If you use carbon offsetting, ensure it is a very last resort compared to changing your processes and activities wherever possible.
- ▶ Check that any carbon offsetting that your work uses is accredited and does not distract from or replace genuine climate action.

**Carbon Capture & Storage**

  per 

(From your own Emissions during Emissions stage)

LIMIT  
Once per round



1121

### Gameplay Notes

- ▶ During the Emissions stage, before adding your Carbon cubes to the Recent Emissions area, discard 2 cards from your hand. Remove 1 Carbon cube from your Emissions per Innovation tag in this card's stack.

You may take this action once per round.





## Carbon Tax Dividend

One of the simplest ways of nudging an entire economy towards clean energy is to make dirty energy more expensive by taxing it. A number of countries and provinces or states have implemented some form of ‘carbon tax’, which means you pay taxes based on the amount of greenhouse gas emissions your activities produce.

The carbon tax rate usually starts low and increases steadily over time. In many carbon tax trials the tax costs haven’t been set high enough to cause a significant transition to clean energy equipment, and they have less impact on wealthy people, who can afford to pay more tax but produce more greenhouse gas emissions by consuming more. However, carbon taxes at least always encourage efficiency.

Because a carbon tax in itself would increase energy prices in the short term, most policy proposals specify a specific use of the revenue. The most common proposal is a “tax and dividend” or “fee and dividend” policy where the total revenue collected by the tax is distributed in equal amounts to every citizen – you would get back the same amount no matter your personal energy use, but you could pay less into the carbon tax if you used energy more efficiently or switched to clean energy options. This policy protects most people economically while incentivizing energy efficiency and renewable energy adoption. However, if less wealthy groups aren’t supported to retrofit their homes and buy electric vehicles then they risk being penalized by this approach.

### Take Action

- ▶ Join or start a local campaign for carbon taxes, such as the Zero Carbon Campaign in the UK.
- ▶ Write to your local representatives to ask them to support legislation to introduce fair carbon taxes.

**Carbon Tax Dividend**

Draw **+1**

LIMIT  
Once per round

1.002

### Gameplay Notes

- ▶ When you take this action, draw 1 Local Project card.
- You may do this once per round.



## Circular Economy

Most economies work in one direction. They take materials from nature, and use them to make products. The products are then thrown away as ‘waste’. The process repeats. This linear process is highly environmentally destructive.

By contrast, in a circular economy there is very little waste. People aim to reduce the amount of materials and products needed. They then keep them in operation for as long as possible, maintain and retrofit them to extend their lifetime, and then reuse or recycle their parts into new products.

Reusing and recycling materials can reduce the greenhouse gas emissions produced when products are made, as raw materials require a lot of treatment and effort to obtain. It reduces the extraction of finite materials and the destruction of nature in the process. Jobs can be created in sectors that help reuse and recycling. This cycle can also boost innovation, as it challenges companies to make more durable products.

But the circular economy can be designed badly. Not all waste can be prevented, and can still be disposed of irresponsibly. Relying on continued material growth (more stuff) of the economy will always produce pollution. Economies are often exploitative of people and highly unequal, a situation that a circular economy cannot tackle without a just, people-centered approach to environmental sustainability.

A circular economy approach is being adopted by communities, companies, and countries around the world. But economies are still a long way from going beyond the destructive linear model.

### Take Action

- ▶ Join the Doughnut Economics community.

**Circular Economy**

2-4 :

5+ : and

LIMIT  
Once per round

1.063

### Gameplay Notes

- ▶ When you take this action, if you have 2–4 Regulation tags in this card's stack, remove 1 Emissions token (of any kind) from your player board. If you have 5 or more Regulation tags in this card's stack, remove 1 Emissions token (of any kind) from your player board and decrease your Energy Demand by 1.

You may take this action once per round.



# Climate



## Citizen Nature Service

In the 1930s, the USA experienced two crises. Poor land management and drought damaged its ecosystems, leading to dust storms that severely impacted farming. Meanwhile, the Wall Street Crash decimated the economy, leading to mass unemployment. In response, the government created the Civilian Conservation Corps, aiming to tackle both these crises simultaneously. Over nine years, the corps put three million unemployed Americans into work to restore ecosystems.

A similar scheme could be used to restore ecosystems today, guaranteeing well paid, good quality jobs. A Citizen Nature Service can help provide the huge amount of work needed to install clean technologies and improve the resilience of communities and wild areas.

But, it needs to be well-designed. The original Citizen Conservation Corps was racist and sexist: it was only offered to young men. Indigenous People and People of Color were segregated from white participants or excluded altogether. In contrast, proposals for modern Citizen Nature Services are often founded on climate justice, with equity at their core.

A Citizen Nature Service also has benefits that go beyond employment and ecosystem restoration, improving the physical and mental health of participants and increasing their employability. Schemes are being set up around the world in recognition of these win-wins.

### Take Action

- ▶ A range of schemes exist around the world. They also extend beyond nature restoration to provide work experience in the growing range of sustainability jobs.

**Citizen Nature Service**

→ + per

or + per

or + per

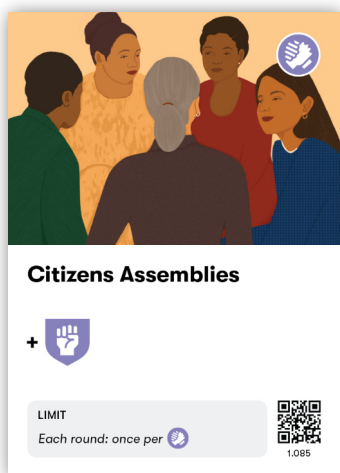
1.202

### Gameplay Notes

Discard 1 card from your hand to:

- ▶ add 1 Social Resilience token per Society tag in this card's stack, or
- ▶ add 1 Ecological Resilience token per Ecology tag in this card's stack, or
- ▶ add 1 Infrastructure Resilience token per Infrastructure tag in this card's stack.

Add these tokens to your player board.



## Citizens Assemblies

Citizens' Assemblies are made up of a randomly-selected group of people who represent the diversity of a community or country. They are brought together to learn about and discuss an important issue and to draw conclusions on what decision-makers should do.

For decades, Citizens' Assemblies have been used across the world to come up with recommendations on issues from abortion rights to voting systems. Citizens' Assemblies have been proven to help reach compromises on contested issues, and to include a greater diversity of views and representatives in political processes. They are now being used to guide decisions on the climate emergency.

Giving citizens more say could help speed up action, by showing politicians the scale of their desire for change, and empowering their voices relative to fossil fuel interests and other blockers of change. This can give communities a greater role in the design of policies that will affect everyone. It could also make societies more resilient as the climate emergency worsens, as they give people a greater sense of responsibility and control over helping their community through difficult issues.

Citizens' Assemblies convening on the climate emergency are increasingly common at local and national levels. They often recommend faster, more equitable action. But these demands have often been ignored or watered down by decision-makers.

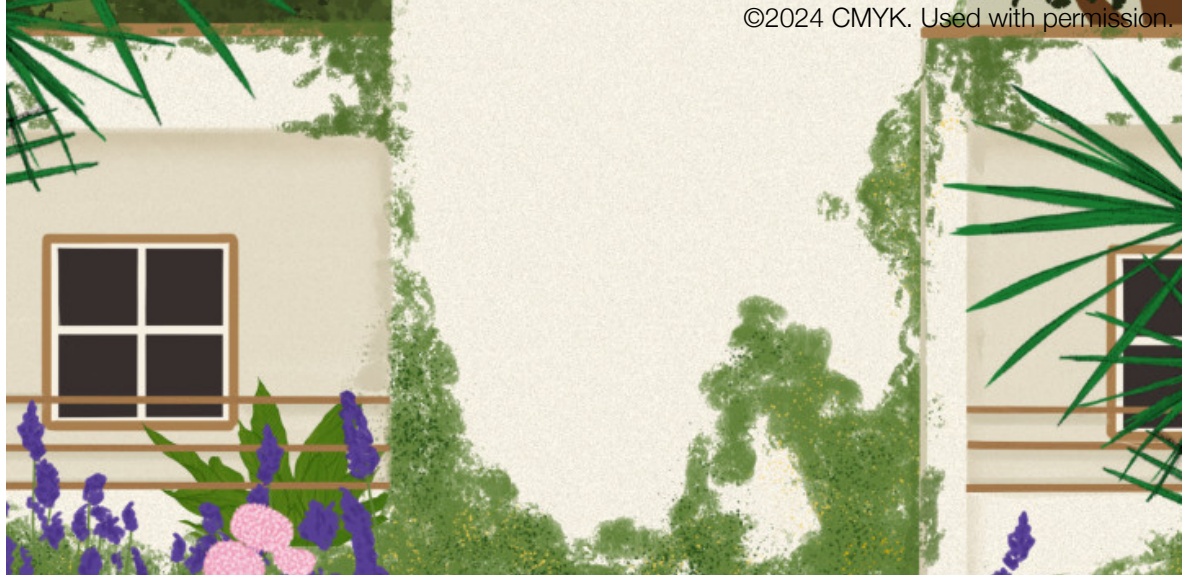
### Take Action

- ▶ Join the Knowledge Network on Climate Assemblies, a network for sharing best practice on the design and implementation of Climate Assemblies.
- ▶ Support Extinction Rebellion demands for assemblies.
- ▶ Support deliberative democracy in the Majority World.

### Gameplay Notes

- ▶ Add 1 Social Resilience token to your player board.

You may take this action once per Society tag in this card's stack per round.



## City Greening

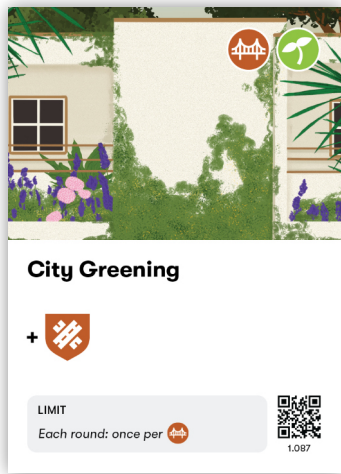
“City Greening” or “Greening cities” describe a variety of actions that city leaders are taking to improve the health and safety of their communities through enhancing local ecosystems. These include planting trees to create shade, making heat waves more manageable. Restoring wetlands or planting rain gardens absorbs rainwater and reduces flood risk. Developing parks and greenspaces absorbs air pollution and creates spaces that people can enjoy.

The world’s population is increasingly moving to cities. Over half the global population lives in cities, and that is projected to grow to 70% by the year 2050. Cities and urban areas are responsible for almost 75% of carbon pollution and it is often in cities where the impacts of the climate emergency, such as flooding and heat waves, are most severe.

Like all public benefits, city greening must be done equitably and with environmental and economic justice considerations at the core. City greening efforts are often part of cities’ plans to address historic injustices that left low income people, marginalized groups and people of colour with far less access to green spaces, for example. This has been extremely harmful for these communities, and urban greening programmes offer an opportunity to change this situation, as well as tackling the climate emergency.

### Take Action

- ▶ Work with neighbours and people in your local community to make a greening or gardening scheme, planting on unused space directly or encouraging landlords or area managers to green the area.
- ▶ Ask your council what they are doing to increase biodiversity in the area or create more green space.
- ▶ Look into options to plant on your roof, if you have one you can access.

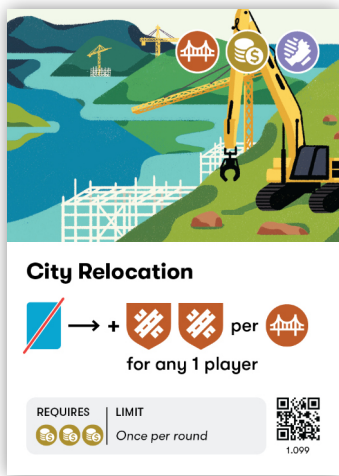
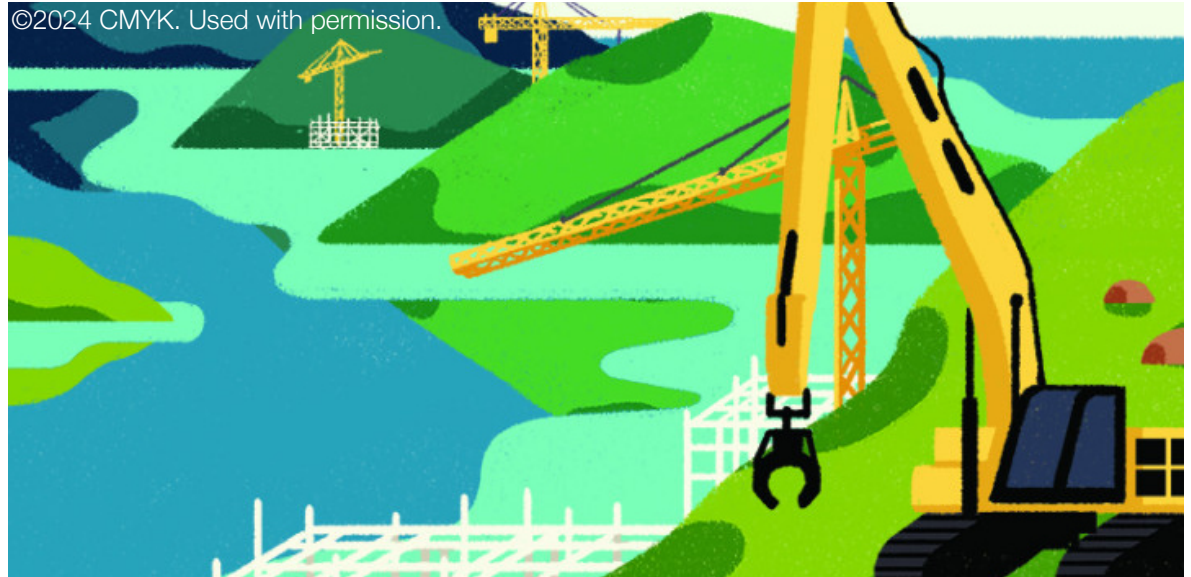


### Gameplay Notes

- ▶ Add 1 Infrastructure Resilience token to your player board.

You may take this action once per Infrastructure tag in this card's stack per round.





### Gameplay Notes

You must have at least 3 Incentive tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Infrastructure Resilience tokens per Infrastructure tag in this card's stack.

You may add tokens to any one (and one only) player board (including yours), once per round.

## City Relocation

City relocation refers to the planned movement of people, buildings and infrastructure to protect them from hazards such as wildfire and coastal flooding. You may also hear this practice called “managed retreat” although some vulnerable communities feel that this term takes away some of their power and autonomy, particularly if they do not want to move. People have been moving away from natural hazards for centuries. What is different now is the scale of the threats posed by the climate emergency and the number of people around the world living in vulnerable cities, particularly on coastlines.

One example of large-scale city relocation due to future climate threats is in Indonesia, where leaders are planning to move the capital city out of Jakarta. It’s estimated that one-third of the city could be underwater by 2050.

Relocating even small communities, let alone entire cities, is a difficult and controversial process, but one that may unfortunately be necessary in many places. It’s critical that, in addition to all the social, cultural, financial and political considerations that go into such plans, the people directly affected have power to input and influence, if not control, the process.

### Take Action

- ▶ If you live in a community repeatedly affected by climate disaster, learn whether there is a movement for or discussion of relocation and join that process.



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## Clean Cookstoves

Nearly one out of every three people in the world eats meals prepared on cookstoves fuelled by wood, charcoal, dung, or crop residues.

Burning biofuels like these produces greenhouse gas emissions, about 2% of global annual emissions. Dirty cookstoves also release pollutants into the air that contribute to the death of some 4 million people each year from lung or heart disease. These pollutants are also dark in colour, so they absorb sunlight and trap heat, worsening the global heating effect.

Replacing these stoves with cleaner alternatives, such as solar-powered units, dramatically reduces greenhouse gas emissions. It also reduces the harmful pollutants produced by dirty cookstoves, reduces the deforestation caused by crops used as biofuels, and frees up time for the women and girls who currently spend a significant amount of their time gathering fuel, which may make it easier for them to go to school or work.

### Take Action

- ▶ If you rely on biofuels such as wood, charcoal, dung, or crop residues for cooking, ask leaders in your community to seek out and advocate for clean energy and clean cooking options.
- ▶ Encourage your government and the international community to support and fund initiatives that promote the expansion of renewable energy, including the adoption of clean cooking.
- ▶ If you cook on a gas stove, consider replacing it with an electric, induction or solar-powered stove.

### Gameplay Notes

You must have 2 Incentive tags in this card's stack to take this action.

- ▶ Remove 1 Buildings emission token from your player board.

You may take this action once per round.





## Clean Electricity Plants

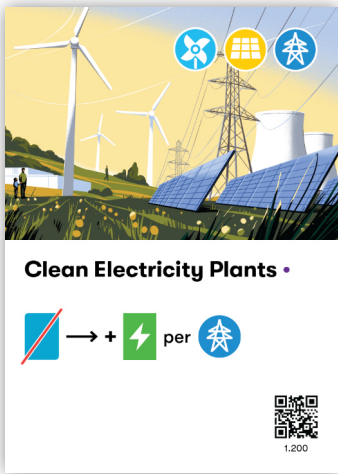
Clean energy plants that do not emit greenhouse gasses while generating electricity can play a major part in reducing global greenhouse gas emissions. They will be needed to replace dirty electricity plants and power a lot of other low-carbon climate solutions, so building out a huge amount of new clean power plants must ramp up early on over the course of the transition period.

One obstacle to building clean power plants is that they require a relatively large amount of initial investment (compared to fossil energy which has high fuel, maintenance, and decommissioning costs, for example). This obstacle can be overcome with direct government investment, subsidies, mandates, and other forms of innovative financing. Another challenge is the fact that some clean plants – solar and wind, for example – are ‘intermittent’ and so don’t match up with demand on their own. This can be solved with a rollout of flexible technologies such as energy storage, having geographically diverse wind and solar generators, and complementing these sources with clean baseload generation (e.g. geothermal and hydropower). It’s important to remember that despite the need for investment, a clean energy-based system will be cheaper than a dirty system overall.

If wealthier countries build large amounts of clean power quickly, it would also reduce the cost of energy and improve scalability, which will help the rest of the world move faster as well. Majority world countries would benefit greatly from more clean energy generation, which is both cheap and relatively climate resilient – yet financial assistance from wealthier nations to make the necessary up-front investments and move away from dirty sources is urgently needed. The faster we shift away from coal and gas to building clean electricity plants, the better chance we have of reducing the impacts of the climate crisis.

### Take Action

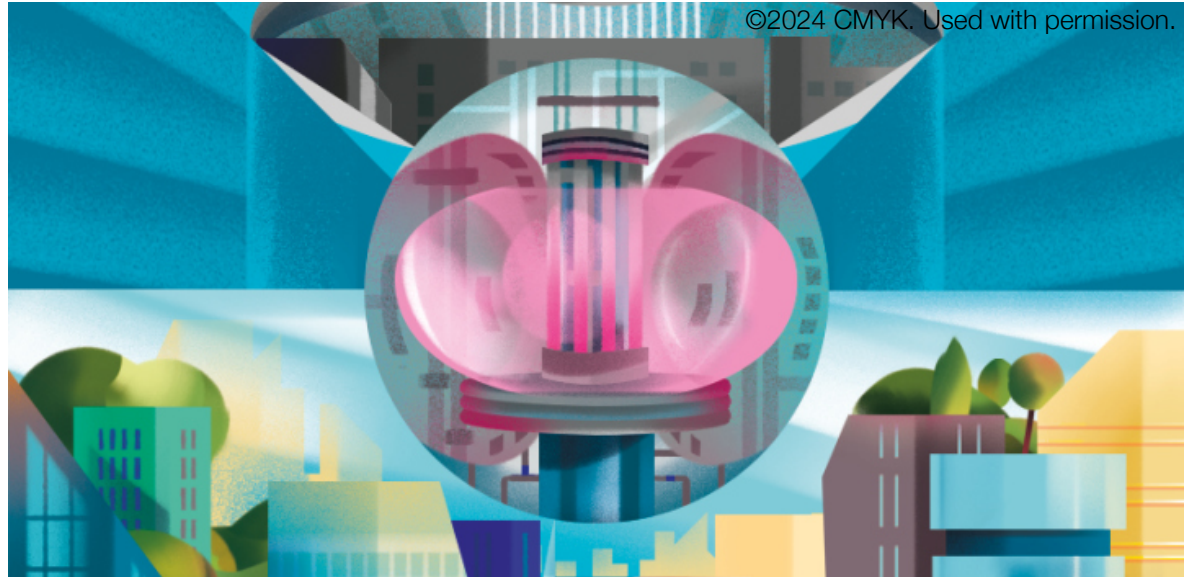
- ▶ Support clean energy initiatives in your community, for example those that install solar panels or support community energy projects.
- ▶ Join, or spend some time with, or support an organization or local group that is pushing for the buildout of green energy, such as the Sunrise Movement.
- ▶ Ask your political representatives to support the buildout of clean energy generators and crucially, the infrastructure to support them, including batteries and other flexible tech.



### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Grid tag in this card's stack.

# Climate



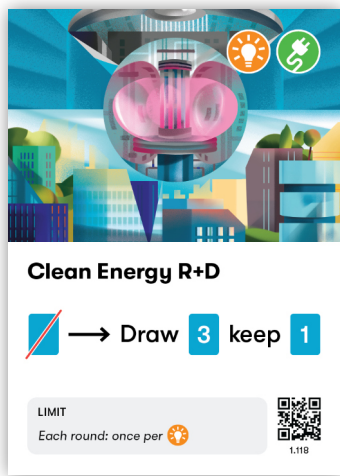
## Clean Energy R+D

Many clean energy technologies could be made cheaper, more efficient, or easier to roll out at scale through research and development. There are a huge number of potential examples, including cheaper, more reliable floating offshore wind turbines, more efficient and less resource-intensive energy storage solutions, digital and machine-learning informed energy system modelling, and using membrane chemistry to boost the production of green hydrogen via electrolysis, to name just a few areas where work is ongoing.

A green energy transition is possible today, but cost matters and further innovation to make a clean energy transition easier and more affordable would clearly be welcome. However, from the perspective of governments and other investors, there is a trade-off between putting funding and time towards potentially unproven or lab-stage technologies (which might be transformational, but generally take a long time to have an impact) and putting efforts into streamlining tested or well-proven tech, which will likely bear fruit in the nearer term.

### Take Action

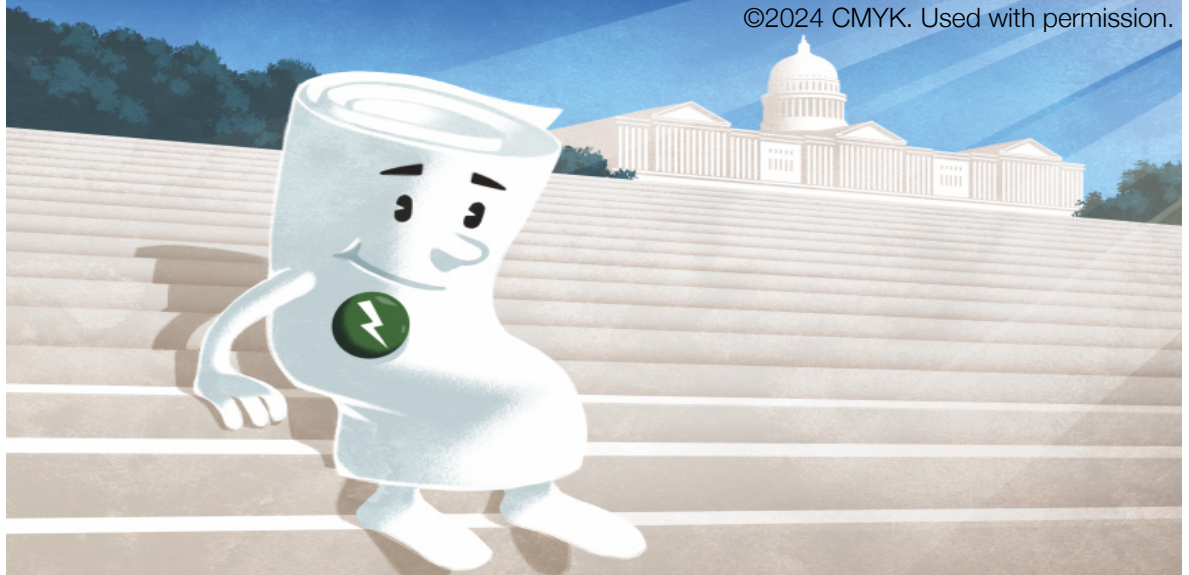
- ▶ You can write to your political representatives to encourage the support of various clean energy R + D efforts.
- ▶ Some community energy groups work to push the boundaries of clean energy, acting as a lab for new technologies. You could see if there are any such groups you might be able to join or support.



### Gameplay Notes

- ▶ When you take this action, discard 1 card from your hand, draw 3 cards, add 1 to your hand and discard the others.

You may take this action once per Innovation tag in this card's stack each round.



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## Clean Energy Standards

Clean energy standards (also called renewable portfolio standards) are a tool governments can use to support generating electricity from zero-carbon sources like wind and solar. A government will typically set a standard for the share of electricity generation sold by utilities that must come from zero-carbon sources; these standards can be encouraged or required. This increases over time to allow utilities time to ramp up their investments in zero-carbon power.

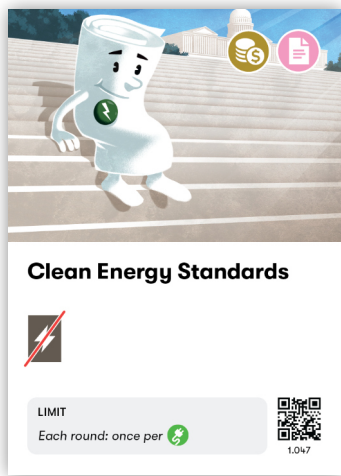
Many countries have already implemented clean energy standards, including Australia, China, South Korea, and Mexico. The United States has multiple standards at the state level, but no standard for the entire country.

Clean energy standards are attractive because, when properly enforced, they help ensure that an increasing share of a grid's electricity mix comes from zero-carbon sources. They can also allow utilities the flexibility to decide which sources are most appropriate for the region in question.

Economists sometimes argue that clean energy standards are less efficient than putting a price on carbon emissions, and in some forms, still let companies decide whether they are willing to pay to use fossil fuels or switch to renewable energy to save money. On the other hand, carbon pricing that would sufficiently motivate switching to zero-carbon sources are often politically unpopular.

### Take Action

- ▶ Contact your legislators to tell them you support establishing a Clean Energy Portfolio Standard in your state, province, or country.
- ▶ Choose to purchase energy from clean energy sources, such as wind or solar power.
- ▶ Work with your employer or business to develop and implement clean energy goals and strategies.



### Gameplay Notes

- ▶ When you take this action, remove 1 Dirty Energy token from your player board.

You may take this action once per Energy tag in this card's stack each round.



# Climate



## Climate Bonds

Companies, banks, and governments issue bonds. They are a form of loan, where an investor gives the issuer of the bond a certain amount of money for a set period of time. In return, the investor receives periodic interest payments, before being returned the initial loan. In the case of climate bonds, the issuer of the bond uses the loaned money to invest in projects that help reduce greenhouse gas emissions and make societies more resilient to climate shocks.

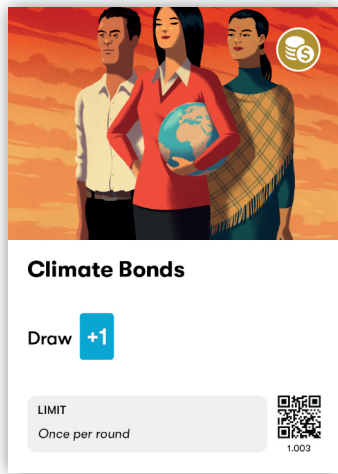
Climate bonds are an important way of raising money to tackle the climate and nature emergency. They offer investors a more sustainable option for financial investing. Over US\$863 billion worth of bonds linked to sustainability efforts were issued in 2022, around 5% of the global bond market.

However, climate bonds have been criticized for being used to fund projects that are not environmentally sustainable. They've also been issued by companies that invest in fossil fuels. This is a form of 'greenwashing'. Those funding genuinely sustainable projects also might not pay attention to whether these investments support climate justice, meaning the bonds may have unintended side effects.

Clear and enforceable rules are needed to make sure that climate bonds genuinely contribute to lowering greenhouse gas emissions, and do so equitably.

### Take Action

- ▶ Many banks and financial companies sell customers bonds that are described as green. Do your research if you are buying climate bonds, checking what they will be used for and what else the organization is involved with.
- ▶ Support groups that fight against greenwashing in financial markets, like Reclaim Finance and Positive Money.



#### Climate Bonds

Draw **+1**

LIMIT  
Once per round



### Gameplay Notes

- ▶ When you take this action, draw 1 Local Project card.

You may do this once per round.



## Climate Debt Reparations

Climate debt reparations require wealthy countries to send funds and technologies to other countries. These are usually nations that suffer the most from the climate emergency despite their relatively small greenhouse gas emissions. The United States has, over the last centuries, had the highest average greenhouse gas emissions per person, and the highest total amount of greenhouse gas emissions overall.

These greenhouse gas emissions came from the US using its ability to buy and burn fossil fuels to supercharge its economy and help make it the wealthiest nation in the world. This has often come at the expense of less wealthy countries in the majority world, from whom the US has exploited for cheap labor and goods for decades.

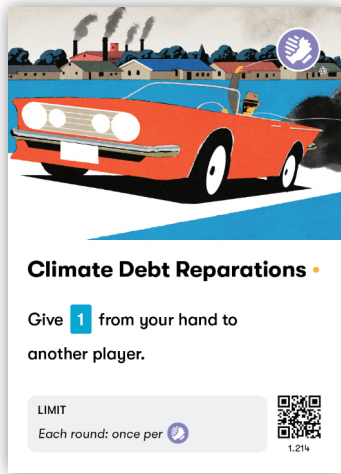
But the climate emergency is a global problem, and the harm caused by the US emitting these greenhouse gasses is being felt around the world. And, given the climate emergency, other nations do not have the luxury of being able to produce endless amounts of greenhouse gasses to bolster their economies and lift them out of poverty. It is, therefore, reasonable to expect the US to share with the world some of the wealth it gained in part by being allowed to emit greenhouse gasses with few consequences. The US will also be affected by other countries not decarbonising since the climate emergency is a global problem: all countries must do everything they can.

Climate reparations can be organized in different ways. Open borders for climate migrants are an essential part of a reparative approach to climate justice. Climate litigation (holding companies and nations legally accountable for climate devastation, ideally with compensation for affected communities) is also important. 'Loss and Damage' funds compensate nations for historic or ongoing damages. Some climate finance transferred internationally is intended to go straight to climate adaptation and mitigation activities.

Many countries, including some in the US, do not want to contribute to climate reparation payments. International coordination and legally binding agreements are required to ensure this vital approach is accelerated.

### Take Action

- ▶ Vote for candidates who support climate reparations.
- ▶ Participate in protests and other public actions that support the demand for climate reparations.



#### Climate Debt Reparations

Give **1** from your hand to another player.

LIMIT  
Each round: once per



### Gameplay Notes

- ▶ When you take this action, give 1 card from your hand to another player to add to their hand.

You may take this action once per Society tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.



# Climate



## Climate Immigration

The climate emergency is forcing people to move location, thanks to more frequent and extreme weather events, changes to agricultural and food supply patterns, and other interlinked environmental and societal tensions. In the coming decades, whole populations of people, from all corners of the planet, may be forced to move as conditions in their homes become untenable.

The way to help people move safely is to design inclusive climate immigration plans. This will ensure that people can move before conditions degrade, have choice as to where to move to, stay with their families and receive fair and safe treatment when they've arrived. This will avoid loss of life, and ensure that societies can flourish with new people joining them.

Climate immigration will be difficult and complex, involving huge numbers of people and extremely challenging situations. Even countries that people move to will be affected by the climate emergency, meaning they will need to both integrate new people into their population, and adapt to the changing conditions. Efforts to stop the climate emergency from happening to begin with are essential.

This will be made easier where countries plan for large numbers of people to move into them in advance, and develop comprehensive inclusive immigration policies to help them move safely. This will require democratic global coordination, the end to hostile border controls and racist immigration policies, and increasing population numbers built into the long term plans of countries and areas which may avoid the worst impacts of the climate emergency.

Climate immigration may become a problem if countries continue to pursue anti-immigration stances and militarize their borders. This will mean people are unable to move and are killed by the climate emergency. If climate immigration systems aren't planned humanely and in advance, large numbers of people may be forced to move at once, risking increasing chaos and unsafe passages.

### Take Action


- ▶ Support local migration care and asylum centers, for example volunteering your time to mentor or welcome people arriving in your area.
- ▶ Challenge false anti-immigration narratives in the media and among your peers to build public attention to the need to support people being forced to move due to the climate emergency.
- ▶ Advocate for your government to make long term plans to accommodate people fleeing the effects of the climate emergency, including in healthcare, housing, education and welfare systems.



#### Climate Immigration

Move one  from another player's board to your own.

LIMIT

Each round: once per 



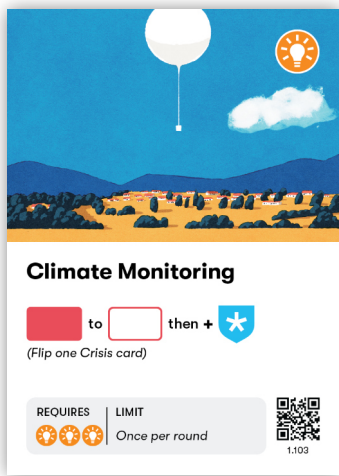
1.109

### Gameplay Notes

- ▶ When you take this action, move 1 Community in Crisis from another player's player board onto your player board. (Ask permission first.)

You may take this action once per Regulation tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.



### Gameplay Notes

You must have at least 3 Innovation tags in this card's stack to take this action.

- ▶ Flip one unknown Crisis card face up. Then add 1 Resilience token of your choice to your player board.

You may take this action once per round.

## Climate Monitoring

Continuously monitoring climate data can provide an early heads-up as problems or changes arise. For example, tracking rainfall and temperature can provide continual updates for farmers and agricultural specialists throughout the growing season, helping them make decisions and reacting to changing conditions rapidly. It can also help give a sense of how the climate emergency is unfolding around the world, and predict shifts in climate like El Niño events.

But, climate data that sits on a computer is not helpful - we need to ensure that climate monitoring and information is communicated to the right people and gets used. Tailored decision-support tools can improve the use of climate monitoring data, like tailored agricultural apps for farmers. Early warning systems can also be linked to climate monitoring databases.

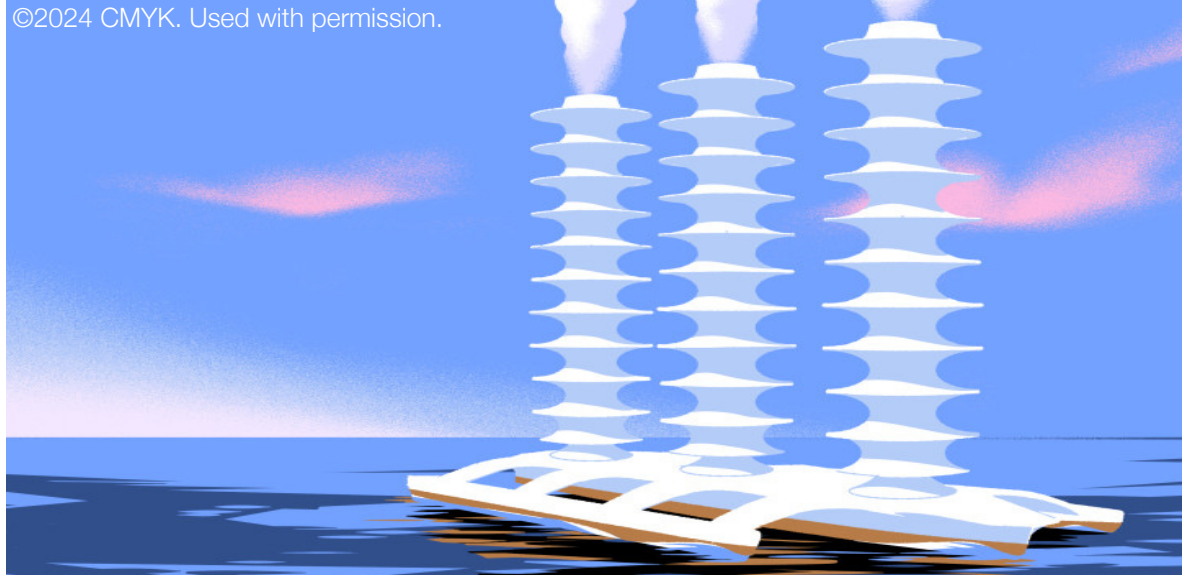
Sometimes, climate data is available at very large scales rather than at the scale of a single house or person, so it is not easy for small-scale decisions to use the large climate datasets. Climate data is also missing in much of the world that does not have good coverage by weather stations.

### Take Action

- ▶ Join citizen science projects to support monitoring efforts and help reconstruct past data too.
- ▶ Look into whether there are weather stations missing in your area, and ask your local government to set one up.
- ▶ If you are a farmer or use weather data in your work, see whether there are predictions for your area that might inform how you work.



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## Cloud Brightening

Burning fossil fuels releases CO<sub>2</sub> which warms the planet but it also releases tiny pollution particles which have a cooling effect. This effect can be seen in satellite images, which show whiter clouds trailing behind polluting ships when they pass under certain clouds. Cloud droplets can only form around tiny seed particles, so these tracks form as ships add more tiny particles to clouds, meaning the clouds form a greater number of smaller droplets, making them more reflective.

Cloud Brightening is a proposal to artificially brighten clouds by spraying sea-salt particles up from the surface of the ocean. This idea won't work in all regions, but researchers are actively studying its potential to cool the Great Barrier Reef and to slow the melting of the Arctic.

There are large uncertainties around this idea and field tests will be needed to determine whether it would actually work. There are also concerns that while it would cool the areas where it was applied, it might also shift patterns of rainfall in nearby regions. A better understanding of the potential and risks around cloud brightening will be essential to informing discussions around its use.

### Take Action

- ▶ Contact your political representatives to urge international rules and scrutiny about the test or use of risky technologies such as these.
- ▶ Study atmospheric or climate science and you might be able to contribute to our understanding of this idea.

**Cloud Brightening**

During the Crisis stage, ignore one result with or .

LIMIT  
Each round: once per

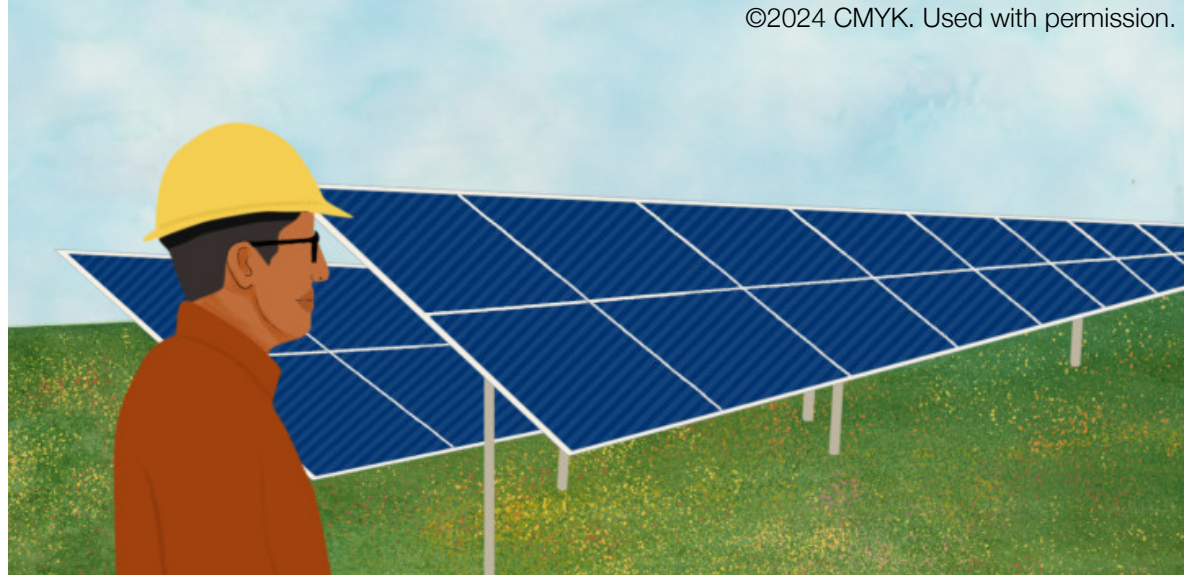
1.128

### Gameplay Notes

- ▶ During the Crisis stage, you may ignore a Loss of Arctic Sea Ice or Thawing Permafrost result on the Planetary Effects die.

You may take this action once per round for each Geoen지니어ing tag in this card's stack.





## Community Solar

Community solar projects can take a variety of forms, but are generally owned by the communities in which they are situated. Some such projects see communities own, operate, and receive the energy from the solar installations themselves. In this case, people can reduce their reliance on large, for profit electric utilities (who often supply dirtier energy).

Other models allow a degree of community participation in selection and operation of solar assets, or entail a transition to community ownership overtime. In many cases, grid community members will finance, own and run a solar project, but sell the energy to a local building or business (on which the panels are mounted), or to the wider grid. This way these projects can pay community members back for their initial investment, with any additional proceeds being reinvested in the community or more community solar generation.

Still, community solar often faces regulatory and financial barriers. It can be difficult to raise initial funds, with lenders often being uninterested, getting grid connections is also often a long and expensive process, and such projects rely on community members having the time and expertise to put such a project together. All this reduces the scalability of community solar.

Nevertheless, Community solar remains an important opportunity to help people transition away from fossil fuels while creating opportunities to increase equity within communities. Support at the local and national levels should help remove barriers, streamlining regulatory processes and unlocking new funding opportunities.

### Take Action

- ▶ Contact a local community solar project, local government, or a local community energy organization to ask about getting involved.
- ▶ Support laws that provide funding for, or otherwise support community solar projects.

**Community Ownership**

→ + per then +

LIMIT  
Each round: once per

1.018

### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Solar tag in this card's stack. Then add 1 Infrastructure Resilience to your player board.

You may take this action once per Society tag in this card's stack each round.



## Community Wealth

Community wealth building is a way of developing local economies in order to keep more of the wealth generated locally within that community. Many local economies are dependent on large businesses and supply chains that come from far away. These can extract wealth, maximizing returns to distant shareholders. Instead, community wealth building seeks to help people to generate and hold wealth in their local area, businesses and community groups. This can include efforts to increase democratic ownership of the local economy, such as setting up co-operatives, and using the power of public institutions to direct money and resources into local companies.

Community wealth building strategies have increased the share of public money being invested and used for local businesses, services and projects. They can make local economies more democratic by giving communities more control over improvements to their neighbourhoods.


While community wealth building has gained traction in Europe and the United States, it is a blanket term that covers long-standing approaches to local economic development used throughout history and across the Majority World, like worker co-operatives, community-owned spaces and stakeholder banks.

Community wealth building is a practical approach that can be adopted under the initiative of both local governments and communities.

Austerity, the cutting of local government budgets, and continuing to prioritize spending on, and policy incentives for, large companies and faraway supply chains can be a barrier to community wealth building efforts.

### Take Action

- ▶ Read one of the toolkits linked online, and try to apply it in your local community.




**Community Wealth**

2-3 : Draw +1

4-5 : Draw +2

6+ : Draw +3

LIMIT  
Once per round



1.006

### Gameplay Notes

- ▶ When you take this action, draw 1, 2, or 3 additional Local Project cards if you have 2–3, 4–5, or 6 or more Infrastructure tags in this card's stack.

You may do this once per round.



# Climate



## Community Wind

Community wind projects are generally owned by the communities in which they are situated. These projects can take a variety of forms. Some see communities own, operate, and receive the energy from the wind installations themselves. In this case, people can reduce their reliance on large, for profit electric utilities (who often supply dirtier energy). Other models allow a degree of community participation in selection and operation of a wind generator, or entail a transition to community ownership overtime. In many cases, grid community members will finance, own and run a wind project, but sell the energy to the wider grid. This way these projects can pay community members back for their initial investment, with any additional proceeds being reinvested in the community or more green community generators.

Wind generation tends to take up more space than say, solar generation, so while a wind turbine might be situated in an urban area, they are often found on the peripheries. This, in turn, often means additional expenses and delays with regards to getting a grid connection. Community wind projects also face other regulatory and financial barriers. It can be difficult to raise initial funds, with lenders often being uninterested, and such projects rely on community members having the time and expertise to put such a project together. All this reduces the scalability of community wind. Nevertheless, Community wind remains an important way to transition away from fossil fuels while creating opportunities to increase equity within communities. Support at the local and national levels should help remove barriers, streamlining regulatory processes and unlocking new funding opportunities.

### Take Action

- ▶ Contact a local community energy project, local government, or a local community energy organization to ask about getting involved.
- ▶ Support laws that provide funding for, or otherwise support community energy projects.



#### Community Wind

- 1-2 Society tags : + Clean Energy
- 3-4 Society tags : + Clean Energy and + Infrastructure Resilience
- 5+ Society tags : + Clean Energy, + Infrastructure Resilience, and + Infrastructure Resilience

LIMIT  
Once per round



1:132

### Gameplay Notes

When you take this action:

- ▶ If you have 1–2 Society tags in this card's stack, add 1 Clean Energy token to your player board.
- ▶ If you have 3–4 Society tags in this card's stack, add 1 Clean Energy token and 1 Infrastructure Resilience token to your player board.
- ▶ If you have 5 or more Society tags in this card's stack, add 2 Clean Energy tokens and 1 Infrastructure Resilience token to your player board.

You may take this action once per round.



## Degrowth Movement

Degrowth refers to the planned reduction of how much energy and resources are used in an economy, with the intention of increasing community prosperity, health and wellbeing at the same time.

Many societies and economic systems have been designed to constantly increase the amount of energy and resources they use, and these are the main drivers of 'growth', as measured by governments. Overuse of fossil fuels and natural resources are causing the climate emergency. Meanwhile, the unequal and exploitative ways these resources are extracted and used is unfair and negatively impacts human wellbeing.

Degrowth aims to tackle these problems simultaneously by using less of the world's finite energy and resources and putting wellbeing ahead of profit. This could be achieved through more sharing, less consumerism, and stopping the planned obsolescence of products, which are made to break or need replacing.

Degrowth does not necessarily mean reducing the growth of gross domestic product (GDP), which is a measure of economic growth, so its name is something of a misnomer. It means moving away from GDP increases as a political objective, and instead shifting directly to goals around well-being and prosperity, while using less energy and resources.

Some argue that degrowth approaches are best applied to wealthier countries whose high consumption is driving the climate emergency. Reductions in this consumption can open up more resources for the Majority World, which may need increases in energy and resource use to reach a point where human needs are being met.

### Take Action

- ▶ Join a degrowth campaign or network, and educate yourself on the topic.
- ▶ Consider whether your organization targets 'growth' in a healthy way. Will it cause more resources and energy to be used, and does it contribute to peoples' wellbeing?

**Degrowth Movement**

2-4 : -1

5+ : -2

LIMIT  
Once per round

1.033

### Gameplay Notes

When you take this action,

- ▶ If you have 2–3 Society tags in this card's stack reduce your Energy Demand by 1.
- ▶ If you have 4 or more Society tags in this card's stack reduce your Energy Demand by 2.

You may take this action once per round.

# Climate



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## Development Assistance

Development Assistance refers to the voluntary transfer of resources, for example money, technology, and even people's time and skills, from one country to another. This transfer is typically from wealthy countries to poorer ones. Governments often give this kind of support to improve the long-term economic, environmental, social, and political development of other nations.

Countries which are historically least responsible for the climate emergency are often most vulnerable to its effects but have fewer resources to adapt. Some wealthy countries have occupied other countries as colonizers, so are also partially responsible for their ability to handle the climate emergency. Many countries have exploited less wealthy countries for a long time, paying less for goods and services than they would at home. Development assistance can transfer important resources to people who need them the most. This assistance can come directly from other countries, or through international organizations like the World Bank or United Nations.

Development assistance, or mandatory alternatives like climate reparations, is important for meeting our climate goals because the climate emergency is a global problem which has mostly been caused by the wealthiest, most industrialized countries. Yet, globally, only 16% of the money needed to avoid the climate emergency is being spent, and very little is being used for development assistance and climate reparations. Often, development assistance is given in the form of loans, meaning countries are forced to pay them back with interest, locking them into expensive debt arrangements. And sometimes, development assistance in the form of aid spending is used to promote trade and companies linked to the country offering the money, serving their own objectives rather than the priorities of the recipient country.

Improving awareness of the connections between mechanisms to redistribute wealth and resources between countries and solutions to the climate emergency could lead to more assistance between countries. More mandatory frameworks and legally-binding systems to share resources around the world led by international bodies like the Intergovernmental Panel on Climate Change would also help accelerate this transfer. Payments should come without repayment requirements or conditions on how it is spent.

Administrative barriers to accessing these resources can make development assistance less effective for vulnerable countries. The fact that a lot of development assistance is voluntary is also challenging, with many wealthy countries failing to meet their commitments. Making these payments legally binding and subject to internationally agreed, fair terms and conditions would help to tackle this.

### Take Action

- ▶ Donate to foreign aid efforts in your country or another country.
- ▶ Familiarize yourself with your country's development assistance policies or development assistance needs and advocate for them to serve the interests of recipient countries.
- ▶ Consider whether your organization is paying fair prices for goods and services abroad - would you be paying more if buying domestically, in which case should you be paying more?
- ▶ Advocate for significant increases in aid provisions from your country, debt-free and with no conditions on how they are spent, to other countries in light of the climate emergency.

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### Development Assistance

Give **1** from your hand to another player.

LIMIT  
Each round: once per



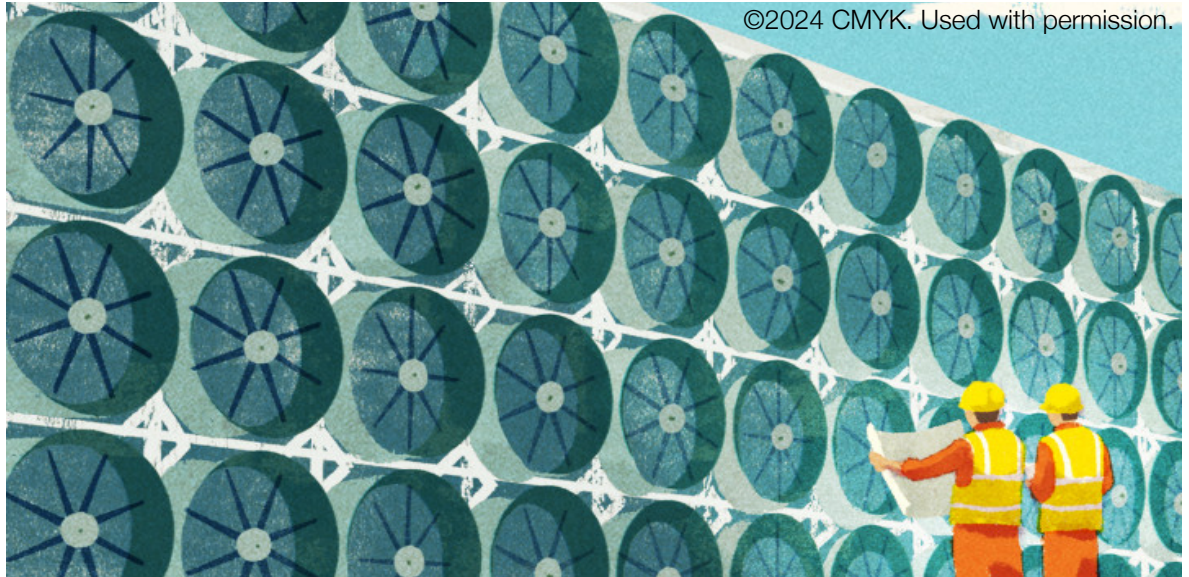
### Gameplay Notes

- ▶ When you take this action, give another card from your hand to another player to add to their hand.

You may take this action once per Society tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.





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## Direct Air Capture

Direct Air Capture is a proposal to build industrial facilities to capture CO<sub>2</sub> directly from the air. Giant fans would blow air over a fluid that chemically binds to the CO<sub>2</sub> in the air. Chemical reactions would then strip the CO<sub>2</sub> from the fluid, allowing the fluid to be recycled and producing a pure stream of CO<sub>2</sub>. In many iterations, this pure CO<sub>2</sub> would then be compressed and pumped deep underground into stable rock formations.

This process theoretically offers an opportunity to capture CO<sub>2</sub>, but it would be very energy intensive and cost a lot of money. Current estimates show that capturing 25% of the USA annual carbon emissions would take as much energy as the nation generates in a year.

While commercial plants are now being built, they currently only capture a very tiny fraction of the CO<sub>2</sub> we emit each year. What's more, the theoretical development of Direct Air Capture facilities is also regularly used to justify less ambitious climate targets, and where carbon is currently captured, 95% of it is not locked away, but used in the extraction of more fossil fuels. New technologies and improved processes could render Direct Air Capture a useful tool in the fight against the climate emergency, but even if we can develop and scale this technology, in almost all cases it will be cheaper and easier to cut CO<sub>2</sub> emissions at their source.

### Take Action

- ▶ Study chemistry or chemical engineering and you might be able to contribute to the development of this technology.
- ▶ Contact your political representatives to urge international rules and scrutiny about the test or use of risky technologies such as these.

**Direct Air Capture**

and → +

REQUIRES

1.123

### Gameplay Notes

You must have 2 Innovation tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand and increase your Energy Demand by 1 to add 1 Direct Air Capture token to the board. (This token will function like a Tree during the Emissions stage.)



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## Dirty Electricity Phaseout

Dirty power plants represent one of the largest single sources of global greenhouse gas emissions. Nations around the world rely on coal and natural gas power plants, as well as oil powered generators that can be called on when electricity demand peaks. Shutting down these dirty power plants is one of the biggest steps we can take to reduce its greenhouse gas emissions.

Phasing out dirty electricity will mean nations legislating to suppress new fossil-energy infrastructure, shutting down existing plants before their scheduled closure, wiping out fossil investments. This move will certainly be resisted by fossil-fuel interests. What's more, if dirty electricity is going to be phased out, then it must be replaced by a cleaner electrical system. While such a system is expected to be much cheaper overall, it will require a relatively large amount of up-front investment. Clean generators cost money, as do batteries and other flexible technologies to ensure that the availability of 'intermittent' solar and wind energy, for example, lines up with energy demand. Upgrading the electrical grid to support such a system also poses an economic and infrastructural challenge. Yet phasing out and replacing dirty electricity ultimately opens the door for electrification to bring the benefits of cheap, clean energy to whole new sectors, eliminating the majority of the world's carbon emissions in the process.

Wealthier nations already face a challenge phasing out their dirty electricity, yet less well-off countries will also require financial support. Without assistance, they may be unwilling to sacrifice or interrupt their growth by getting rid of their dirty electricity, especially when richer countries have prospered using dirty electricity for decades, at their expense.

### Take Action

- ▶ Join, or spend some time with, or support an organization or local group that is pushing for the phaseout of dirty electricity and fossil fuel energy more widely.
- ▶ Ask your political representatives to work harder to phase out fossil fuels, to say no to new coal and fossil fuel plants, and if you live in a wealthier nation – to support Majority World nations in phasing out fossil power. You might also ask them to invest in and streamline the buildout of clean energy generators and crucially, the infrastructure to support them, including batteries and other flexible tech.

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### Dirty Electricity Phaseout •



1.201

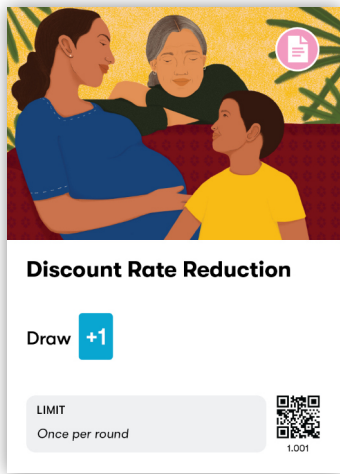
### Gameplay Notes

- ▶ Discard 1 card from your hand, then remove 1 Dirty Energy token from your player board for each Regulation tag in this card's stack.





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## Discount Rate Reduction

The ‘social discount rate’ is used to weigh the costs of climate action to current generations against their benefits to future generations. The higher the discount rate, the more that current generations are prioritized over future generations. Traditionally, higher discount rates were justified using the assumption that guaranteed economic growth would make future generations wealthier. But the worsening damage caused by the crisis could make them much poorer. It could even be catastrophic. So, there is a growing consensus that discount rates should be low, zero (whereby the welfare of present and future generations is treated equally), or even negative (concern for the welfare of future peoples requires pressing action today).

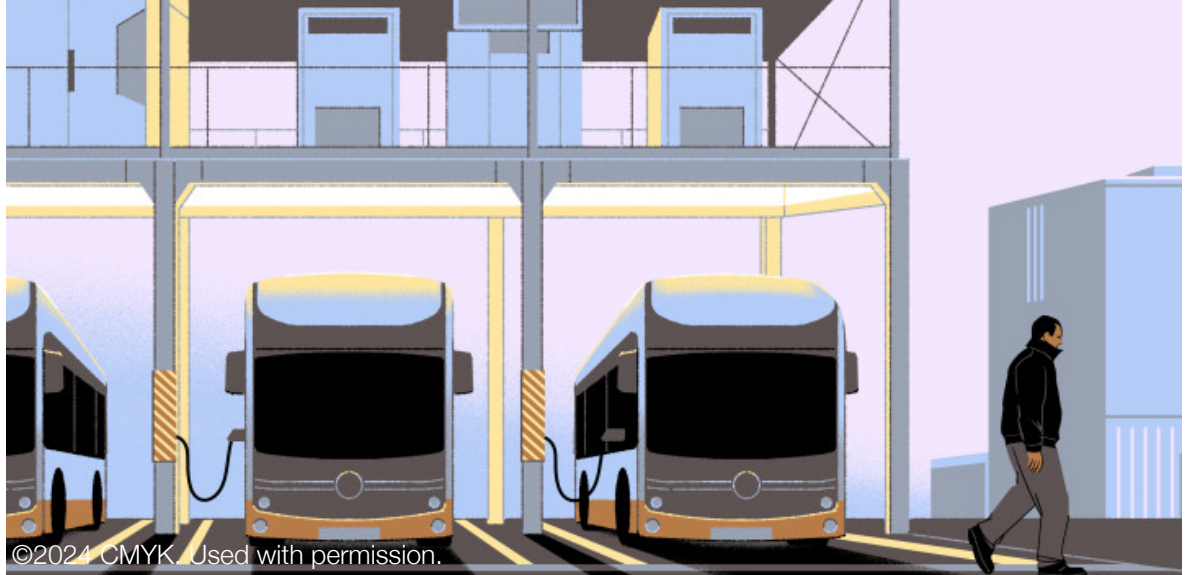
There has also been a change in how we think about the present ‘costs’ of climate and ecological action. Replacing coal power plants and phasing out dirty vehicles might cost money, but it will reduce air pollution, among other benefits today, as well as reduce the effects of the climate emergency in the future.

Some economists argue that lower discount rates could divert investment away from poorer communities today, in favor of future generations. This is why many policymakers still think there is a trade off between action today and its future benefits. But, this might be a false trade off. Access to clean water, energy, housing, and other fundamentals can often be met without large environmental costs.

### Gameplay Notes

- ▶ When you take this action, draw 1 Local Project card.

You may do this once per round.



**Distributed Energy Storage**

+

LIMIT  
Once per round

1.063

## Gameplay Notes

- ▶ Add 2 Infrastructure Resilience tokens to your player board.

You may take this action once per round.

## Distributed Energy Storage

Distributed or decentralized energy storage involves creating a web of smaller storage devices and is an important source of low carbon ‘flexibility’ – making sure cheap, clean solar and wind energy is available when we need it. The two main sources of distributed energy storage are small-scale batteries and electric vehicles (EVs) (which are essentially big batteries on wheels). More and more electric vehicle models include ‘vehicle to grid’ functionality meaning grid operators can draw power from a connected EV to manage power demand.

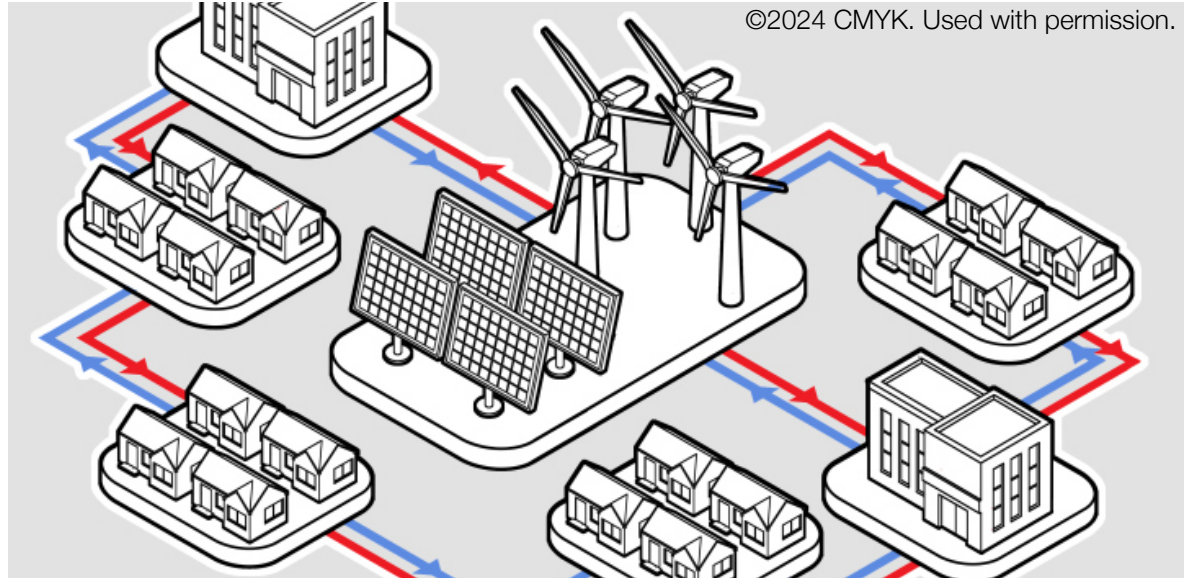
Electricity can be stored when green energy is abundant, and then used (or sold back to the grid) later on when green energy is scarce. When combined with rooftop solar, for example, distributed energy generation storage can make buildings self-sufficient with the potential to massively reduce greenhouse gas emissions and energy bills.

Barriers to widespread adoption of distributed energy storage systems include the costs of batteries, unhelpful planning and regulation, the need to support battery manufacturing and associated supply chains, and the need to modernize electrical grids to better integrate distributed storage solutions.

Still, prices for lithium ion batteries are rapidly falling and new, improved battery technologies are in development. Utilities are beginning to update grids to support decentralized low carbon storage because it is cheaper than paying dirty, expensive gas stations to turn on to meet energy demand, reduces the need for other expensive infrastructure upgrades, and gives ordinary people a way to benefit from taking part in the green energy transition.


## Take Action



- ▶ Switch to an electric vehicle.
- ▶ Purchase a home battery system.
- ▶ Contact your political representatives urging them to invest in and streamline the rollout of low carbon flexible technologies.




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**District Heating**



REQUIRES	LIMIT
 	Once per round

  
1.062

## Gameplay Notes

You must have 2 Grid tags in this card's stack to take this action.

- ▶ Remove 1 Buildings emission token from your player board.

You may take this action once per round.

## District Heating

Rather than installing separate boilers, we can reduce the climate impact of heating by connecting adjacent buildings with insulated underground piping and running hot water from a larger main boiler that services all of them at once.

District heating is most beneficial in cold climates. It also helps if buildings are clustered closely together, minimizing the amount of piping and pumping energy required. District heating's beneficial impact can be multiplied many times over if the hot water comes from geothermal sources, waste heat generated by industrial processes, the sun, or biomass burning rather than heat generated by burning fossil fuels. Installing district heating when an area is undergoing other infrastructure work (when replacing water or sewer systems, for example) is often cheaper and more convenient too.

Challenges include the coordination of heating among different building owners, high upfront installation costs, and the potential to impact multiple buildings at once if the wider system goes down. Still, as communities and businesses transition to climate-friendly ways of generating and using energy, district heating is worth consideration.

## Take Action

- ▶ If your urban area is undergoing infrastructure upgrades, encourage planners to consider district heating.
- ▶ If your campus or community uses district heating, encourage it to shift the energy source toward renewables — using renewable heat sources, or using electric power derived from renewables to run the system.





## Drilling and Mining Bans

Humans have extracted trillions of tons of fossil fuels by drilling for crude oil under the ocean floor and mining coal and fossil gas. However, there are still large amounts of these materials left under the Earth's surface. Extracting and burning it will continue to drive the climate emergency. Preventing companies from doing this, through drilling and mining bans, will keep fossil fuels safely in the ground.

As well as directly stopping greenhouse gas emissions from being released, bans would also force companies and governments to invest more in clean energy sources such as renewables and storage. It would also stop the ecological devastation caused by drilling and mining - including ecosystem disruption and the potential for catastrophic accidents such as oil spills related to deepwater oil drilling.

Bans usually need to be created by governments, who are often in charge of environmental licenses and permitting. International agreements can also be a useful way for multiple countries to undertake bans and avoid local pushback. Efforts by governments, in collaboration with unions, are essential to ensure drilling and mining workers can be retrained and deployed to new, green jobs.

Fossil fuel and mining lobbyists may campaign against bans, and often have powerful connections and influence that is hard to tackle. Similarly, bans will be unpopular among workers if alternative employment opportunities and protections aren't in place. Bans should also be accompanied by affirmative action to invest in alternative clean energy systems and new technologies to help energy demand and behaviors transition to alternative systems.

### Take Action

- ▶ Support laws and lawmakers who favour drilling and mining bans.
- ▶ Contact your local representatives to encourage them to initiate and support bans.
- ▶ Attend protests against mining and drilling activities in your community.



### Gameplay Notes

You must have at least 2 Ecology tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then remove 2 Dirty Energy tokens from your player board for each Regulation tag in this card's stack.



## Early Warning Systems

Early warning systems refer to mechanisms, often involving technologies like sensors and radar, that signal impending hazardous events, like heat waves and storms. These systems are an important part of disaster risk reduction as they give people and services more time to prepare for and react to a disaster event.

These systems can dramatically reduce the impacts of climate-related disasters, especially in countries with less infrastructure to protect them from shocks and stresses. For example, Bangladesh began heavily investing in early warning systems after Cyclone Bhola struck the country in 1970, killing 300,000 people. Their subsequent adaptation efforts have significantly decreased the impact of major cyclones, with Cyclone Fani causing just 5 deaths in the country in 2019.

Communities in the Majority World, specifically those in regions more prone to disasters and which have less economic resilience to shocks, are often the most at risk from climate disasters, meaning setting up early warning systems in these regions is particularly critical. However, early warning systems require the involvement of communities most at risk from disasters to be effective, and many governments are inexperienced in working with these groups or are distrusted by them. Public awareness of disaster preparations and well-planned communication of alerts are also needed.

Sharing experience between countries and communities on how to best design and use early warning systems, as well as their benefits, could help increase their use. For example, research has found that, on average, each dollar invested in improving early warning systems produces nine dollars in economic benefits.

### Take Action

- ▶ Familiarize yourself with disaster preparedness protocols in your area.
- ▶ Get involved with your community in making sure that early warning systems can best communicate life-saving information about natural disasters to people in your town or city.
- ▶ Tackle injustice and hatred within communities, instead investing in strong local ties and relationships between people and services to build community resilience and cohesion.

**Early Warning Systems**

→ to then +

(Flip one Crisis card)

LIMIT  
Each round: once per

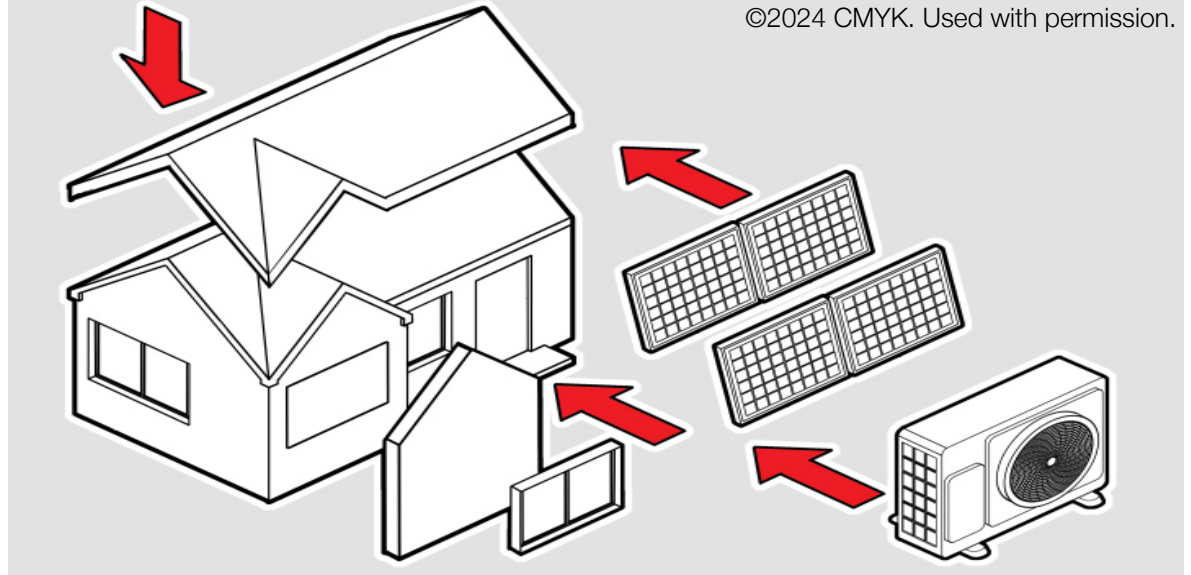
1.224

### Gameplay Notes

- ▶ Discard 1 card from your hand, then flip one unknown Crisis card face up. Then add 1 Resilience token of your choice to your player board.

You may take this action once per Innovation tag in this card's stack each round.





## Efficiency Regulations

According to current targets, 40% of global emissions reductions needed by 2040 will be met by using electricity more efficiently. Sometimes referred to as the 'first fuel,' improving energy efficiency means finding ways to complete a given task (or achieve a given result) using less energy than before. This way, energy efficiency can provide extremely fast and effective emission reductions.

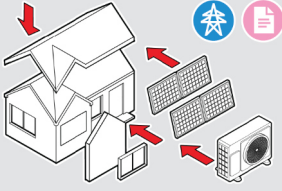
Governments can use regulations to set specific energy efficiency standards for energy generation, products, industrial processes, and buildings that reduce energy consumption. Setting standards work best when enacted alongside policy tools, including financing or loan programs and prioritization of public and social housing upgrades. Efficiency measures may also involve retrofitting projects: replacing lights with LEDs, for example, can reduce energy consumption by 60% or more, which helps lower emissions and energy bills.

Many countries already have some efficiency standards, but most don't go far enough. While fines often exist for violating standards, the fines are often so low that utilities or manufacturers can easily afford to cover them as a business cost instead of improving their practices.

Many efficiency improvements are needed across the Majority World, where people often rely on relatively inefficient equipment, especially for industrial practices. These countries often lack resources for more efficient equipment and could benefit from foreign aid. This would, in turn save money, lower energy demand, and so reduce global emissions.

### Take Action


- ▶ Check that your appliances, lightbulbs or any other electrically powered items in your home, are all highly ranked in efficiency.
- ▶ Encourage your employer to implement energy-efficient practices in the workplace, such as using energy-efficient lighting, equipment, and appliances.
- ▶ If you're able, reach out to your local representatives about setting stricter efficiency regulations in your community or country.



**Efficiency Regulations**

**-1**

LIMIT  
Once per round



1.032

### Gameplay Notes

- ▶ Reduce your Energy Demand by 1.

You may take this action once per round.



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## Efficient Ocean Shipping

More than 50,000 commercial shipping vessels travel through the high seas today, carrying clothing, building materials, appliances, and countless other goods from one part of the world to another. Together these ships produce huge amounts of greenhouse gas emissions each year.

Along with the large number of ships comes a huge opportunity to reduce their climate impact. Simply slowing the speed of the vessels can reduce their greenhouse gas emissions and energy demand. Technology fixes, such as reshaping the stern, making the hull out of slipperier materials, and cleaning propellers, can boost efficiency even more. All together, deploying known energy-saving measures can cut ship fuel consumption in half.

### Take Action

- ▶ If you or your company purchase goods from overseas, ask the carrier what they are doing to reduce the climate impact of shipping.
- ▶ When considering whether to buy something, consider not only its monetary cost to you, but also its cost to the planet in terms of greenhouse gas emissions created in the process of producing and shipping it.
- ▶ Buy locally, for your work and personal consumption.



### Gameplay Notes

You must have 2 Innovation tags in this card's stack to take this action.

- ▶ Remove 1 Transportation Emissions token from your player board.

You may take this action once per round.

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## Electric Vehicle Subsidies

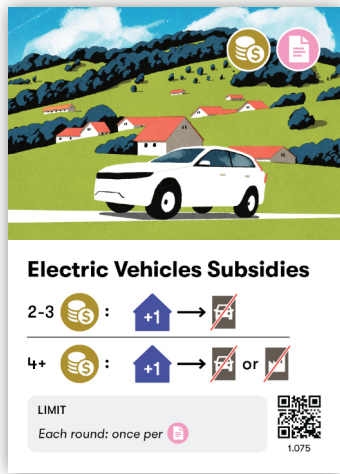
Currently most vehicles run on gasoline or diesel, spewing carbon dioxide as well as other toxic pollutants into the air. Running vehicles on electricity instead not only reduces harmful impacts on the Earth's climate and human health, it also reduces the cost of maintaining vehicles.

Electric vehicles are currently more expensive than internal combustion vehicles, largely due to the battery cost and the high demand relative to supply. Extracting the minerals needed for batteries has adverse environmental impacts. In addition, the needed infrastructure – charging stations, an electric grid able to handle added demand, battery supply chains, and battery recycling options – is still under development, creating a potential bottleneck to wide-scale adoption of electric vehicles.

Governments can encourage consumer demand for electric vehicles through strategic use of rebates, reduced taxes, preferential access to parking/driving lanes, and other policy measures. On the supply side, they can provide subsidies that speed manufacturing as well as development of the needed infrastructure. They will need to take care, however, to provide broad support for the transition, so workers and businesses that depend on the status quo are not left in the dust.

### Take Action

- ▶ Take advantage of EV incentives available to you.
- ▶ Share information about subsidies with others in your circle of influence.
- ▶ Show your support for government policies that promote EV adoption.

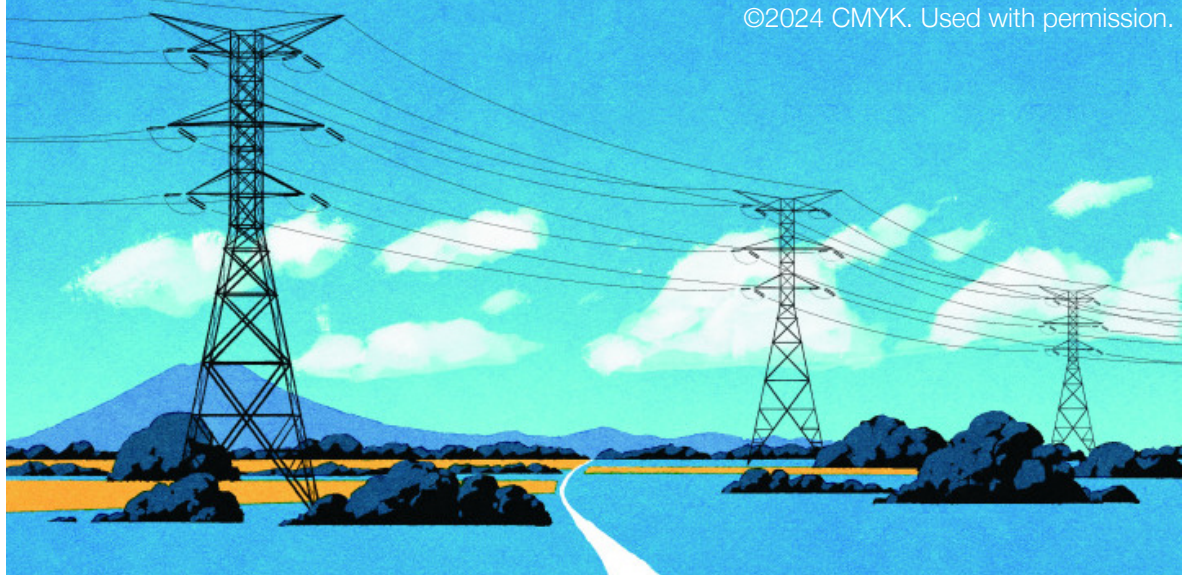


### Gameplay Notes

- ▶ When you take this action, if there are 2–3 Incentive tags in this card's stack, increase your electricity demand by 1 and remove 1 Transportation Emissions token from your player board. If there are 4 or more Incentive tags in this card's stack, increase your electricity demand by 1 and remove 1 Industry Emissions token from your player board.

You may take this action once per Regulation tag in this card's stack each round.





## Electrification Initiatives

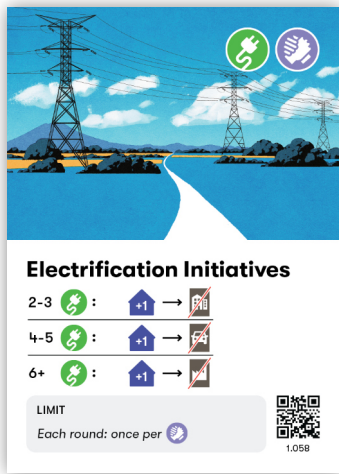
Electrification involves switching the source of energy that underpins our economies from fossil fuels to electricity. It's true that electricity has long been produced by burning fossil fuels (for example, in a coal or gas-fired power plant), but so long as electricity is increasingly generated by solar, wind, geothermal, hydro, and other non-fossil-fuel energy sources, electrification becomes a powerful climate solution.

Electrification typically involves measures such as replacing gas boilers with electrical alternatives, fossil-powered transport with electric vehicles, and electrifying fossil powered industrial processes. In this way, electrification has the potential to bring the benefits of cheaper, cleaner energy to new sectors, and eliminate 75% of global carbon emissions in the process. Converting fossil-fuel-burning devices to electric devices also gives other health benefits, reducing air pollution, for example.

Electrification usually means generating a greater quantity of green electricity, as well as finding ways to store and transmit that electricity. Though cheaper, cleaner energy has clear benefits, in the meantime electrification calls for substantial investment in electrical infrastructure, as well as the implementation of schemes, subsidies and other regulatory changes designed to encourage a switch to electrical technologies. One big obstacle comes from fossil-interests, keen not to lose money sunk into existing fossil fuel related technology and infrastructure.

### Take Action

- ▶ Participate in community conversations about how to justly and equitably site electrification infrastructure such as powerlines, solar panels, wind turbines, and battery storage systems.
- ▶ Buy products made using renewable energy rather than fossil fuels as a production energy source.
- ▶ Encourage your employer to reduce their use of fossil fuels. Encourage your employer to reduce their use of fossil fuels.
- ▶ Look at electric options when replacing fuel-burning devices in your home.



### Electrification Initiatives

- 2-3 Energy tags : +1 Energy Demand, -1 Buildings Emissions
- 4-5 Energy tags : +1 Energy Demand, -1 Transportation Emissions
- 6+ Energy tags : +1 Energy Demand, -1 Industry Emissions

LIMIT  
Each round: once per Society tag



### Gameplay Notes

When you take this action:

- ▶ If you have 2–3 Energy tags in this card's stack, increase your Energy Demand by 1 and remove 1 Buildings Emissions token from your player board.
- ▶ If you have 4–5 Energy tags in this card's stack, increase your Energy Demand by 1 and remove 1 Transportation Emissions token from your player board (but not Buildings Emissions).
- ▶ If you have 6 or more Energy tags in this card's stack, increase your Energy Demand by 1 and remove 1 Industry Emissions token from your player board (but not Buildings or Transportation Emissions).

You may take this action once per Society tag in this card's stack each round.

# Climate

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## Electrify Everything

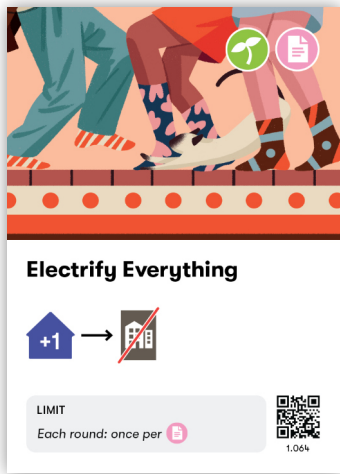
For renewable energy to completely replace greenhouse gas-producing fossil fuels, we'll need to switch out appliances in homes, offices, and other buildings that currently use oil, fossil gas (sometimes called 'natural gas') or LPG for new technologies that do the job using electricity. For example, the biggest fossil fuel users in buildings are furnaces and boilers, water heaters, and gas stoves. Replacing these with alternatives that run on electricity reduces greenhouse gas emissions (especially if the electricity comes from clean sources) but also increases comfort levels and improves indoor air quality. Replacing fossil fuel heating devices with efficient electric heat pumps can reduce overall energy consumption and save money, too.

Replacing appliances and upgrading electrical systems costs money upfront. That means that rebates, grants, and other funding sources from governments, utilities, or other entities can accelerate electrification. However, electrifying everything could also increase the overall demand for electricity. As homes and businesses electrify, utilities will be called on to strengthen and reconfigure grid systems and to build energy storage into systems to ensure that electricity is available when their customers need it. This is costly and requires raw materials, which come with their own greenhouse gas emissions footprint and are often extracted unethically and dangerously from less wealthy countries, mainly in the Majority World. This is why it's so important we also reduce the amount of energy we use, for example through retrofits, and take action to ensure green technologies, trade deals and organizations are designed in an equitable, just and non-extractive way.

As more homes and businesses rely on electricity to provide all of their energy services, grid reliability and energy storage will become increasingly important. If those buildings have been designed to be highly efficient, they can retain the desired indoor environmental conditions with very little energy input. This makes the building more resilient to extreme weather or power disruptions, and may open opportunities to "shift" electrical loads to convenient times of the day when more carbon-free electricity is available—a win-win for grid operators and for increasing the use of variable renewable energy.

### Take Action

- ▶ Consider replacing your appliances that run on gas or oil with electrical appliances, retrofit your home and use less energy where possible and safe to do so.
- ▶ Encourage your utility and local government to invest in renewable energy, grants for low income households to retrofit their homes and to roll-out electric vehicle charging infrastructure.
- ▶ Encourage lawmakers to provide incentives for electrifying everything and legislate out the use of and funding for fossil fuels.
- ▶ Protest unethical extraction of materials and resources from the majority world, and ask politicians to take action on this critical subject.



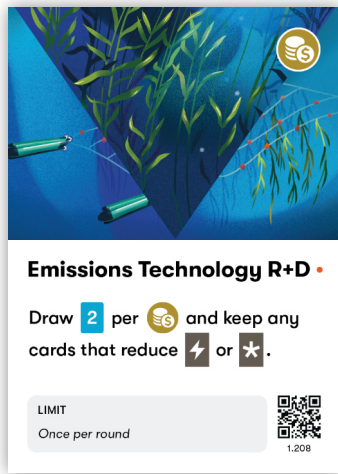
### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Buildings Emissions token from your player board.

You may take this action once per Regulation tag in this card's stack each round.

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## Gameplay Notes

- ▶ When you take this action, draw 2 cards for every Incentive tag in this card's stack. Add any cards that reduce Emissions from Dirty Energy or other Emissions sources to your hand. Discard the other cards.

You may take this action once per round.

## Emissions Technology R+D

As part of its plan to reach carbon neutrality by 2060, China has made significant investments in research and development (R&D) into technologies that can reduce or capture greenhouse gas emissions from polluting industries.

China's investment in greenhouse gas emissions technology R&D is not only important for achieving the country's own carbon neutrality goals, but also for the global effort to address the climate emergency. China is responsible for manufacturing more than 25% of the world's goods, and as a leader in green technology it is supporting other countries to transition away from fossil fuels and decarbonise.

China currently directs a significant amount of resources into researching and developing technologies to reduce emissions - including electric vehicles, carbon capture and storage technologies, hydrogen fuel cells and renewable energy systems. Investment in these technologies has already led to major improvements and cost reductions in batteries, charging infrastructure, and wind and solar technologies, among many others.

However, poor labor conditions in China are a serious concern for its development of clean technologies and R&D processes. Chinese solar companies have been tied to the use of forced labor, for example, and independent unions are illegal. Research and development is a critical arena for bringing the just transition into a cleaner planet, and Chinese R&D is not emulating these important ideas.

## Take Action

- ▶ Support companies and organizations that are investing in emissions reduction technologies.
- ▶ Consider the barriers to decarbonisation in your company, and whether it could undertake research and development to remove them.
- ▶ Advocate for international cooperation on emissions technology research and development.



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## Energy Infrastructure R+D

Research and development to improve energy infrastructure so that it might better support a green energy transition is hugely important for reducing greenhouse gas emissions. Innovations continue to increase the efficiency and reliability of energy infrastructure and systems more widely, while reducing their impact on the planet we call home.

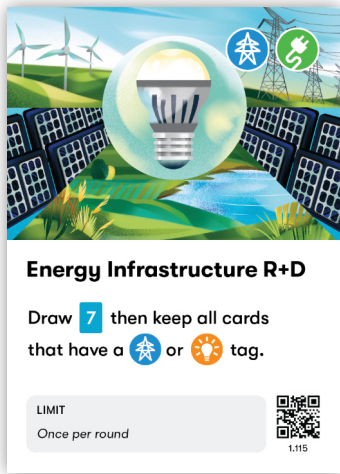
Energy infrastructure is not just limited to our electricity grids. It also describes the technologies needed for extraction, transport, refinery, and storage, and combustion of fossil fuels, as well as the generation of electricity, for example. Historically, much infrastructure innovation has been aimed at fossil energy infrastructure, reducing leaks from methane ('natural' gas), and improving engine efficiency, for example. These have helped reduce emissions, but we must not get caught up in prolonging the life of fossil infrastructure which should be phased out and replaced as soon as possible.

At the same time, innovation with regards to low carbon technologies would be incredibly welcome – especially those relevant to energy infrastructure, from next generation control systems that allow operators to manage increasingly complex energy usage patterns, to more efficient grid-scale energy storage. Likewise, climate hazards like floods, hurricanes, heatwaves, and fires pose threats to global energy infrastructure, so improving resilience to these through R&D is also key to a reliable and safe global power system.

Developing, scaling up, and rolling out these innovations will require new policies that encourage investment and coordinated research into these cutting edge technologies. Driving low-carbon technology is often expensive, time intensive, and has long had to compete with fossil energy research for money, so Government spending and support is especially important when it comes to driving such developments.

### Take Action

- ▶ Contact your elected officials and voice your support for energy innovation. Urge them to prioritize funding for energy infrastructure R&D in their policy decisions.
- ▶ Learn about and support innovative energy infrastructure projects in your community, such as green roofs or solar panel installations.



### Energy Infrastructure R+D

Draw **7** then keep all cards that have a  or  tag.

LIMIT  
Once per round



L115

### Gameplay Notes

- ▶ Draw 7 cards. Add any cards with Grid and/or Innovation tags to your hand. Discard the others.

You may take this action once per round.



# Climate



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## Environmental Movement

2-3  : Draw +1

4-5  : Draw +2

6+  : Draw +3

LIMIT  
Once per round



## Gameplay Notes

When you take this action,

- ▶ If you have 2–3 Ecology tags in this card's stack draw 1 additional Local Project card.
- ▶ If you have 4–5 Ecology tags in this card's stack draw 2 additional Local Project cards.
- ▶ If you have 6 or more Ecology tags in this card's stack draw 3 additional Local Project cards.

You may do this once per round.

# Environmental Movement

For as long as people have recognised our interdependence with nature, there have been movements opposing its destruction. These movements have often argued that humans are part of natural systems and not distinct from them.

Over the last two centuries, environmental movements have had two broad focusses. There are those who concentrate on changing regulations and technologies, like implementing clean air laws and switching to electric vehicles. There are others who also focus on the deeper power dynamics and ways that societies are constructed that lead to the destruction of nature. These include anti-colonial movements that see the extractive connections between imperialism and environmental destruction.

As awareness of the climate emergency has grown, so have environmental movements. These have rapidly reached a global scale, like the school strike movement. These movements include organized groups of scientists, lawyers, health professionals, carers, cleaners, activists and many more. Their aims range from cleaning up local rivers to changing global economic systems.

Being part of an environmental movement is easier than ever. But it can also be deadly, with hundreds of activists killed each year by authoritarian governments and corporations whose power is challenged.

## Take Action

- ▶ Join a local environmental campaign group, or one linked to your profession.
- ▶ Focus your work and expertise on climate action, for example by retrofitting buildings, using cleaner products and services, or asking your seniors to take action.
- ▶ Lobby your elected representative for changes.



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## Fertilizer Efficiency

Plants, like people, need nutrients to thrive. And when those plants are crops, they are often given extra — including nitrogen — from synthetic fertilizers.

Synthetic fertilizers have played a huge role in mass-producing food for worldwide consumption. But they can have impacts that harm human well-being, too. Synthetic fertilizer production uses massive amounts of fossil fuel energy, contributing to the climate emergency. Fertilizers pollute water, and their production generates nitrous oxide, a powerful greenhouse gas. They've also been catalysts for industrial agriculture, which is hugely carbon-intensive, bad for soil quality and erosion and has contributed to deforestation.

Although regenerative agriculture and natural ways to restore soil quality and nutrient levels are preferred, some argue that more efficient fertilizer use, and the use of organic fertilizers, can help alleviate the downsides of fertilizers. Farmers can use nutrient sources such as manure and crops that add nitrogen to the soil to reduce the need for synthetic fertilizers. They can also customize the application rate and timing of fertilizers to the needs of the crop and the condition of the soil to cut down on pollution and overuse.

Research has shown that it's possible to reduce fertilizer use while increasing yield — and saving money, too. Providing farmers with legislation and support to change their fertilizer usage can go a long way toward improving the health of people, our planet, and farm operations all at the same time. However, there are powerful lobby groups seeking to prevent harmful substances from being banned, so this has proven an uphill battle in many countries.

### Take Action

- ▶ If you grow crops, work with a consultant to switch to regenerative agricultural practices.
- ▶ Encourage lawmakers to adopt policies that eliminate fertilizer overuse and regulate against pollution and biodiversity loss.

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### Gameplay Notes

- ▶ Discard 1 card from your hand, then remove 1 Agriculture Emissions token from your player board.

You may take this action once per Regulation tag in this card's stack each round.



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## Financial Risk Regulations

Under capitalism, most economic activity — like building renewable energy plants or setting up a sustainable cafe — is funded by investors, at least initially. They often use financial markets to find projects to invest in and receive a return on that investment. This requires accurate and timely information on these investments.

As the climate emergency affects economies more, investors need information on how climate risks will impact their current and potential investment decisions. Climate- and nature-related risk disclosure frameworks guide companies on what information they need to publish about their climate risk vulnerability to help investors make decisions.

This information should help investors better recognise the benefits of decarbonisation and nature restoration and the risks of unsustainable investments, and encourage companies to identify and reduce their climate-related risks. It is hoped that this will guide investment toward climate action.

But many governments and businesses are over-reliant on these disclosures. They can assume that the only thing standing in the way of sustainability is a lack of information, and fail to make proper regulations and investments. Power, culture, and vested interests are other barriers to action. Disclosures also assume that information on the risks of the climate and ecological emergency can be accurate and timely. Instead, these risks are very uncertain and unpredictable.

While more and better information might increase green investment, this doesn't replace real action on reducing fossil fuels, and green investment may still not come fast enough or be fairly distributed.

### Take Action

- ▶ Positive Money is a research and campaigning organization that reimagines how money, banks, and finance can work better for the wellbeing of people and the planet.



#### Financial Risk Regulations



LIMIT

Each round: once per



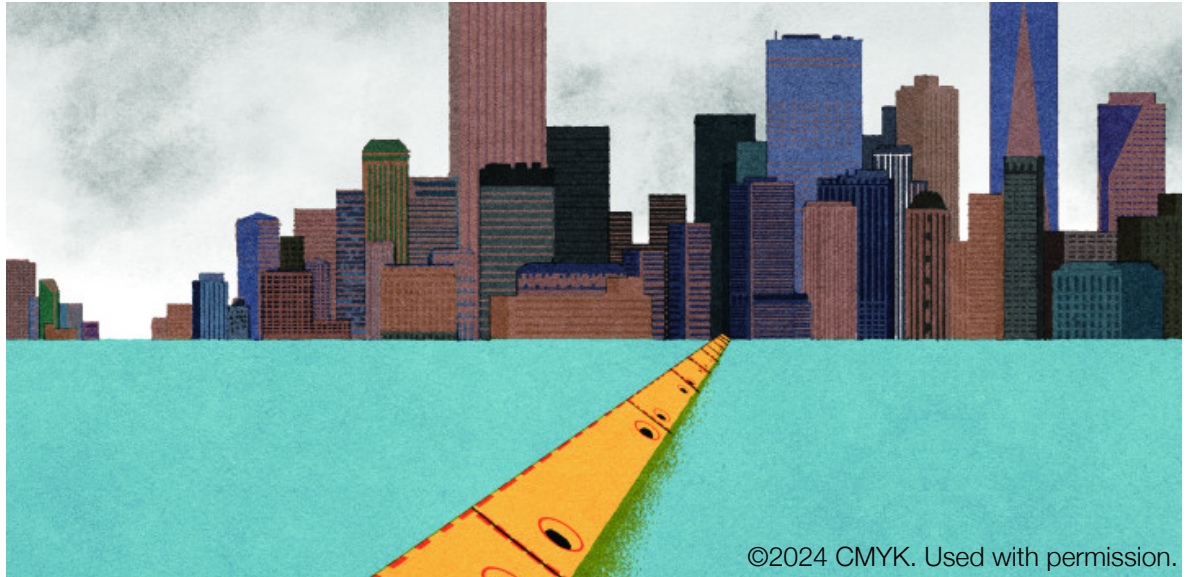
1.088

### Gameplay Notes

- ▶ Add 1 Social Resilience token to your player board.

You may take this action once per Regulation tag in this card's stack per round.





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## Flood Barriers

The concept of a flood defense is very simple: shape a local place such that flood water won't cause damage or risk peoples' safety.

Some flood barrier systems are 'hard' barriers, where a wall is built around an area to keep water from getting in. Their design and engineering is extremely complex, often expensive, and requires upkeep and maintenance. They can be built from human-made materials such as concrete, often called floodwall, as well as with soil and stone, typically referred to as 'levees'.

'Natural' flood management shapes an area to absorb flood water safely, like a sponge. Mangroves and wetlands, for example, can help capture storm surge waters and lessen the burden on human-made flood barriers. Flood plains across fields are also commonly used. Flooding cycles can naturally cultivate healthy ecosystems.

As the climate emergency worsens, sea level rise, more frequent and intense rainstorms, and hurricanes are making flooding more severe. Existing flood barriers and systems were rarely designed with the climate emergency in mind, so they may become less effective.

More and more coastal cities are looking to create flood defenses to protect their buildings and residents from rising water. Scientists, ecologists and engineers have the knowledge to build them effectively but paying for the cost of construction is a major challenge, even shaping natural systems can be expensive.

## Take Action

- ▶ Review flood maps for your home and community to know if you live or work in a flood zone. Make sure the maps are up-to-date and if not, petition your local government to update them.
- ▶ Urge your government to support climate resilience measures both at home, and in vulnerable nations around the world.

## Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Infrastructure Resilience token to your player board for each Infrastructure tag in this card's stack.



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## Food Waste Reduction

Food production and food waste are among the single biggest contributors to the climate emergency. They're also one of the most solvable.

Food production, or agriculture, comes at a huge cost to the climate. Converting wild areas to farmland, fertilizing crops, raising animals, and using energy to grow, harvest, transport, and prepare food combine to make up one-quarter of the world's total human-caused global greenhouse gas emissions. Yet nearly one-third of all of the food the world's farmers grow ends up spoiled, discarded, or simply unused.

Part of the problem with food waste is that for big companies it can be more profitable to throw away food than to save it, leading to poor management of supply chains and over-ordering. Infrastructure can also be a limiting factor, with pests, harvest problems, transportation, and food storage being logistical challenges. Another part is awareness: many people don't realize that wasting food contributes to the climate emergency.

Reducing food waste is a huge win for both our planet and people. It not only benefits the climate, it also alleviates hunger, saves consumers money, and helps protect biodiversity, water quality, and more.

### Take Action

- ▶ Campaign for governments to introduce food waste reduction requirements and fair wages for agricultural workers domestically and abroad.
- ▶ Ask your supermarkets, restaurants and meal events organizers of choice to reduce their food waste by working with food rescue services.
- ▶ Help set up composting and food waste services, with your family, neighbors and/or colleagues.
- ▶ Plan meals before you shop.
- ▶ Store food properly.
- ▶ Learn about date labels and adjust your practice accordingly.

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### Gameplay Notes

You must have 2 Ecology tags in this card's stack to take this action.

- ▶ Remove 1 Waste Emissions token from your player board.



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## Forest Restoration

Forests are home to unknowably complex systems of animals, bacteria, fungi and more. They also store a lot of greenhouse gas emissions: trees and their roots are 50% carbon, and forest soils store greenhouse gasses .

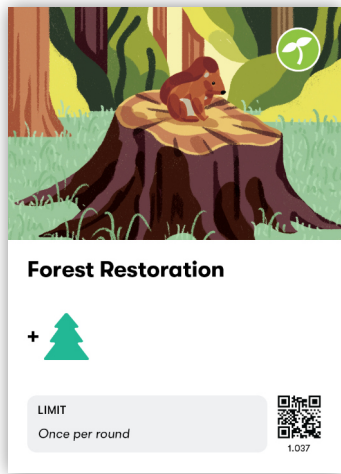
Preserving existing forests, and letting them expand, is always the best strategy for protecting these irreplaceable ecosystems. But restoration is important, too. Restoring forests can enrich ecosystems and enable them to flourish, providing clean water, clean air, habitat for endangered species and much more. Restoring the hundreds of millions of hectares of forest around the world that have been damaged or destroyed would absorb a huge volume of greenhouse emissions from the atmosphere.

One way to restore forests is to plant new trees. But if we stop disturbing the land, trees and other living things will naturally fill the space.

Restoring forests can create changes for people who had started working on the land for other purposes - like farming. New jobs and opportunities will be available protecting, monitoring and preserving the new forests, and government subsidies can help stimulate this change of purpose. But it's important that efforts to restore forests include legal protections that ensure that the new forests are preserved long-term, rather than converted to another use.

### Take Action

- ▶ If you own land that was once forested, return it to its former state, and open it to the local community to steward.
- ▶ Volunteer with a reforestation, invasive species removal, or habitat restoration project.
- ▶ Put pressure on companies whose products you buy or stock you invest in to support forest restoration and protection of restored forests, and to publish information about whether their supply chain is implicated in deforestation.



### Gameplay Notes

- ▶ When you take this action, add 1 Tree token to the board.

You may take this action once per round.





## Fossil Fuel Nationalization

Fossil fuel nationalization would see national governments take control of the fossil fuel industries within their borders to limit their use and oversee their replacement. In many countries, the fossil fuel industry is dominated by private companies who resist a clean energy transition (despite their best efforts to appear like they are doing the opposite). Nationalizing fossil fuel industries would allow governments to control fossil fuels, and encourage the adoption of clean alternatives. They would be able to plan the inevitable sunset of fossil-fuel industries, and a smoother societal transition to clean electrical technologies, creating a smoother path for millions of fossil fuel industry workers. Governments could, for example, set prices in ways that aid the green transition, using any final profits that would have gone to the fossil fuel companies (and their harmful projects) to invest in alternative technologies such as renewables and storage, and decommission stranded fossil-energy infrastructure.

### Take Action

- ▶ Join, or spend some time with, or support an organization or local group that is pushing for the nationalization of fossil fuel industries.
- ▶ Talk about fossil fuel nationalization to your friends and family.
- ▶ Contact your political representatives to ask them to explore the idea of nationalizing fossil fuel industries.
- ▶ Support laws that redistribute fossil fuel profits to people most harmed by fossil fuel industries.



### Fossil Fuel Nationalization



REQUIRES



1.044

### Gameplay Notes

You must have at least 2 Society tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then remove 2 Dirty Energy tokens from your player board for each Regulation tag in this card's stack.



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## Fossil Fuel Subsidies Ban

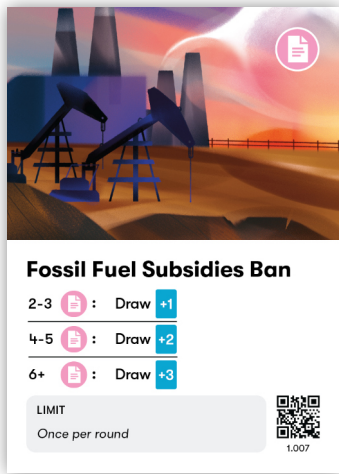
Around the world, energy produced using fossil fuels is made cheaper by government subsidies. Subsidies can include governments announcing discounts on energy bills, lowering costs for customers; or they can be direct payments to companies that extract fossil fuels and produce energy from them. In 2020, worldwide fossil fuel subsidies totalled US\$5.9 trillion, or 6.8% of global GDP.

They might lower prices, but subsidies come at a high cost. By encouraging the burning of fossil fuels, these subsidies contribute to the climate emergency, cause ill health and premature death from air pollution, and mostly benefit wealthier people, as they rarely target poorer groups. Subsidies have also held back the growth in renewable energy by making fossil fuels artificially cheap.

At the UN climate conference (COP26) in 2021, countries agreed to accelerate the phase-out of some fossil fuel subsidies. This could open up much needed funding and make it easier for renewable energy infrastructure to take off. But, despite the huge benefits of doing this, many countries have found it difficult to reform their energy subsidies. This is partly because it can lead to a temporary increase in energy prices, which impacts citizens, leading to a political backlash. Fossil fuel companies are also effective at lobbying governments to keep subsidies.

### Take Action

- ▶ Support campaigns against fossil fuel subsidies.



#### Fossil Fuel Subsidies Ban

- 2-3 Regulation tags : Draw +1
- 4-5 Regulation tags : Draw +2
- 6+ Regulation tags : Draw +3

LIMIT  
Once per round



1.007

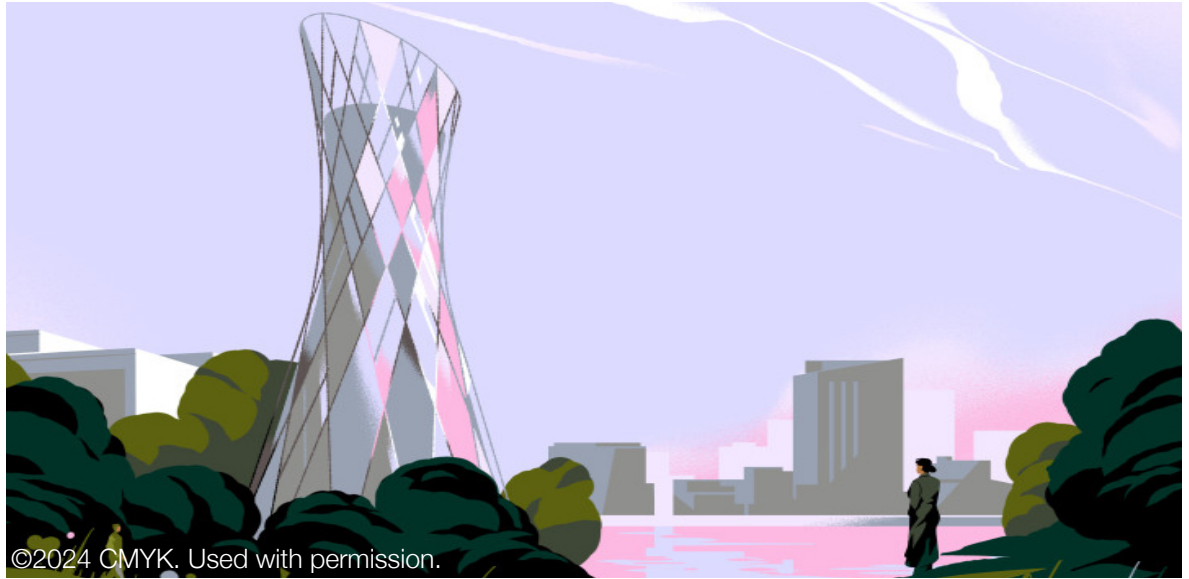
### Gameplay Notes

When you take this action,

- ▶ If you have 2–3 Regulation tags in this card's stack, draw 1 additional Local Project card.
- ▶ If you have 4–5 Regulation tags in this card's stack, draw 2 additional Local Project cards .
- ▶ If you have 6 or more Regulation tags in this card's stack, draw 3 additional Local Project cards .

You may do this once per round.





# Fourth Generation Nuclear

'Fourth generation' nuclear plant designs either scale down the size of a power plant to make mass-manufacturing easier and capital costs lower for each project, or use a new technology in the fission reactor itself. Fourth generation designs are usually also modular designs.

Most of these designs would lessen concerns over weaponizable byproducts. All new nuclear designs are 'walk-away safe,' meaning that the design itself makes major releases of radiation impossible, without requiring action by plant operators.

Fourth Generation Nuclear plants also lower the amount of radioactive waste associated with nuclear (some can even consume existing waste as fuel), though some ecological concerns associated with mining, transport, and radioactive waste remain.

One obstacle to fourth generation nuclear technology is that testing, demonstrating and proving a new design for a reactor core can take years. In addition, nuclear regulatory agencies haven't usually been set up to license new reactor designs. Political efforts to create a new framework for regulation, and funding to enable demonstrations of new designs, could accelerate fourth generation nuclear as a potential climate solution.

## Take Action

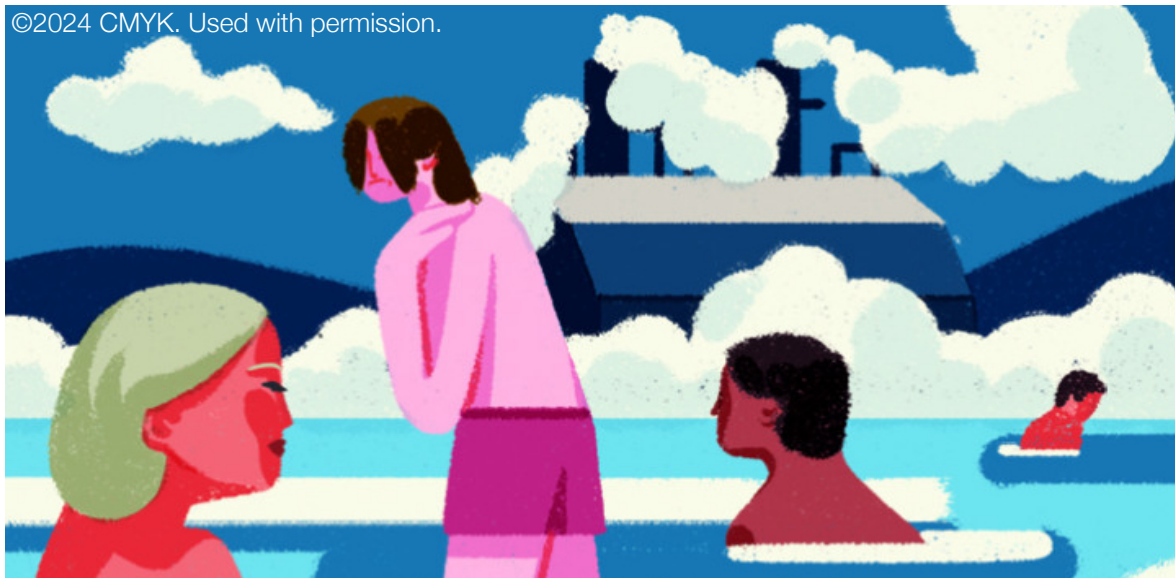
- ▶ If you feel fourth generation nuclear reactors might play an especially important role in a green energy transition where you live, you could write to your political representatives urging them to invest in the development of such technologies.

## Gameplay Notes

You must have at least 1 Regulation tag and 1 Innovation tag in this card's stack to take this action.


- ▶ Add 2 Clean Energy tokens to your player board for each Nuclear tag in this card's stack.

You may take this action once per round.




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**Geothermal Plants**

+ 

LIMIT  
Once per round



1010

### Gameplay Notes

- ▶ When you take this action, add 1 Clean Energy token.
- You may take this action once per round.

## Geothermal Plants

Geothermal power plants extract energy from hot water deep underground, often using steam to power turbines that in turn, generate electricity. They emit no greenhouse gasses and can operate 24/7, forming a major part of certain countries' green energy mix, such as Iceland and Kenya .

There is more energy stored as heat in the Earth's crust than in all fossil fuels and fissionable materials combined. Theoretically, geothermal power could supply far more than humanity's total energy needs. However, in 2020, geothermal energy provided only about 0.5% of global electricity generation. This is because traditional geothermal wells are drilled into natural steam reservoirs, which exist in a relatively small number of places around the world.

Geothermal generation could become a major global energy source, especially thanks to the development and adoption of several emerging technologies that aim to harvest heat from dry rock, often from deeper in the crust than traditional geothermal wells. Yet unwieldy regulation, long permitting processes and a lack of funding currently stand in the way.

### Take Action

- ▶ If you live somewhere where there are untapped geothermal resources, consider asking your political representatives to invest in and streamline the buildout of geothermal generation.



## Green Building Codes

Green building codes are enforceable policies applied to the design, construction and operation of buildings to reduce their environmental impact while being healthier for occupants. They often emphasize energy efficiency, climate resilience, and indoor air quality. The most widely used green building code is the International Green Construction Code, but many cities and countries have their own versions.

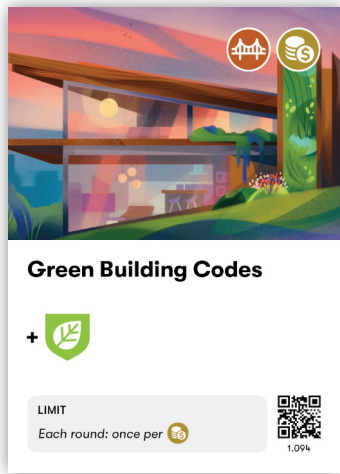
Buildings are responsible for as much as 40% of global greenhouse gas emissions each year. This means that reducing their impact by avoiding unnecessary construction, using sustainable materials, powering them with renewable energy, and repurposing or upgrading existing buildings is critical. In many cases, using these practices also saves money over the life of the building.

Architects and building professionals know how to reduce the impacts of buildings, and this is being put into practice more and more. However, green building codes are still uncommon around the world, and many professionals are not changing how they design quickly enough.

Cities and local governments have led the way in implementing these codes. Putting policies in place at every level of government makes adoption easier and more efficient for building professionals. Educating policymakers as well as building professionals on the benefits of green building codes is key, with consistent standards like the International Green Construction Code simplifying education and training.

### Take Action

- ▶ Ask your local council what they are doing about the emissions from building projects in the area.
- ▶ If you are involved in a new building project, make sure you are building to PassivHaus standards and using clean materials.



### Gameplay Notes

- ▶ Add 1 Ecological Resilience token to your player board.

You may take this action once per Incentive tag in this card's stack per round.



# Climate



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## Green Energy Transition

A green energy transition represents a massive shift in how we generate, consume and use energy. Fossil energy is responsible for 75% of global greenhouse gas emissions, including everything from electricity, manufacturing, transportation, heat in buildings, and more. A green energy transition would see us switch from heavily polluting fossil fuels like coal, oil, and natural gas, to renewable sources that generate no greenhouse gas emissions like wind and solar. Such a green energy transition is already well underway, delivering cleaner air, cheaper energy, new jobs, and making our communities more resilient to disasters. Wind and solar power plants are now the vast majority of new generators being built: according to Systems Change Lab, from 2019 to 2021, electricity solar generation grew by 47% and wind by 31%.

And yet a green energy transition doesn't just mean building more cheap, green generation – it also means investing in green energy infrastructure, and rolling out the flexible technologies to ensure that the availability of clean energy lines up with energy demand – such as energy storage, green hydrogen, and consumer-flexibility (which rewards people for using up energy at points where clean energy is abundant, for example). This will be increasingly important as demand increases due to increased electrification, as industries that were previously powered by fossil energy, such as heating and road transport, increasingly transition to clean electricity instead (with other, trickier to reach sectors, such as aviation and some heavy industries transitioning to other clean alternatives, like green hydrogen, for example).

Even as the amount of renewable energy increases worldwide, it doesn't necessarily 'replace' fossil energy because energy demand continues to rise. To effectively limit global heating, the rollout of clean energy systems must accelerate rapidly, while being combined with energy saving measures and fossil fuel suppression. With that in mind, the green energy transition can be facilitated by direct investment in clean energy systems, or encouraging investment via subsidies and other mechanisms (especially where investors are divesting from fossil energy). Likewise, streamlining planning and regulation for clean technologies and systems, investing in research and development, and both mandating and compelling businesses and sectors to decarbonise will also play a key role. A green energy transition will provide cleaner, fairer, cheaper and more secure energy, but it must be supported, especially as a fear of economic disruption could slow the process.




### Take Action

- ▶ Join, or spend some time with, or support an organization or local group that is pushing for the phaseout of dirty electricity and fossil fuel energy more widely, such as the Sunrise Movement.
- ▶ Ask your political representatives to work harder to replace fossil fuels. You might also ask them to invest in and streamline the buildout of clean energy generators and crucially, the infrastructure to support them, including batteries and other flexible tech, as well as the suppression of fossil energy projects.
- ▶ Reduce your energy consumption by using energy-efficient appliances and turning off lights and electronics when not in use.
- ▶ Encourage the company you work for to divest from fossil fuels and invest in renewable energy.

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### Green Energy Transition

Whenever you take an action that adds +   you may .

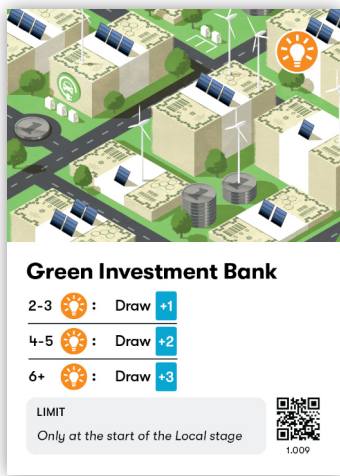
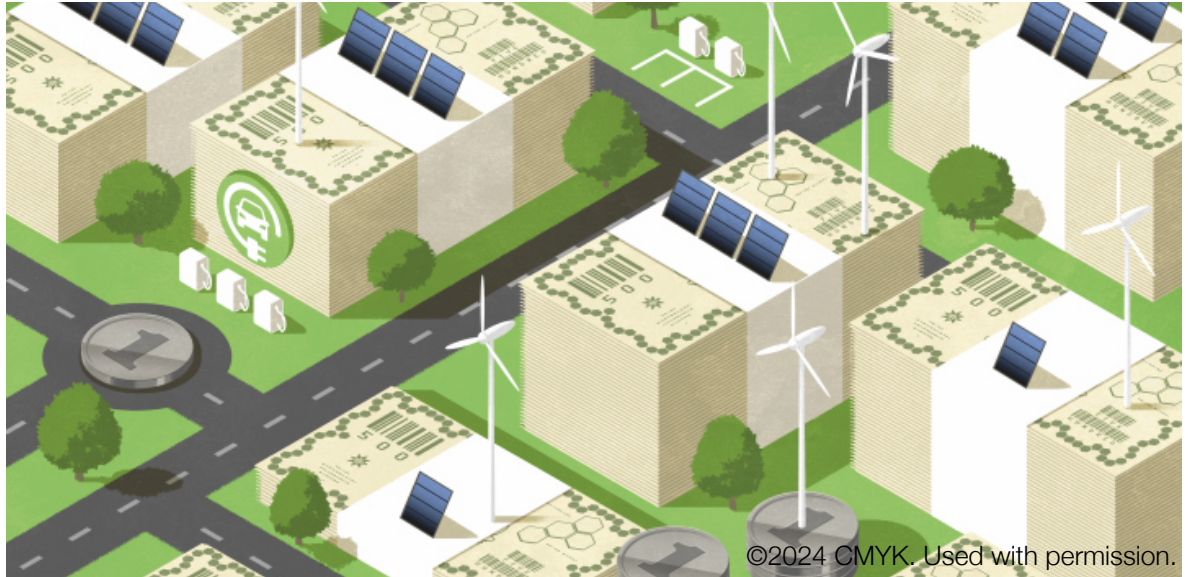


1.0x3

### Gameplay Notes

- ▶ Whenever you take an action on a Local Project in your play area that adds 2 or more Clean Energy tokens to your player board, you may remove 1 Dirty Energy token from your player board.





# Green Investment Bank

It is estimated that tackling the climate emergency will require trillions of dollars of investment a year over the coming decades. These investments will protect against catastrophe, improve health and wellbeing, and generate profits. Yet investors are still not providing funding at this scale. This is partly because they seek short term profits, while green investments might be more profitable over longer periods of time - although few investors consider the cost of inaction on the climate emergency when assessing viability. It's also because some green technology is in its earlier stages and so the possibilities for profit are more risky.

Public banks that make green investments could overcome these barriers. These are banks that are backed by governments. This means they can borrow money and lend it to green investments more cheaply than private banks, by using lower interest rates. Their specialist focus on green investments means they are better at spotting profitable opportunities. They also invest more patiently, waiting for investments to pay off.

This reduces risk, so public banks can focus on funding innovation and longer term investments. It also means that private investors are more likely to co-invest with public investment banks, creating a bigger overall green investment. But this is reliant on governments not closing or selling the public investment bank, which can cause private investors to drop out, when the situation looks more risky and unreliable to them.

## Take Action

- ▶ Join a stakeholder or community banks, democratically-run alternatives to public banks that may similarly have local, green and financial stability goals.
- ▶ Campaign for your government to set up regional public investment banks to fund local retrofit and climate infrastructure.



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## Green Quantitative Easing

In the wake of the 2007/8 global financial crisis, governments sought a way to get economies growing again. Many ruled out spending public money. This meant that central banks had to play a big role, and they did so using quantitative easing (QE).

Banks create money whenever they issue loans. Under QE, central banks created new reserves of money, and used this to buy up financial assets, like the bonds issued by governments and companies, who then had more money to spend in the economy. This increased the price of these assets, which meant interest rates went down and it became easier for banks, people and companies to borrow again, putting even more money into the economy. The idea was that economic growth would follow.

Many of the financial assets purchased with QE helped fund fossil fuels and other destructive economic activities. So green QE advocates propose that only assets that fund renewable energy, natural restoration, and other sustainable activities should be purchased. This would help lower the cost of borrowing for these investments, encouraging more green investment. It would also help economies by creating green jobs, as well as helping save economies from being destroyed by the climate emergency.

While some central banks are exploring how to make their purchasing programmes greener, green QE is not widespread. Other central banking policies to boost climate action, which do not involve injecting money into the economy, include introducing climate risk into central bank goals and mandates; developing macroprudential risk-assessment tools to measure and regulate the climate risk companies and investors are exposed to; designing green lending guidelines for banks; ending central bank purchasing of bonds issued by fossil fuel companies; and developing credit guidance rules such as preferential interest rates on green loans.

### Take Action

- ▶ Support groups like Positive Money, an international research and campaigning organization that reimagines how money, banks, and finance can work better for the wellbeing of people and the planet.

**Green Quantitative Easing**

2-3 : Draw +1

4-5 : Draw +2

6+ : Draw +3

LIMIT  
Once per round

1.008

### Gameplay Notes

- ▶ When you take this action, draw 1, 2, or 3 additional Local Project cards if you have 2–3, 4–5, or 6 or more Incentive tags in this card's stack.

You may do this once per round.





## Green Steel

That steel chair, car chassis, roof, or bridge you used today is not only an amazingly functional item, it's also the bearer of a huge climate cost. Steel is the most-used metal in the world. Making it demands massive amounts of fossil fuels to melt and amalgamate the raw materials that comprise it, as well as to mine and extract the materials in the first place.

Researchers are developing new ways to make steel that reduce or eliminate the need for fossil fuels. One approach to “green steel” is to use hydrogen fuel produced with electricity generated from wind, solar, or other emissions-free energy sources. Another is to use an electric furnace powered by clean electricity.

Since these processes aren't yet being used at an industrial scale, they are generally more expensive than fossil fuel-based steel production. If demand for steel continues to grow, this approach will get cheaper.

Although recycled steel is now common, raw steel still requires minerals and materials to be extracted. That's why it's essential that we maintain, retrofit and properly use the buildings and materials that we have already, and make new products out of reused and bio-based materials as a first priority, avoiding carbon-intense materials and new demand for steel wherever possible.

### Take Action

- ▶ Think twice before buying a product made with steel. Might there be a more environmentally friendly option?
- ▶ When you do buy a product made with steel, buy one that will last. If you find yourself no longer in need of it, sell or donate it to another user.
- ▶ When a steel product is no longer functional, recycle rather than discard it.
- ▶ If you are involved with planning a new building, ask your architectural team about reducing the amount of steel used in construction and whether there are recycled, reused or bio-based alternative structures that could be specified.

**Green Steel**

REQUIRES	LIMIT
	Once per round

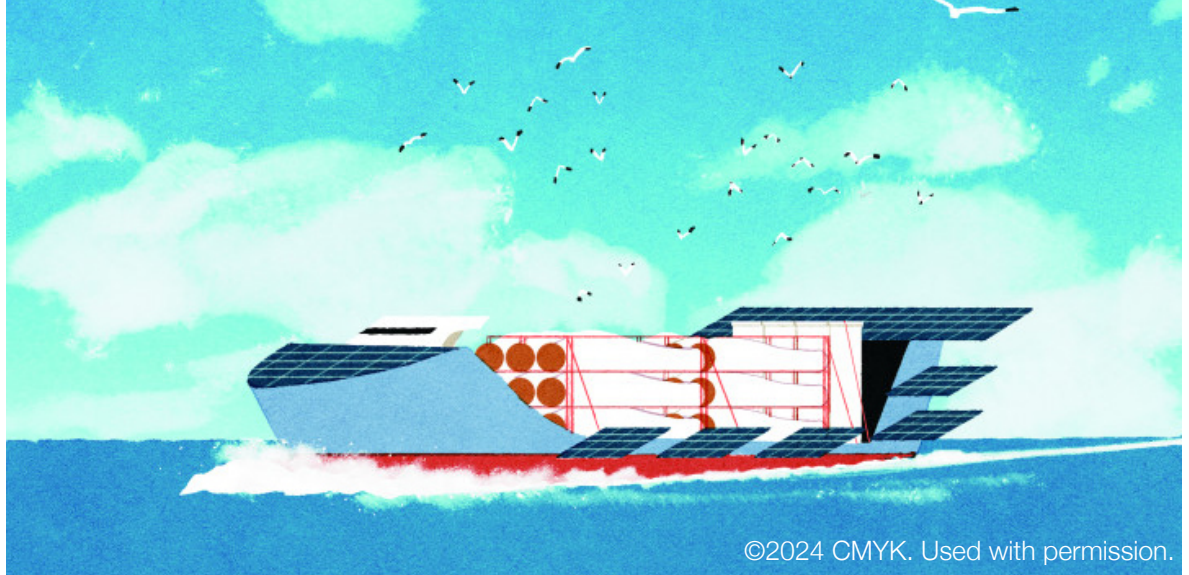
1.068

### Gameplay Notes

You must have 1 Incentive tag in this card's stack to take this action.

- ▶ Remove 1 Industry Emissions token from your player board.

You may take this action once per round.



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## Green Tech Exports

Green technologies, like solar panels, electric vehicles and batteries, have become an important part of China's transition to a low-carbon economy. This took off in 2015, when China launched its “Made in China 2025” plan, which aimed to upgrade the country's manufacturing sector and increase the production of green technologies.

Since then, the Chinese government has established policies and financial incentives to support the development and export of green technologies, and China has become the world's largest renewable energy investor and producer. China's leadership in green technology exports has helped reduce the cost of renewable energy technologies and increased the roll out of clean energy in the Majority World. Access to cheaper green technology has allowed some countries to implement renewable energy faster than they otherwise would be able to.

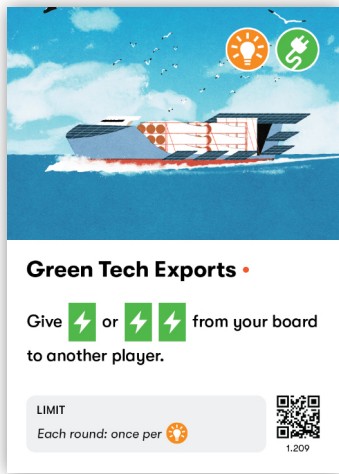
Critics have raised concerns about the mineral extraction needed for the green transition, and the treatment of workers in some Chinese processing facilities. While fossil fuel infrastructure also requires the (much greater) use of rare minerals, it is essential that green technologies are built responsibly and all mining is done with minimal ecological harm. Workers contracted in solar panel and green technology factories must be treated fairly, paid properly and in decent conditions.

China's role in green technology exports is likely to continue to grow in the coming years. As the world moves towards a low-carbon economy, there will be increasing demand for green technologies, and China is well-positioned to meet this demand.

### Take Action


- ▶ Support sustainable and clean technology companies through your purchasing decisions.
- ▶ Look at other organizations in your industry to find inspiration for ways to make your own company more sustainable, or share knowledge and expertise from your organization with other companies looking to become more sustainable.
- ▶ Support international cooperation efforts that facilitate clean technology exports.

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### Green Tech Exports

Give  or  from your board to another player.

LIMIT  
Each round: once per 



### Gameplay Notes

- ▶ When you take this action, move up to 2 Clean Energy tokens from your player board to the player board belonging to one (and one only) other player.

You make take this action once per Grid tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.





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## Grid Enhancing Tech

Grid enhancing technologies are designed to increase the capacity, efficiency, or reliability of our electrical grids. Electrical grids are the web of wires and pylons that connect electric generators such as nuclear plants and solar farms to such as towns and factories, bringing electricity right down to the street level. Like highways, electrical grids are prone to congestion, which can make it hard to deliver the right amount of electricity to the right amount of load. One solution is to build more wires (like you can build more roads), but another is to increase the efficiency of the existing wires. Grid enhancing technologies can modify the amount of electricity that can flow on a wire depending on external conditions, direct electricity through the network in more efficient ways, store energy across the system at times of abundance, or encourage the use of electricity in a way that better fits the availability of renewable power. Digital technologies can also give grid operators information about what is going on across the network, and help model complex scenarios.

In short, grid enhancing technologies are vital for getting renewable energy onto the system quickly and cheaply. Yet, being a much less visible aspect of a clean energy system than wind and solar farms, for example, they receive far less attention than they should. Many governments and system operators have been late to realize the importance of developing and rolling out grid technologies, especially with regards to their role in a green energy transition.

### Take Action

- ▶ Contact your political representatives, urging them to support renewable-friendly grid-enhancing technologies.

**Grid Enhancing Tech**

LIMIT  
Each round: once per

1.067

### Gameplay Notes

- ▶ Discard 1 card from your hand, then remove 1 Industry Emissions token from your player board.
- You may take this action once per Grid tag in this card's stack each round.

# Climate



## Half Earth Rewilding



REQUIRES  
16 15 16

LIMIT  
Once per round



## Gameplay Notes

You must have at least 3 Incentive tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Ecological Resilience tokens per Ecology tag in this card's stack.

You may add tokens to any one (and one only) player board (including yours), once per round.

# Half Earth Rewilding

Half-Earth is the goal of expanding nature preserves to 50% of the Earth's surface to stop mass extinction

Entomologist Edward Osborne (EO) Wilson and journalist Tony Hiss coined the term 'Half-Earth' in 2014, building on similar efforts by the Wildlands Network and the WILD Foundation since the 1990s. Conservationists in these two organizations had been inspired by Wilson's research on island biogeography in the 1960s, where he and Robert MacArthur formulated a mathematical relationship between biodiversity and territory based on the fourth root. Decades later, Wilson and other activists realized that nature preserves had become islands of biodiversity in a sea of human-modified landscapes. If a mere 10% of ecosystems are protected in parks then only 56% (i.e.  $4\sqrt{0.1}$ ) of species would survive, while conserving 50% — Half-Earth — would safeguard 84% of the world's biodiversity ( $4\sqrt{0.5}$ ).

To find room for Half-Earth it is necessary to tackle three problems: meat consumption, the territorial footprint of renewable energy systems, and the conservation movement's colonial past. The livestock industry occupies far more land than any other sector of the world economy, making it the greatest driver of the extinction crisis. Renewables have a low 'power density' (W/m<sup>2</sup>) compared to fossil fuels, which means that they can require a lot of space. Since nature preserves, the meat industry, and renewable energy are already making competing claims on scarce land, we must fight to prevent Indigenous Peoples and other marginalized populations from being displaced. Environmental and conservation groups have to do more to atone for their often dark past and build alliances with Indigenous peoples and the environmental justice movement. A goal as ambitious as Half-Earth cannot be realized in isolation of the global agricultural and energy sectors, and without the support of a diverse, international, and radical coalition.

## Take Action

- ▶ As an individual, significantly – or even completely – cut down on animal products and as a member of a community push for vegan food to be the default choice – be it at work, school, or an activist occupation.
- ▶ Join a local or global conservation organization that is working to protect biodiverse spaces, rewild ecosystems by introducing extirpated species, and improve connectivity between nature preserves.
- ▶ Support politicians and policies seeking to reduce energy consumption (e.g., carless cities, efficient appliances, passive housing, and train travel) so that less renewable infrastructure is needed.
- ▶ Learn about and reflect on historical episodes when the environmental movement collaborated with racist authorities at the expense of marginalized groups.



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**Heat Pumps**

LIMIT  
Each round: once per

1.065

## Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Buildings Emissions token from your player board.

You may take this action once per Incentive tag in this card's stack each round.

## Heat Pumps

A heat pump uses electricity to pull heat from the air, water, or ground and move it somewhere else, for example into a home that needs warming up. It can move heat in different directions. A refrigerator is a heat pump, as is an air conditioner. A reversible heat pump can warm a building in the winter as well as cool it in the summer.

Building heating and cooling currently accounts for some 15% of energy use around the world. The bulk of that comes from fossil fuels, including oil, fossil gas (sometimes called 'natural' gas), and coal. One benefit of a heat pump is that it is much more efficient than most heat sources: you only have to put in a small amount of energy for it to extract a lot more energy from the air, water or ground. The other benefit is that it can run off electricity, which can be generated by renewable energy sources - unlike gas stoves, which are tied to a fossil fuel source.

Heat pumps are already being used in many places around the world. They aren't cheap in all countries yet because they are a relatively new technology, but they can pay for themselves quickly through savings on fuel costs. They also are fairly easy to install.

## Take Action

- ▶ If your employer is planning to construct or upgrade buildings, introduce and encourage the use of heat pumps to keep it comfortable indoors.
- ▶ Switch to a high-efficiency heat pump to heat and cool your home.





## High Speed Rail

Imagine being able to travel from one city to another in a third of the time your car can make the trip — and with less than a tenth of the climate impact of air travel. That's what high-speed rail has to offer.

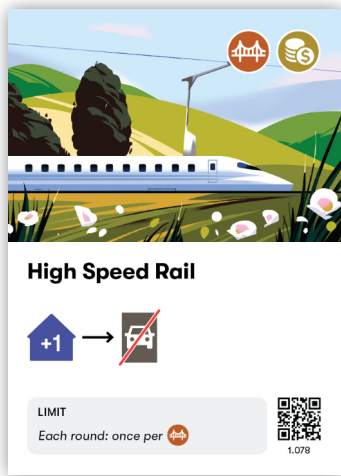
Hurting along on electrified rails at 200 kilometres per hour or more, high-speed trains filled with people can rapidly bridge the gap between destinations while reducing greenhouse gas emissions up to 90 percent compared to planes, cars, buses, or conventional rail. When deployed at scale they can reduce car traffic and pollution, boost footfall to urban centres, and help people use their time more efficiently.

High-speed rail has been effectively deployed around the world, with more than 50,000 kilometres already installed in places like China, Japan, and Europe. Governments and railway networks elsewhere around the world are hopping aboard as well.

The technology is expensive and material-intensive: it requires new infrastructure, including rails, electrical generation and transmission facilities. It also cuts through land that might otherwise be used for habitat or growing food. And it requires a change in behaviour — not easy for individuals who are used to (or have no alternative to) driving everywhere. But in areas of dense population, where reducing automobile traffic would have multiple benefits, high-speed rail is beneficial for both people and the climate.

### Take Action

- ▶ If high-speed rail is available, use it wherever possible instead of driving or flying. Ask your employer to let you work from the train - they often have wifi connections.
- ▶ Learn about high-speed rail. If it could be appropriate for your community, introduce policymakers to the benefits.
- ▶ Learn more about and campaign for a frequent-flier levy, and encourage policymakers to ban short-haul flights when a train alternative exists.

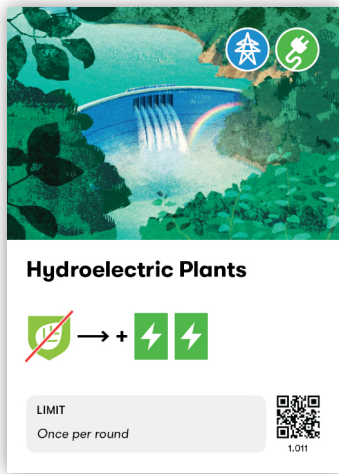


### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Transportation Emissions token from your player board.

You may take this action once per Infrastructure tag in this card's stack each round.





## Hydroelectric Plants

Hydroelectric plants, generally found in dams across rivers, provide more electricity worldwide than any other low-carbon energy source, and they continue to grow today. Hydropower is relatively affordable, especially as their ‘fuel’ – water – is free. A hydropower generator’s output is flexible, as the water flow is easily controlled, and it can also help store water. Hydropower is a renewable energy source, though it does have some associated emissions (take those connected with construction, for example)

While a powerful source of clean electricity, large hydroelectric plants, or mega-dams, can come with high natural and human costs. They may drastically change the landscape, displace millions of people, or create geopolitical tensions as water sources are coveted and redirected. By cutting off fish like salmon from traveling up the river to breed, they can also disrupt fisheries and create food insecurity in communities around the plant.

Small in-stream hydropower projects, when designed carefully, will not disrupt the river’s flow. They produce small amounts of electricity, and can replace diesel generators and help expand energy access. Small-scale hydropower is especially valuable in remote areas without access to electrical grid networks. These small systems are more expensive per kilowatt than fossil fuels, and some costs may fall on communities or families. Government programs or projects from international groups and nonprofits can help meet these costs.

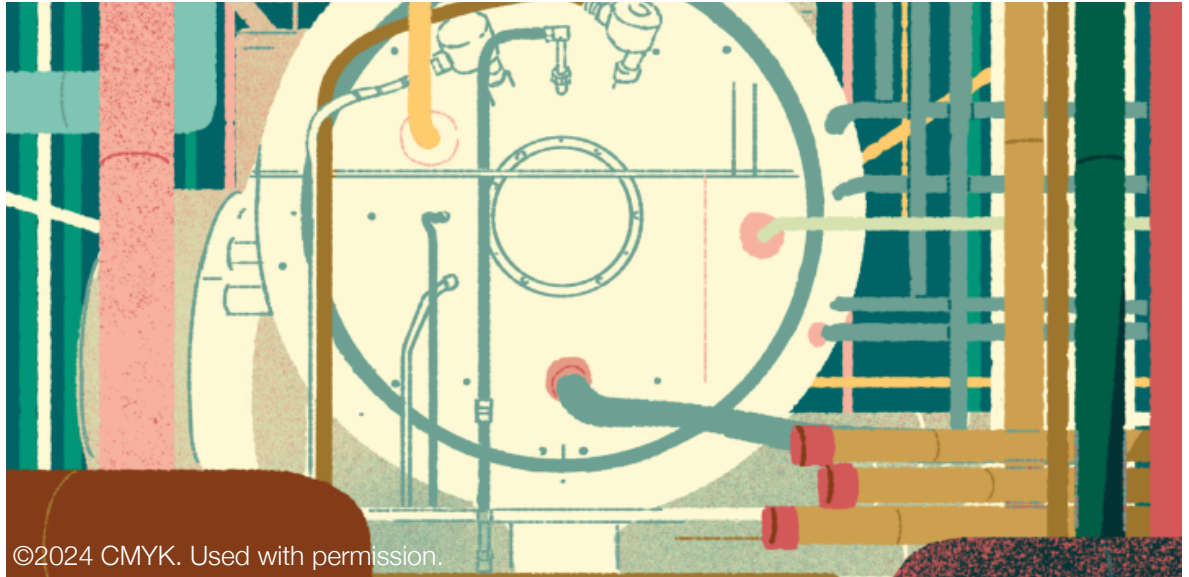
### Take Action

- ▶ If you’re able, advocate for a small hydropower system in your community. Reach out to your local power authority and keep up to date on any new developments in your local grid.
- ▶ Consider advocating against mega-dam projects in your area that could negatively impact your community.

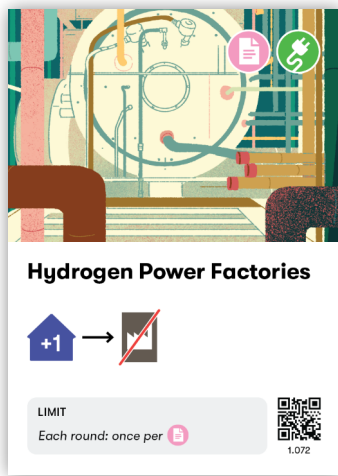
### Gameplay Notes

- ▶ When you take this action, remove 1 Ecological Resilience token from your player board to add 2 Clean Energy tokens to your player board.

You may take this action once per round.



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## Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Industry Emissions token from your player board.

You may take this action once per Regulation tag in this card's stack each round.

## Hydrogen Power Factories

Converting factories that rely on fossil fuels to power their operations with hydrogen as an alternative fuel source can significantly reduce industrial emissions. When hydrogen is used as a fuel source, it produces water rather than CO<sub>2</sub>, or other greenhouse gasses.

It is important to consider how the hydrogen is produced when assessing its ability to help reduce emissions. Most of the world's hydrogen is derived from fossil fuels in processes so carbon intensive that they render this 'grey' hydrogen dirtier than coal overall.

It is possible to produce 'green' hydrogen via electrolysis, which uses electricity to split water into oxygen and hydrogen. We can use electricity generated from clean sources such as wind and solar (especially at points where there is an overabundance of green energy), we can create 'green' hydrogen. Because green hydrogen is currently scarce and very energy intensive to make, it is important that we use it only to decarbonize the most urgent sectors such as aviation, shipping, and industry — using hydrogen to power factory processes that are proving especially difficult to electrify, for example.

## Take Action

- ▶ Encourage your political representatives to introduce policies that support green hydrogen generation, and policies that encourage people to make the most of green hydrogen. (Using hydrogen for home heating, for example, is often considered to be a waste, as there are other, more viable green alternatives in this sector, such as heat pumps).
- ▶ Support policy and regulatory frameworks that bring the benefits of green hydrogen to bear on industrial factory processes that are proving especially difficult to decarbonise.
- ▶ Support policies that end subsidies for fossil fuel plants.
- ▶ Divest and encourage others to divest in energy companies that still operate fossil fuel plants.



## Inclusive Immigration

People move home for many reasons: to escape oppression, to find new opportunities, for work, or family, or more. Inclusive immigration means everyone being able to move safely and without prejudice, receiving the support they need to move and settle safely and prosperously.

Increasing the quota of people allowed to enter a country from abroad, or removing quotas entirely, helps ensure that everyone can live where they choose to, and find safe homes. Policies that support the rights of people moving into a country - such as providing permanent residence, national IDs, and the full right to work - help them to settle quickly and prosper.

Many governments and media commentators scapegoat immigrants for societies' problems. Rising populist sentiments in many countries threaten inclusive immigration policies by casting immigrants as 'outsiders' who are undeserving of support or inclusion.

Advocating for and educating people about fair immigration policies can reduce these false narratives, and counter xenophobic violence and harassment.

It is also important that governments help people arriving in a country build safe and stable lives. This includes helping them access healthcare, welfare support, safe housing and education facilities. Smooth processes to help them find stable and dignified work will help people settle in a new country.

### Take Action

- ▶ Support local migration care and asylum centres, for example volunteering your time to mentor or welcome people arriving in your area.
- ▶ Challenge false anti-immigration narratives in the media and among your peers.
- ▶ Campaign against efforts by your government to introduce limits on migration.



### Gameplay Notes

- ▶ When you take this action, move 1 Community in Crisis from another player's player board onto your player board. (Ask permission first.)

You may take this action once per Society tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.





## Indigenous People's Tenure

Indigenous Peoples have nurtured – and been nurtured by – the lands they have called home for centuries or millennia. They are the custodians of valuable knowledge, and experts when it comes to keeping ecological and climatic systems balanced and healthy, even in the face of immense pressure and exploitation. After centuries of neglect, their voices should be listened to and acted on, and Indigenous Communities should receive the credit they deserve for their long-standing environmental contribution.

Ensuring that Indigenous Peoples have control over the lands they call home supports their rights as a people. Indigenous Peoples' Tenure also helps protect ecosystems from being ill managed in ways that would release more greenhouse gasses and/or sequester less greenhouse gasses, both of which contribute to climate change.

Indigenous Peoples' ability to manage their lands remains threatened by extraction and those who would profit from it, but committing to acknowledge and protect historic landholders' rights is not only the right thing to do, it's the climate-smart thing to do as well.

### Take Action

- ▶ Support efforts to protect the rights of Indigenous people to traditional lands.
- ▶ As you pursue climate solutions, consider other ways of knowing besides Western science.
- ▶ When making purchases, favor products that support Indigenous peoples' efforts to protect the environment.

**Indigenous People's Tenure**

3-4 : +

5+ : +

LIMIT  
Once per round

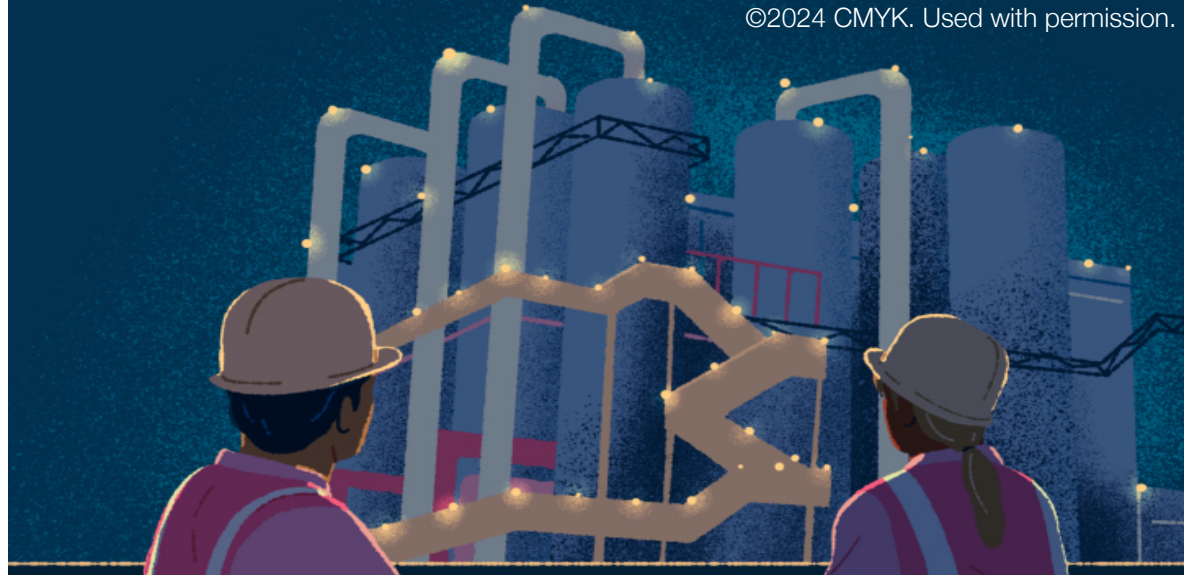
1.056

### Gameplay Notes

- ▶ When you take this action, add 1 Tree token to the board if you have 3–4 Ecology tags in this card's stack or add 2 Tree tokens to the board if you have 5 or more Ecology tags in this card's stack.

You may take this action once per round.





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## Industrial Electrification

Industrial electrification involves switching industries that currently power their operations with on-site fossil fuel combustion to electricity. Many facilities use fossil fuels to power their industrial activities, often to generate industrial heat for processes such as washing, rinsing, drying, distillation, melting glass, smelting iron into steel and the calcination of limestone for cement production. Some of these activities can already be replaced by equipment that uses electricity rather than burning fossil fuels. With additional research, there is an expectation that the vast majority of the world's industrial processes could be switched to electricity. Where full electrification is not currently possible, it is also possible to develop hybrid systems that dramatically reduce the reliance on fossil fuels for industrial processes.



### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Industry Emissions token from your player board.

You may take this action once per Society tag in this card's stack each round.

### Take Action

- ▶ Support policies that require or encourage industry (or individual industries) to electrify.
- ▶ Join, or spend some time with, or support an organization or local group that is pushing for the electrification of industry.
- ▶ Advocate for research that could lead to technologies to reduce reliance on fossil fuels for industrial processes.

# Climate



## Integrated Planning Solar

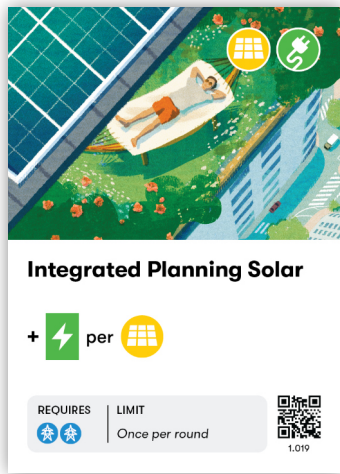
Taking solar energy into account during city planning (and infrastructural planning more widely) can maximize the usefulness of this clean energy source, and simplify a solar energy rollout.

In this case, integrated planning involves prioritizing the installation of solar panels in areas that get a lot of sunlight, and limiting adverse social and ecological impacts. Such areas often include rooftops, parking lots, and other underused urban spaces. Integrated planning might also involve taking building design, energy efficiency, and the placement and development of grid (or 'microgrid') infrastructure into account, to ensure that solar energy can be effectively integrated at scale. This approach has the advantage of reducing greenhouse gasses and improving urban air quality, but also creating new jobs, stimulating local economies while saving money, and making cities more resilient in the face of environmental disasters.

Integrating solar requires careful, holistic planning, involving many parties, which relevant authorities and companies aren't always prepared for. It should always be done in consultation with energy experts to ensure panels are installed and connected effectively.

### Take Action

- ▶ Install solar panels on your home or business if feasible.
- ▶ Encourage your company to hire a sustainability manager that can recommend actionable steps to integrate sustainability into your business.
- ▶ Work with local governments and community organizations to identify and prioritize suitable areas for solar installations.



#### Integrated Planning Solar

+ ⚡ per ☀️

REQUIRES  
⚙️ ⚙️

LIMIT  
Once per round



### Gameplay Notes

You must have at least 2 Grid tags in this card's stack to take this action.

- ▶ When you take this action, add 1 Clean Energy token to your player board for each Solar tag in this card's stack.

You may take this action once per round.





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## Long Range Transmission

Give ⚡ or ⚡⚡ from your board to another player.

LIMIT  
Each round: once per ⚡



## Long Range Transmission

Long range transmission refers to the power lines (for example, high-voltage direct current lines) that efficiently carry electricity across long distances. These can help integrate renewable energy into a grid because they make it possible to install solar panels and wind turbines where conditions are best and then transmit that electricity over long distances to places where it is needed, including from one country to another. Balancing the distribution of electricity generation in this way can help address the ‘intermittency’ of wind and solar resources and help ensure a supply of clean energy year round.

Robust, well connected long range transmission lines are also critical for climate resilience. Disasters occur. During a record heatwave that hit the western United States in 2022, states in the region were able to handle both power demand and supply by using an integrated, high-efficiency regional transmission grid that allowed them to send electricity where it was needed most and avoid large scale blackouts that could have been devastating to communities in the region.

Building transmission infrastructure that is able to support large quantities of ‘intermittent’ clean energy generation presents a huge challenge. Without a robust transmission system, a transition to energy that is cleaner and cheaper overall will likely be impossible in many countries. Yet this remains a relatively neglected part of the clean energy transition compared to boosting clean energy generation, for example. Combining long range transmission with energy storage and other flexible technologies should help reduce the amount of infrastructure needed, but many grids still need record amounts of infrastructure in a relatively short time frame. Those that are responsible for buildout must be given the resources necessary to keep up with green targets, be adequately compelled to meet those targets, and be held accountable for missing them. At the same time, many countries are exploring how to change their rules to make transmission buildout easier without hurting people or the environment. Some options include allowing people to benefit financially from nearby transmission infrastructure, in order to reduce local opposition.

## Take Action

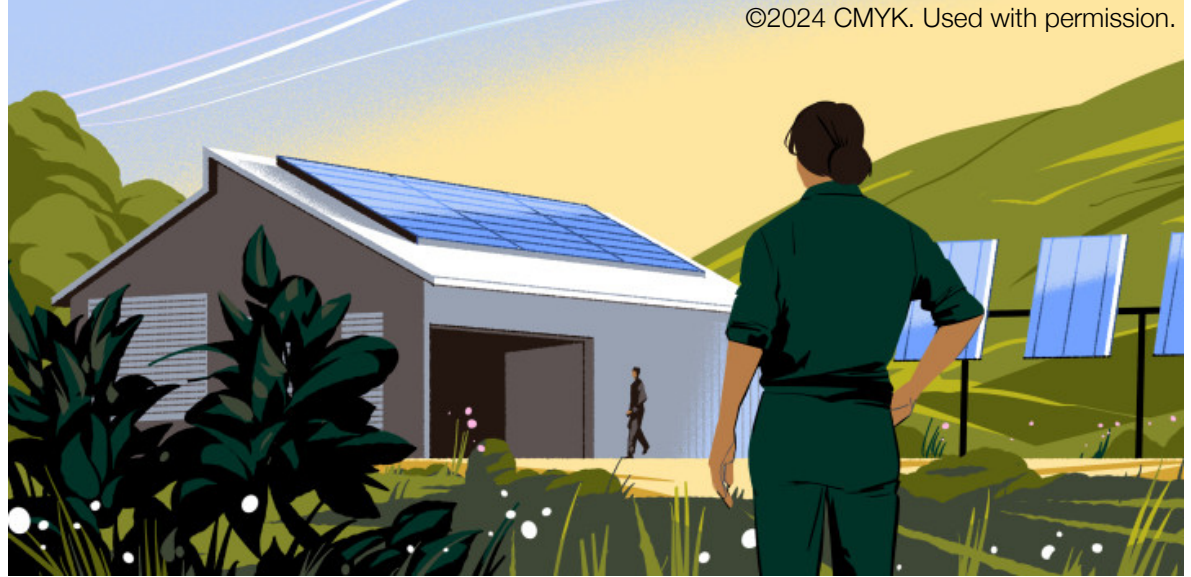
- ▶ If there is a hearing on building new high-voltage transmission lines in your community, make your voice heard and tell your local representatives to support infrastructure that is important for a renewable transition.
- ▶ Ask your political representatives to speed up the buildout of vital green energy infrastructure, and hold those responsible accountable.
- ▶ Conserve energy when possible by turning off lights and electronics that aren’t in use, or adjusting your thermostat. By reducing your overall energy usage, you can help lower demand in your region and ensure energy is getting where it needs to be.

## Gameplay Notes

- ▶ When you take this action, move up to 2 Clean Energy tokens from your player board to the player board belonging to one (and one only) other player.

You may take this action once per Grid tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.







## Low Eco-Impact Solar


Low eco-impact solar farms preserve topsoil to ensure that the land that surrounds them remains productive. One of the few downsides of solar energy is that solar farms use a large amount of land per megawatt. While panels can be placed on buildings and other under-utilized surfaces, and improved efficiency can reduce the amount of land needed, the fact remains that getting the amount of solar power we need will require a fair bit of land. Traditionally, solar developers clear and level the land before installing solar panels. With low eco-impact solar, developers only level land where necessary and regardless preserve the topsoil. Developers then seed the ground with native plants, especially those that are friendly to bees and other pollinators, and have the option to maintain the areas directly around panels with grazing animals. This allows the land to remain highly productive and reduces the erosion that can lead to polluted brownfield soils. This approach can be extended to allow entire farms to be built and operated in conjunction with solar farms, and can lead to a dramatic reduction in the land designated exclusively for solar energy.


### Take Action

- ▶ Get involved in a local conservation group.
- ▶ Attend public meetings and hearings to encourage and require good siting policies.
- ▶ Get involved in community solar projects to encourage the use of best practices.

**Low Eco-Impact Solar**




 per
 

LIMIT  
Each round: once per 



1.013

### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Solar tag in this card's stack.



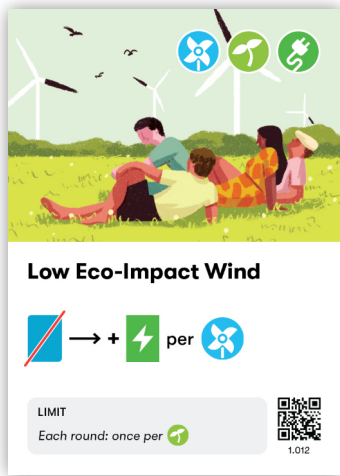


## Low Eco-Impact Wind

Low eco-impact wind farms are sited and constructed to avoid impacts to local plants, animals, and communities. One of the few downsides of wind energy is that wind farms use a large amount of land and come with a unique set of aesthetic and ecological impacts. While the efficiency of wind turbines will continue to increase, the fact remains that getting away from fossil fuels will require land for renewable energy production. With low eco-impact wind farms, developers carefully consider not only where the best wind resources are when siting a project, but also whether the towers will harm birds and other wildlife. In particular, low eco-impact wind farms avoid migratory routes and use technologies to limit the likelihood that birds will run into or be displaced by wind towers. Low eco-impact wind farms are also designed to boost local economies, for example, a farmer might use a wind turbine as an added source of revenue while still being able to farm around the towers.

### Take Action

- ▶ Get involved in a local conservation group.
- ▶ Get involved with a community energy wind farm.
- ▶ Attend public meetings and hearings to encourage and require good siting policies.



### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Wind tag in this card's stack.



## Luxury Consumption Tax

On average, the wealthier someone is, the more they will contribute to the climate emergency. This is partly because wealthier groups do more carbon-intensive luxury consumption, like regular flying and driving in larger cars. They also have investments and savings which prop up companies and activities that produce greenhouse gas emissions. Overall, the world's richest 1% contribute more than twice the greenhouse gas emissions of the poorest half of humanity.

Yet we all face the same global carbon budget: the amount that can be emitted before temperatures rise above dangerous 1.5C or 2C levels. More business class flights and SUVs means less for poorer communities to use on growing food, heating homes, and life's other essentials.

Taxing luxury consumption is one way to reduce greenhouse gas emissions. This would make carbon-intensive luxury activities more expensive, disincentivizing them and highlighting that this behavior is not compatible with avoiding the climate emergency. It would also raise revenues that could be spent on supporting poorer communities and the rollout of clean technologies. Higher costs for greenhouse gas emissions might also encourage luxury manufacturers to innovate to save costs. Meanwhile, reductions in inequality are generally good for societies.

Luxury consumption taxes would need to be coordinated globally so luxury manufacturers and consumers don't just move their greenhouse gas emissions to another place. They also need to be designed carefully so that they target luxury consumption and the wealthiest individuals, not the poorest in society.

### Take Action

- ▶ Support campaigns such as Stay Grounded and Tax Justice Network.



**Luxury Consumption Tax**

Draw **2** per **Regulation** tag and keep all cards that reduce **⚡** and/or **✳** (any type of Emissions).

LIMIT  
Once per round



1.054

### Gameplay Notes

- ▶ When you take this action, draw 2 cards for every Regulation tag in this card's stack. Add any cards that reduce Emissions from Dirty Energy or other Emissions sources to your hand. Discard the other cards.

You may take this action once per round.



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## Major Nuclear Program

A major nuclear program would involve one country – or coalition of countries – planning and building a series of many nuclear power plants as part of a wider coordinated project. Historically, major national or provincial nuclear programs have been the only way nuclear power plants have been built in any significant quantity. For example, France, Sweden, and Ontario each built many similar nuclear plants over the course of 10-15 years, and shut down nearly all of their fossil fuel power plants. Such programs are also the only major historical examples of fossil fuel plants being shut down en-masse. For this reason, some see such nuclear build out as an effective climate solution. On the other hand, these programs would require significant expenditure, and need to both jump through numerous regulatory hoops, and overcome public skepticism linked to the ecological impacts and wider risks associated with nuclear energy.

**Major Nuclear Program**

→ + ⚡⚡ per ⚛

REQUIRES

1.051

### Gameplay Notes

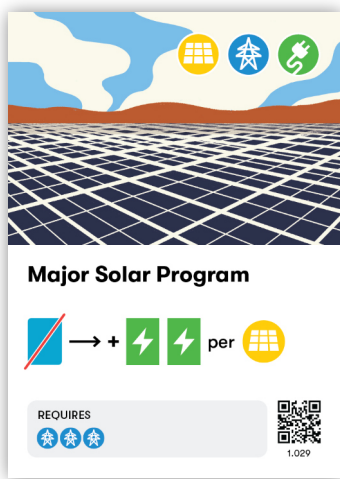
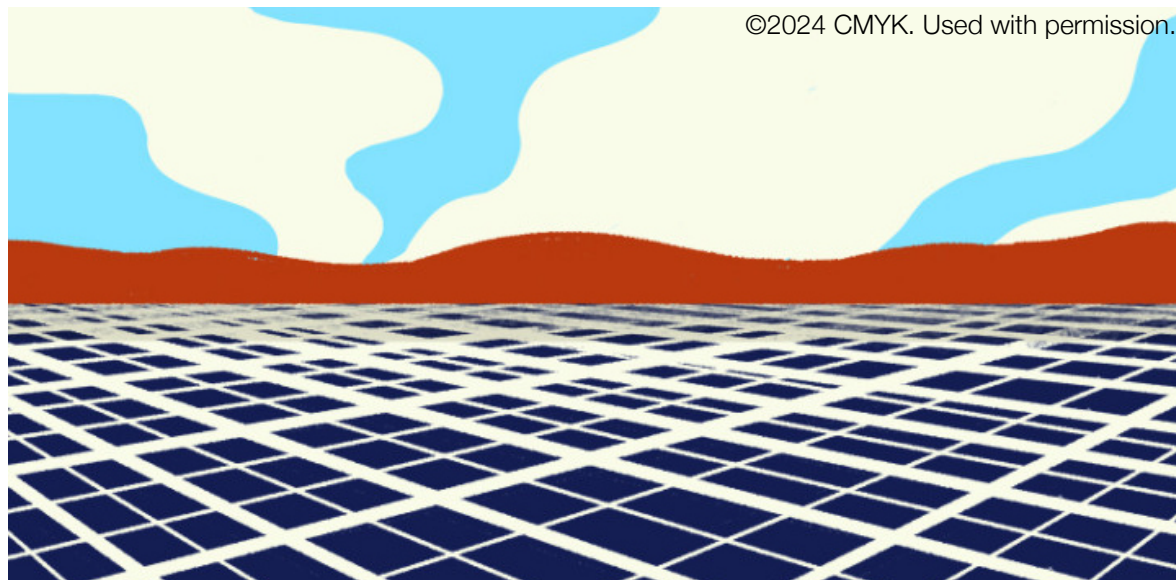
You must have at least 2 Regulation tags and 1 Society tag in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Clean Energy tokens to your player board for each Nuclear tag in this card's stack.

### Take Action

- ▶ In the US and several EU countries, there are conversations about directly repowering fossil fuel power plants with nuclear reactors, making use of existing turbines and grid connections. Such a program would only happen by national government mandate. If done at scale this could help decarbonize the grid. If you feel nuclear energy might play an especially important role in a green energy transition where you live, you can contact political representatives to urge the implementation of a well considered nuclear program.





## Gameplay Notes

You must have at least 3 Grid tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Clean Energy tokens to your player board for each Solar tag in this card's stack.

# Major Solar Program

A Major Solar Program is a large-scale plan to greatly increase solar energy generation. Such a program could take many different forms, but would likely involve significant government investment in building large solar power plants, research and funding for new solar technologies, simplified permitting processes to make it easier (and less expensive) to install solar energy, or tax incentives to help homeowners, businesses, and utilities install solar panels, for example.

A major solar program would likely also be accompanied by efforts to develop and roll out flexible technologies, such as energy storage systems, and heavy investments in - and improvements to - the power grid so that it might handle all these new clean, green electrons, transporting them to places where they are needed.

Wind and solar already constitute the vast majority of new energy generation being built. However, a major solar program would go further, helping to reduce greenhouse gas emissions from electricity, bringing down electricity prices, creating new jobs in renewable energy, and helping improve energy security by reducing reliance on fossil fuels.

## Take Action

- ▶ Personal: Install solar panels on your home or business to generate your own renewable energy.
- ▶ Professional: Support the adoption of solar energy within your workplace.
- ▶ Political: Support local community solar initiatives and programs that make it easier for individuals to access and benefit from solar energy.





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## Mangrove Restoration

Mangroves are plants that grow in tropical and subtropical areas where land meets the ocean. They aren't a single species of plant, but they tend to have adaptations that allow them to thrive in waterlogged soil and salt water.

These plants not only provide rich habitat for a variety of species, stabilize shorelines and cleanse water, they also help slow climate change by absorbing greenhouse gas emissions from the air and storing them in their branches and the soils below. Hectare for hectare, mangroves can store several times as much carbon as tropical forests.

Mangroves have declined in recent years as agriculture, tourism, aquaculture, and road and dam construction have destroyed 20% or more of mangrove ecosystems. Restoring mangroves is possible by planting or allowing them to regrow naturally. However, mangroves thrive in a narrow range of water levels. As sea levels rise, so may the need for restoration efforts to help them to adjust to new conditions.

### Take Action

- ▶ Support nonprofit organizations that conserve coastal wetlands.
- ▶ If you live near a coast that suffers from mangrove destruction, work with your local government agencies to start or help with an existing restoration project.
- ▶ Contest efforts to build on or cut down mangroves in your area, and ask local politicians to support you.
- ▶ Tell others about mangroves and the many benefits they provide to people and our planet.



### Gameplay Notes

- ▶ When you take this action, add 1 Ocean token to the board.

You may take this action once per round.



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### Massive Tree Farms



LIMIT  
Once per round



## Gameplay Notes

- ▶ When you take this action, remove 1 Social Resilience token from your player board, then add 2 Tree tokens to the board.

You may take this action once per round.

You may not take this action if you do not have any Social Resilience tokens on your player board to discard.

## Massive Tree Farms

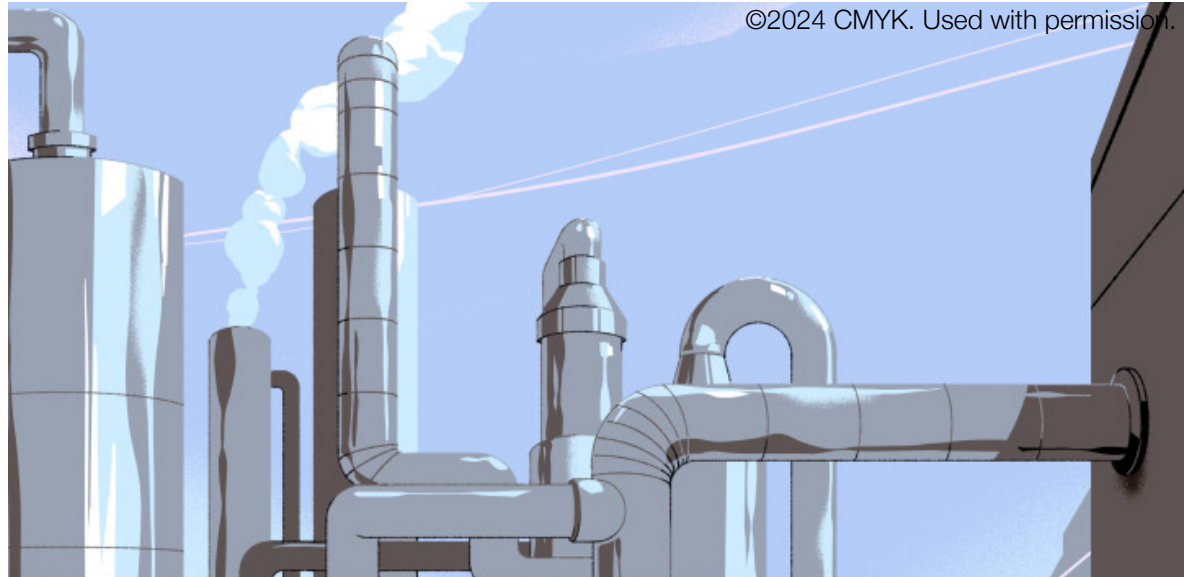
Trees directly remove greenhouse gas emissions from the air. A mature tree can absorb on average 22kg of carbon dioxide each year, using photosynthesis to turn it into wood, leaves, bark, and roots.

It's tempting to try to solve the climate emergency by planting billions of trees. But massive tree planting can cause problems. It can reduce people's ability to thrive, affect livelihoods and desecrate sacred spaces if it involves unjustly taking control of land. Planting concentrations of single species can reduce the ability of ecosystems to cope with change, since single species tend to be vulnerable to pests and disease.

As with so many practices, being strategic is key. We can avoid planting trees where other land uses are better suited to the area. We can mix trees with farm crops or plant in pastures. We can plant a variety of native trees instead of a single species. Tree planting in the right place, under the right circumstances, can be a strong contribution to tackling the climate emergency.

## Take Action

- ▶ Plant native trees and other species in your community.
- ▶ Encourage your city or town to plant native trees, rewild unused spaces and have 'no mow' seasons to help pollinators thrive.
- ▶ When buying wood products, select those made from accredited sustainably grown trees.



## Methane Removal

Methane is an especially potent greenhouse gas that traps 80 times more heat than carbon dioxide. While there is currently less methane than carbon dioxide being emitted into the atmosphere by human activity, the rate at which methane is emitted has increased more quickly.

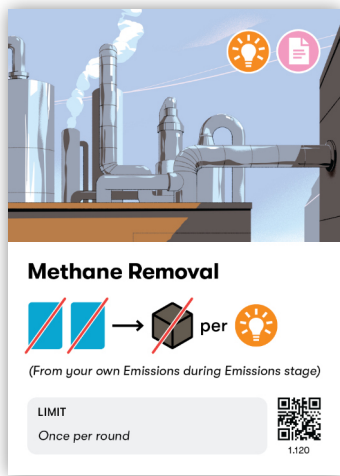
Large quantities of methane are created by decomposing plants and animals trapped underground in the Arctic. As the atmosphere warms and Arctic permafrost melts, we risk triggering a feedback loop: trapped methane is released, causing further global heating and more melting that releases more methane. On top of this, around 70 megatons of methane are leaked from oil and gas projects annually.

Methane removal relates to attempts to reduce the amount of methane in the atmosphere. One example is the use of porous minerals called zeolites to filter methane and convert it to carbon dioxide, not fully removing it but decreasing its warming impact. It could potentially also be converted into ethanol fuel.

Methane removal lags far behind carbon dioxide removal, though solutions that cut down methane emissions at the source do exist. Another challenge is that methane concentrations, despite their impact on global heating, are so chemically low that capturing it directly is difficult and energy intensive. More funding for research and development could help improve these technologies.

### Take Action

- ▶ Advocate for composting services and food waste reduction initiatives in your neighbourhood.
- ▶ Ask your political representatives to phase out subsidies for meat producers and support initiatives to encourage healthy, plant-based diets.
- ▶ Advocate for methane regulations on oil and gas operations and for cleaning up methane leaks with your elected representatives.

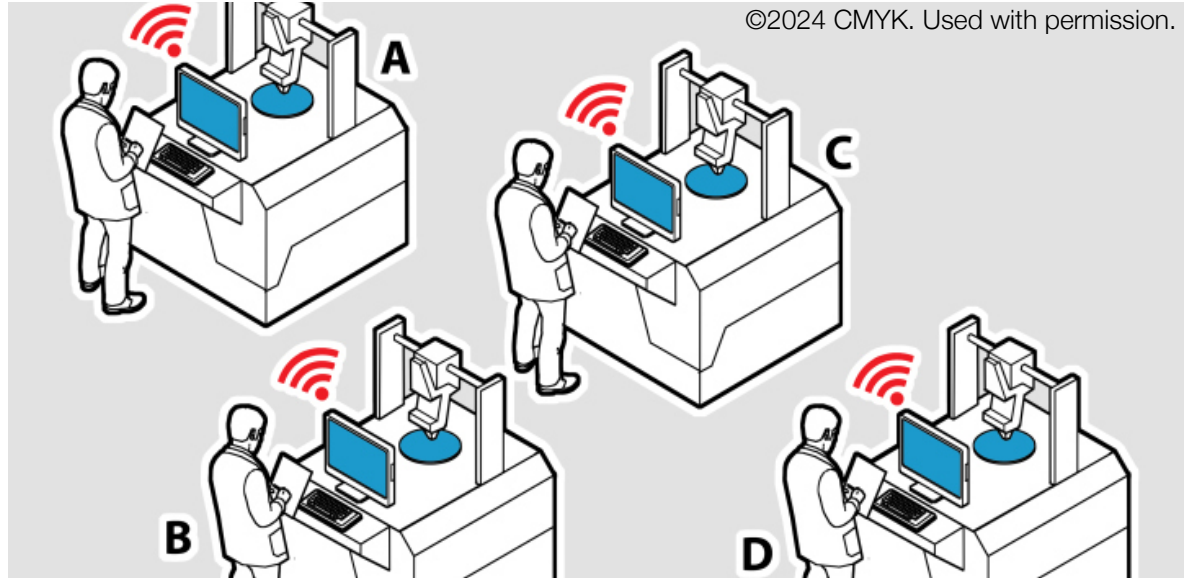


### Gameplay Notes

- ▶ During the Emissions stage, before adding your Carbon cubes to the Recent Emissions area, discard 2 cards from your hand. Remove 1 Carbon cube from your Emissions per Innovation tag in this card's stack.

You may take this action once per round.





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## Microfactories

Microfactories are small-scale industrial facilities constructed to deliver products to local markets. They generally have fewer negative impacts on the landscape and people who live nearby, while creating local jobs. Microfactories reliably have smaller footprints and tend to require fewer resources than larger centralized factories. Microfactories are easily scaled, so they can produce the optimal amount of products at any given time. Because microfactories are relatively cheap to build and take up significantly less space than traditional factories, they can be situated nearer to sources of raw materials, end users, and local transportation hubs. This reduces transportation emissions, while allowing factories to take advantage of local renewables.

### Take Action

- ▶ Encourage your political representatives to introduce policies that support microfactories (for example the streamlining of regulatory processes).

**Microfactories**

+1 →

LIMIT  
Each round: once per

1.071

### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Industry Emissions token from your player board.

You may take this action once per Infrastructure tag in this card's stack each round.





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## Microgrids

Microgrids are electrical power networks designed at smaller scales than typical 'national grids'. Often built around the buildings, communities, or wider infrastructure they serve, they can generally operate both alongside, or independent from a larger grid. Microgrids tend to have their own energy generation sources, such as solar panels or wind turbines, which are connected to local energy users, and increasingly, energy storage systems batteries as well. In these cases, a local microgrid can largely power a community on clean energy alone.

Given their distributed generation and ability to operate independently, microgrids are often resilient to disruptions from weather or other disasters that affect larger power grids. Their smaller scale makes it easier to add additional renewable generation, and being closer to users reduces power lost in transmission over long distances. Today, in many isolated or rural communities, especially in Global Majority countries, microgrids are often easier to build than fossil-energy infrastructure, providing the opportunity to build a clean energy system from the ground up, rather than adapting an existing, dirtier system.

Microgrids do face financial and legal barriers. Raising funds can be difficult, especially given the smaller scales and variety of designs. At the same time, most places lack a clear legal definition of a microgrid and this makes complying with local laws difficult, while increasing permitting costs.

National or local governments and utility companies are often the most important decision makers when it comes to supporting the growth of microgrids. Partnerships between public and private institutions can sometimes help overcome challenges, so a system might be built and operated by the combination of businesses, utilities, communities, and government. Whatever shape microgrids might take, consistent, supportive policies and comprehensive standards are key.

## Take Action

- ▶ Support a reputable group that is facilitating the building of microgrids in your area, or that supports the building of clean energy-based microgrids from the ground up in a global majority country, where they are especially needed.
- ▶ Support policies encouraging the adoption of clean energy-based microgrids.
- ▶ Urge your electricity provider to support and facilitate the building of clean microgrids.

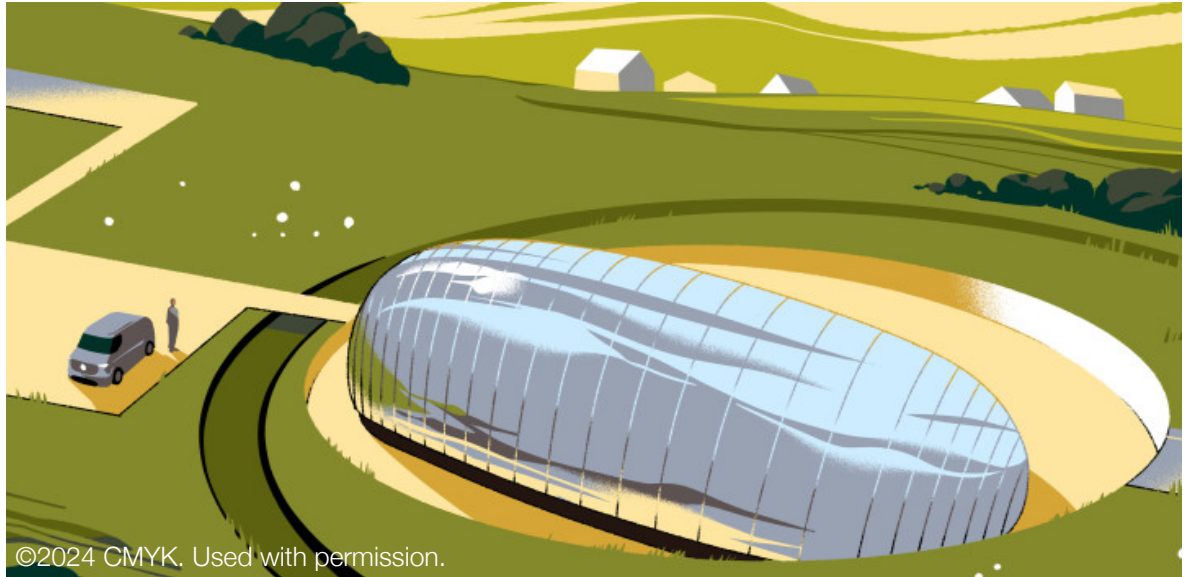
**Microgrids**

→ + per

1.095

## Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Infrastructure Resilience token to your player board for each Incentive tag in this card's stack.



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## Modular Nuclear



1.023

## Modular Nuclear

Modular nuclear plants are meant to make nuclear power affordable and scalable. One of the main problems with nuclear plants since the 1980s (at least in Western countries) has been long construction times and spiraling costs. This was largely because almost every nuclear plant has had a unique design, with first-of-a-kind problems and custom on-site construction.

‘Modular’ nuclear plants would be mass-manufactured in factories, then shipped to each site and installed. Each would be identical to all others, with potentially hundreds or thousands of a single design being manufactured – something that has never been attempted.

Most modular designs are also ‘fourth generation’ designs and have ‘walk-away’ safety. However, they do not eliminate existing ecological concerns associated with nuclear energy, for example, the pollution that accompanies uranium mining and difficulties associated with waste storage.

Theoretically, a modular nuclear model could make new nuclear plants cheaper than existing nuclear designs, as well as coal and gas plants. Here, the main obstacles are slow regulatory processes for new designs, a lack of funding for demonstratory projects, and nuclear opposition more generally.

## Take Action

- ▶ If you feel advanced modular reactors might play an especially important role in a green energy transition where you live, you could write to your political representatives urging them to streamline regulation.

## Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Nuclear tag in this card's stack.



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## Nature Restoration

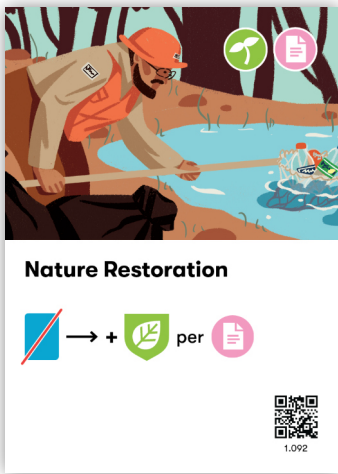
Nature restoration policies aim to improve the health and functioning of ecosystems, such as forests, wetlands, grasslands, marine and freshwater environments, that have been degraded or destroyed by human activities. Restoration projects include reforestation, water quality improvement efforts, restoration of degraded wetlands, wild species reintroduction, and promotion of regenerative farming practices.

Restoring degraded or destroyed habitats to a healthier state promotes the biodiversity of plant and animal species in these ecosystems. But restoring an ecosystem also mitigates the climate emergency, since these projects can prevent the release of greenhouse gas emissions into the atmosphere (if, for example, the area is set to be turned into a road or carbon-intensive area) while fostering the capacity of soils and ecosystems to store carbon. In addition, restoration programmes can provide economic benefits, such as supporting local tourism and recreational activities, and protect human health by improving water and air quality. Nature restoration projects can also improve urban environments, by expanding green spaces, reducing concrete areas, and tackling fertilizers and pesticides use.

Nature restoration efforts are growing. The UN established the Decade on Ecosystem Restoration, Europe is debating a law to repair 80% of the European habitats that are in poor condition, while the U.S. is running restoration programs such as the Land and Water Conservation Fund and the Conservation Reserve Program.

### Take Action

- ▶ Advocate for nature restoration policies by writing to your elected representatives to express your support for nature restoration policies at local, national, and international levels.
- ▶ Buy certified goods produced sustainably, such as timber, chocolate, coffee and paper products, helping to prevent deforestation and habitat destruction.
- ▶ Support and volunteer with organizations working on restoration projects, encouraging friends and family to take similar actions to support restoration efforts.

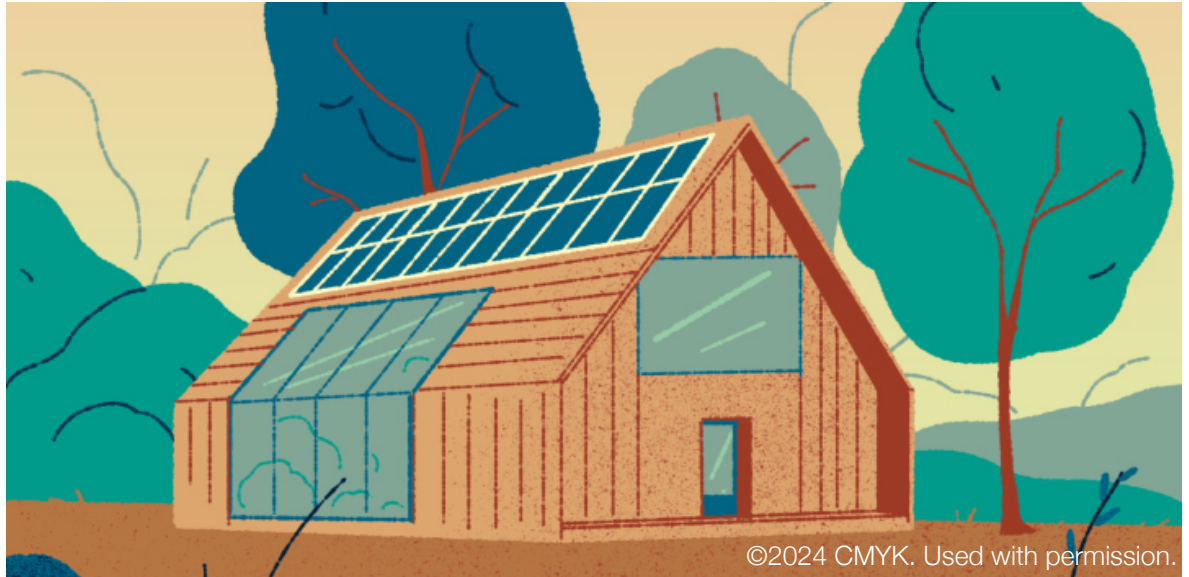


### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Ecological Resilience token to your player board for each Regulation tag in this card's stack.



# Climate



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## Net-Zero Buildings

As anyone who has ever paid an energy bill knows, our homes and buildings use a lot of energy. And in most cases today, that means using fossil fuels. In 2021, buildings were responsible for nearly one-third of global energy use.

We can use less energy in our buildings in lots of ways. One is smart design: insulation and high-performance windows and doors prevent wasteful heat loss, automatic lighting and heating turn systems off when they aren't needed. 'Green roofs' are covered in plants to help keep buildings warm, and also increase local biodiversity. 'Cool roofs' reflect sunlight, keeping buildings cool in hotter climates.

We can also take the fossil fuels out of our homes and buildings by installing solar panels and hot water heaters, or heat pumps, which bring heat from the air or ground outside into your home.

Producing, processing and transporting the materials used to build a structure also produces greenhouse gas emissions. This can be around half of the greenhouse gas emissions associated with a new building in the UK, for example. In some cases we might not need a new building at all, and instead we could upgrade, refurbish or use an existing space more efficiently, avoiding demolition and the need for new materials. If we do need a new structure, we can reuse the materials from deconstructed buildings and structure, like bricks and beams, or use sustainably-sourced timber and other natural products that produce far fewer greenhouse gas emissions than traditional concrete and steel construction. This is a huge design challenge and opportunity for engineers, architects and other design professionals.

### Take Action

- ▶ Invest in money-saving measures to reduce energy use in your own home, like insulation, smart meters and double glazing.
- ▶ Campaign for your local building regulations to require all new buildings to be built according to science-based whole life carbon standards and other socially just measures.
- ▶ Find a building in your community that includes energy efficiency, wildlife or renewable energy features and shine a light on it through social media.

### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Buildings Emissions token from your player board.

You may take this action once per Innovation tag in this card's stack each round.





## Nutrient Management

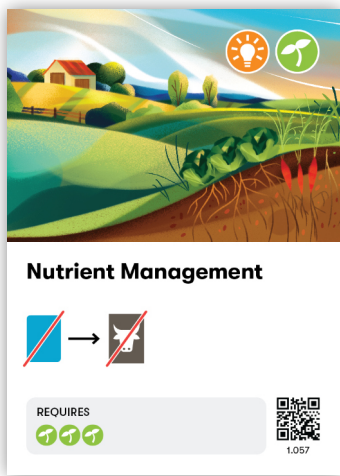
Nutrient management is trying to balance nutrients in soil to ensure healthy plant growth while minimizing damaging ecological impacts. Plants require nutrients like nitrogen, phosphorus, and potassium to grow properly. If there are too few nutrients, crops won't grow as well as they could and yields will be lower. However, getting the right balance of nutrients in the soil is a delicate operation. If there are too many nutrients in soil, they can leach into waterways and cause serious environmental pollution.

Ecological farming practices, like crop rotations, cover cropping, composting, and using natural fertilizers like manure, can be very effective at managing nutrients. These practices build healthy soils that are naturally more productive and resilient to pests, diseases, and erratic weather conditions. Nutrient balance can also be managed by avoiding synthetic fertilizers and pesticides, which can have negative impacts on ecosystems and human health. By focusing on building healthy soils and working with ecosystems, good nutrient management helps to create a more sustainable and resilient food system.

In comparison, industrial farming, which often involves monoculture crops, relies heavily on synthetic fertilizers to boost crop yields. Excessive fertilizers use leads to soil and water pollution, causing eutrophication (excessive plant and algal growth) and harmful algal blooms.

### Take Action

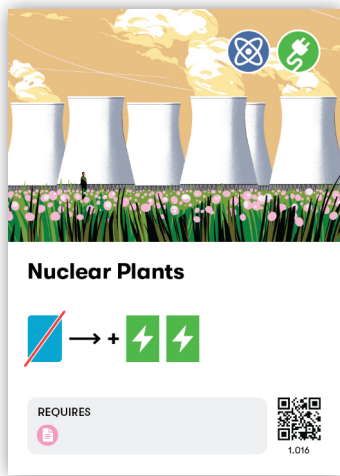
- ▶ Buy products created using regenerative farming practices like organic products.
- ▶ Call on your national and local governments to implement policies and regulations that encourage responsible nutrient management practices.



### Gameplay Notes

You must have 3 Ecology tags in this card's stack to take this action.

- ▶ Discard 1 card to remove 1 Agriculture emission token from your player board.



## Gameplay Notes

You must have at least 1 Regulation tag in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Clean Energy tokens to your player board.

## Nuclear Plants

Nuclear power plants use fission (usually of uranium) to heat water and run steam through a turbine that generates carbon-free electricity. In 2020 nuclear plants provided around 10% of global electricity generation.

The Earth contains on the order of a billion years worth of uranium, rendering it a long-term resource. With increasing focus on rapid decarbonization, some people are interested in building new nuclear plants to directly replace coal and gas plants as 24/7 electricity sources. However, historically, nuclear power plants have been slow to build and expensive to run, and while they present a low emission source of power, the wider nuclear supply chain is more problematic. Mining radioactive uranium can leave areas uninhabitable, and storing harmful waste has also proved difficult.

Existing nuclear plants provide a useful source of reliable 'baseload' power, but long construction times, cost, and ecological consequences have created a sense of hesitancy. Standardized 'modular plants' and other experimental nuclear technologies may address some safety, cost, and timescale issues, but skeptics generally favor investment in cheaper, tried-and-tested clean energy generation, such as wind and solar – alongside storage solutions and other 'flexible' technologies to meet our demand for power.

## Take Action

- ▶ One way to ensure nuclear assets are used optimally is simply to talk about their pros and cons in climate-focused and political contexts.
- ▶ If you live somewhere where nuclear energy might play an especially important role in a green energy transition, you can involved with an organization working to create policies to enable its use at scale as a climate solution.



## Offshore Wind

Offshore wind uses huge turbines to generate electricity from wind 10-15 miles out to sea, where winds are stronger and more consistent. Offshore wind is a proven technology, providing large quantities of zero-carbon electricity.

Offshore wind can take advantage of wide open space that doesn't impact homes or businesses to build a large number of turbines, making offshore wind turbines an attractive option for governments and companies. As a result, many governments have set targets for the installation of offshore wind, provide subsidies that help pay companies to build offshore wind farms, or have invested directly in publicly owned offshore wind.

Although building turbines at sea is generally more expensive than building them on land, the cost of building offshore wind roughly halved from 2010 to 2020. Still, offshore installations often have to do a lot of work to prove they're not interfering with marine wildlife or with economic or military activity. New technological achievements in offshore wind, like floating wind turbines, are helping to address these concerns (and also allow the possibility of moving wind turbines around to fit wind abundance and electricity demand), yet governments must continue to encourage offshore wind development.

### Take Action

- ▶ Offshore wind farms often face political opposition in the communities that can see them from shore. Educate your neighbors about how offshore wind can help against climate change.
- ▶ Support wind energy by purchasing green energy options from energy providers.

### Gameplay Notes

You must have at least 3 Grid tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Clean Energy tokens to your player board for each Wind tag in this card's stack.





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## Onshore Wind

Onshore wind refers to wind turbines that have been installed on land (as opposed to offshore wind, where turbines are placed in the ocean). Given that onshore wind is abundant and cheap to produce once turbines have been installed, it is considered an effective way to generate electricity at a large scale without creating greenhouse gas emissions.

Wind speeds generally increase as altitudes increase, which is why turbines are so tall. Unfortunately, this also limits where they can be installed, as they need consistent wind flow and can't be placed near urban areas where tall buildings might interfere with wind flow. Local opposition has also interfered with the building of onshore wind turbines, but public support is rising, especially as people are given options to benefit from local onshore wind. Still, wind turbines, though cheap to run, are generally more expensive than solar panels to install.

Some governments have looked to invest in onshore wind directly, through companies that are at least partially state-owned, for example, (with nine out of ten of largest renewable building nations having done just that). In this case, a portion of the money these wind farms raise by selling their energy goes back to the public purse and can be reinvested in more green energy, for example. Another option is to meet the upfront costs associated with onshore wind by encouraging private investment – via subsidies, for example. Governments first began providing financial incentives to build wind farms in the 1970s when political instability and oil embargoes made oil very expensive. Subsidies can cost money, but they have also proved to be an effective way of getting wind farms in the ground.

### Take Action

- ▶ Some companies will work with your power company to ensure they are supplying electricity from wind power to match your electricity use. Contracting with one of these companies helps show power companies that their customers want more wind power.
- ▶ Raise awareness about the importance of clean energy by talking to friends and family, sharing information on social media, or hosting educational events and encouraging others to switch to renewable energy.

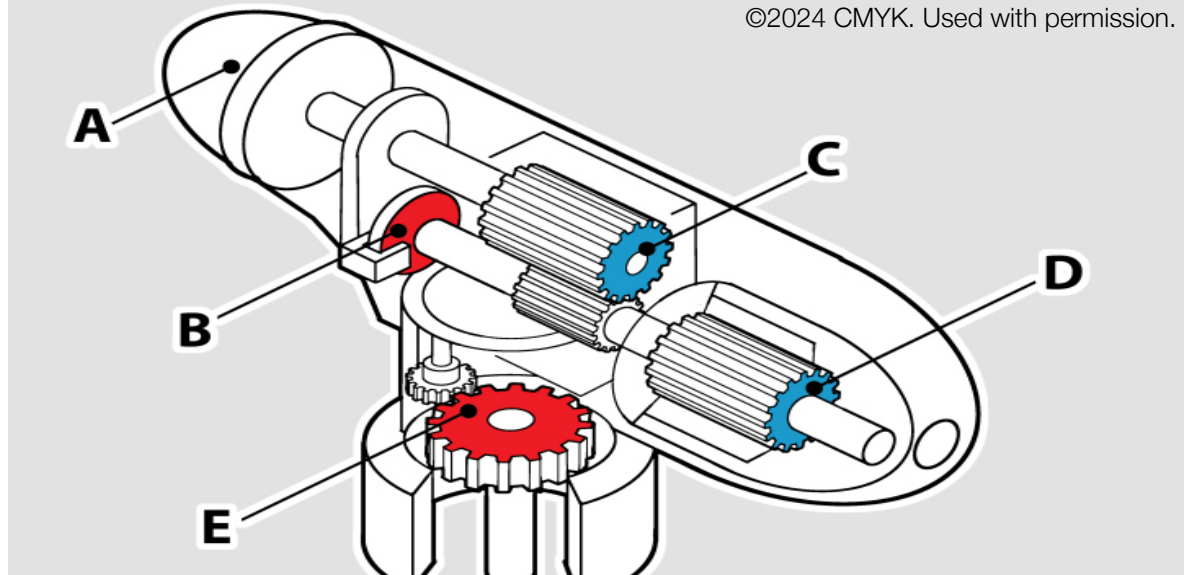


### Gameplay Notes

You must have at least 1 Grid tag in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Wind tag in this card's stack.





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## Patents Regulations

Reforming patent regulations can help speed up innovation and commercialization of new green technologies. Patents have long been considered necessary to incentivize technological innovation by giving inventors a time-limited monopoly to use their ideas without fear that someone else will steal their innovation. In the context of innovations designed to tackle the climate emergency, however, some people worry that patents prevent world-changing technologies from spreading fast enough.

While some believe that patent law continues to serve an important role in encouraging innovation, others believe that we need to adjust patent laws as they pertain to climate emergency technologies. Both sides agree, however, that existing patent laws need significant reform to find a better balance between encouraging technological innovations and ready access to those same innovations.

Lobbying controls from industry groups may hinder patent reform, as they may see patents as important to drive their profitability. Politicians should promote ideas around collaboration and shared knowledge to communicate why this action is important.

### Take Action

- ▶ Support patent reform in your country.
- ▶ Make your own patents freely available for use by governments, community organizations, and others.

**Patents Regulations**

Give **1** from your hand to another player.

LIMIT  
Each round: once per **E**

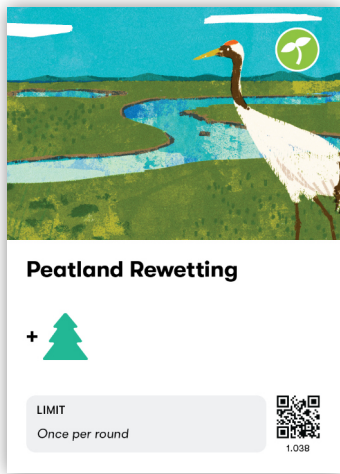
1.051

### Gameplay Notes

- ▶ When you take this action, give another card from your hand to another player to add to their hand.

You may take this action once per Regulation tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.



## Gameplay Notes

- ▶ When you take this action, add 1 Tree token to the board.

You may take this action once per round.

## Peatland Rewetting

Peatlands are the Earth's sponges. Vast stretches of wetlands made up largely of waterlogged, partly decayed plants that have been accumulating for thousands of years, cleanse water, reduce the risk of floods, and provide habitat to rare and endangered species. They hold twice as much carbon as all of the earth's forests combined.

But despite their importance as ecosystems, peatlands are under threat. Humans have drained or destroyed 50 million hectares of peatland to use the peat for fuel, or to make room for agriculture or buildings. Half a million hectares of peatland are still being destroyed each year.

Preventing further peatland loss is the first priority. But drained and degraded peatlands can find new life, too, if we restore their water supply and let native species regrow. Government policies that support peatland protection and penalize peatland destruction are needed to protect these vulnerable areas. Consumers can also pressure food companies not to destroy peatlands to grow crops. By understanding how important and precious peatlands are, we can protect them for millennia to come.

## Take Action

- ▶ Pressure the government and policymakers to ban peatland destruction, require landowners to protect peatland areas and invest in the restoration of damaged peatland.
- ▶ When choosing food brands, check their sustainability practices to see if they prioritize the protection of wild and ecologically important areas. If not, contact them and ask why.
- ▶ Support non-profit and community-lead organizations working to defend and restore peatlands.



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## Petrol and Diesel Phaseout

In 2018, more than 99% of cars on the road ran on petrol (gasoline) or diesel. With vehicles spewing gigatons of greenhouse gas emissions into the atmosphere each year, phasing them out is a powerful climate solution. Electric vehicles offer alternatives. Boosting use of mass and public transit is another option. But these are just part of the picture.

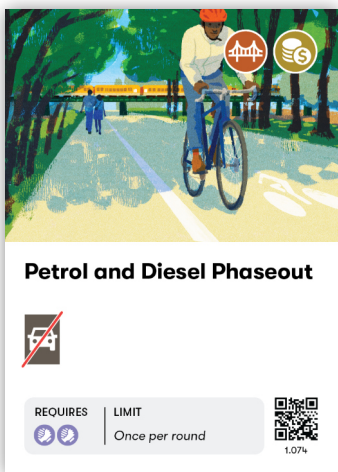
Other ways to eliminate fossil fuels from transport include increasing walking and bicycling. This means altering infrastructure, changing mindsets, and providing incentives for adopting these modes. Offering remote work options to employees can also reduce the need to commute. Teleconferencing and related technologies allow people to connect electronically across time and space.

A major challenge to switching away from petrol and diesel cars to other modes of transportation is the deep entrenchment of the status quo. The automobile industry is lobbying hard to avoid regulations and bans, and major system changes will require new infrastructure and a retrained workforce. But making the shift opens the doors to exciting new opportunities to design healthier, friendlier communities as well as forward-facing career paths with better air quality at work.

### Take Action

- ▶ Reduce your personal use of gasoline and diesel by choosing alternatives to driving a car, if you are physically able to: walk, bike, take mass transit, connect remotely.
- ▶ Encourage local planners to envision and implement policies to minimize the use of powered vehicles.
- ▶ Encourage your government representatives to eliminate fossil fuel use and instead fund incentives and infrastructure that makes it easier to use alternatives: electric charging stations, bus and train routes, bicycle and pedestrian infrastructure.

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### Gameplay Notes

You must have 2 Society tags in this card's stack to take this action.

- ▶ Remove 1 Transportation Emissions token from your player board.

You may take this action once per round.





## Plant-Rich Diets

Plant-rich diets feature fruits, vegetables, legumes, nuts and whole grains, with minimal or no consumption of animal products.

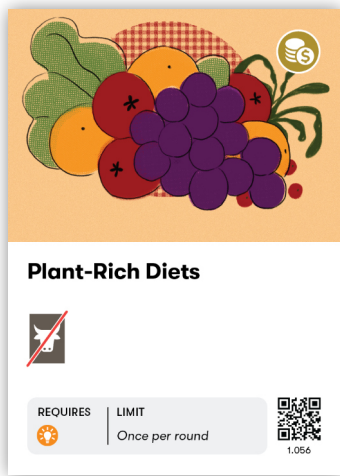
Plant-rich diets tend to have lower environmental impacts than diets high in animal products. Meat and dairy production alone are responsible for 14.5% of global greenhouse gas emissions. They take up two thirds of agricultural land globally, and are linked to deforestation and biodiversity loss. The most problematic products are red (e.g. beef, pork) and processed meat (e.g. sausages, bacon, hot dogs). Halving the consumption of meat, dairy and eggs in Europe, for example, could cut EU greenhouse gas emissions from agriculture by 25 to 40%. If everyone in the world started eating a vegetarian or vegan diet, we could cut greenhouse gas emissions from agriculture by 63% and 70% respectively.

To help people adopt plant-rich diets, policymakers can inform the public of the health and environmental benefits of plant-based diets, through publishing official dietary guidelines. They can also ensure that meals in public spaces, like schools, hospitals and official buildings, offer sustainably-sourced plant-based food.

They can also support people working in the agricultural sector who fear losing their livelihoods if we reduce the amount of animal products we consume. Reforming public subsidies to support fruit and vegetable farmers, and introducing new policies to support people to learn new ways to farm could help meat and dairy producers to move to new areas of food production.

### Take Action

- ▶ Use fruits, vegetables and grains as main courses during breakfast, lunch, and dinner, filling at least half of your plates with it. When eating meat, go for much smaller amounts, considering it as a garnish not as the main dish.
- ▶ Use recipe books and online guidance to find plant-based meals you enjoy, including substitutions like plant-based milks.
- ▶ Encourage the food provider at your work, the canteen of your children's school or your favorite restaurant to include plant-based meals in their menus.
- ▶ Get advice from a doctor if you have health conditions that make you worry about moving to a plant-rich diet.



### Gameplay Notes

You must have an Innovation tag in this card's stack to take this action.

- ▶ Remove 1 Agriculture Emissions token from your player board.

You may take this action once per round.





## Pollution Reduction

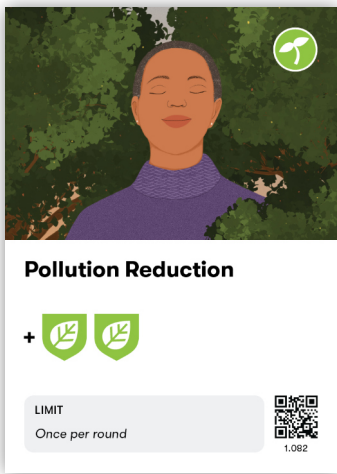
In 2019, pollution caused one in six deaths worldwide, with 92% of pollution-related deaths occurring in the Majority World. The World Health Organization (WHO) estimates that 90% of the world's population is breathing polluted air, and that air pollution is responsible for 7 million premature deaths each year. The most affected regions are Asia and Africa, with 9 out of 10 cities exceeding the recommended pollution levels. Globally, 80% of wastewater is discharged into the environment untreated, with major health and environmental consequences.

The best way to reduce pollution is to limit the amount of pollutants released into the environment. Pollution reduction requires urgent attention from governments and industries worldwide. They can implement regulations and standards to control emissions from factories, power plants, vehicles and farms, for instance.

Increasing the use of cleaner technologies also reduces pollution. Renewable energy sources like wind and solar can replace fossil fuels, which produce polluting gasses when burnt. Public transportation systems can abate pollution in urban areas. Individuals can also contribute by reducing their energy consumption, using public transportation, or reducing meat consumption. Reducing pollution requires a collaborative effort from governments, industries, and individuals, and the benefits are well worth the effort.

### Take Action

- ▶ Reduce, Reuse, Recycle – Following such a basic attitude reduces waste, natural resources use and pollution. Campaign for your waste service provider to run composting and recycling services.
- ▶ Campaign for your local government to design and create public transport routes, bike lanes and safe, shady pedestrian and wheelchair-access routes - then use them.
- ▶ Pressure politicians and campaign for the end to fossil fuel extraction and burning, which are leading causes of air pollution.
- ▶ Reduce material and energy consumptions by using energy-efficient appliances like LED light bulbs, energy-efficient air conditioners, and refrigerators.
- ▶ Reduce plastic usage by choosing reusable bags and containers, drinking tap or filtered water, and buying products in bulk.



### Pollution Reduction



LIMIT  
Once per round



### Gameplay Notes

- ▶ Add 2 Ecological Resilience tokens to your player board.

You may take this action once per round.



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## Recovery Coordination

Whenever you take an action that adds +   or more you may remove  .



1106

# Recovery Coordination

Recovery coordination is the process of safely managing the aftermath of a disaster, the rebuilding, restoring and rehabilitating of the community. Recovery coordination involves managing which policies and investments are being used, who they affect, who is responsible for them, what their impacts will be, and how they might interrelate. Sometimes an emergency is small enough not to need one, but if there are lots of groups involved and people or systems affected, a recovery coordination effort will be essential.

Recovery coordination efforts ensure that everyone involved in the recovery knows what is happening, and what their responsibilities are. This prevents duplicated work, lets people act quickly and aids communication. It's also useful to help document how the recovery process has been organized, for the sake of transparency, so it can be reviewed in future and learnt from, and to aid monitoring efforts. Successful recovery coordination systems can help inform future resilience strategies, emergency plans and recovery policies.

Recovery coordination plans and teams will function best where they are flexible. This means being agile and responsive to a changing situation and new feedback. They should be managed inclusively and collaboratively, involving representatives from any organizations or industries involved in the recovery effort, and community members who will be affected by the recovery policies. Members of vulnerable and disadvantaged or minoritized groups should be involved as a priority.

Recovery coordination may be threatened when affected groups aren't consulted or ignore their advice. If an emergency happens again, or a new crisis arises, recovery coordination may need to evolve and change. Lack of community involvement in coordination plans may mean that recovery efforts are unsuccessful as they don't work or have unintended consequences.

## Take Action


- ▶ Join local recovery coordination efforts - like citizens forums or networks contributing to emergency recovery plans.
- ▶ Advocate for your community group, organization or workplace to join recovery coordination efforts and contribute your ideas or services.
- ▶ Question whether recovery coordination efforts are democratic, inclusive and accessible to make sure that all communities are represented in them.





## Recovery Investments

→ Remove  for any 1 player

LIMIT  
Each round: once per 



## Recovery Investments

Recovery investments are spending plans by governments and central banks to help a community or area to regroup and move on from an emergency. Sometimes these are direct investments, when governments invest in local businesses and activities who have struggled to stay afloat during the crisis. Sometimes they involve investments in new processes and infrastructure to boost productivity and economic activity indirectly.

Recovery investments can be particularly effective where they incorporate wider priorities and targets - meaning that the area is rebuilt better, more resilient and more fair. The COVID-19 pandemic spurred many organizations around the world to help economies recover from the crisis by investing in green technologies and initiatives that created jobs, healthy spaces and new business opportunities.

Recovery investments are less effective where they involve weak regulations or investments into the same system that caused the disaster in the first place. After the 2008 Global Financial Crisis, public money was used to 'bail out' the banks, and many argue that not enough was done to support those whose livelihoods and savings were affected, or to set up alternative systems.

Recovery investments are commonly made after disasters as governments know they must be seen to do something to help populations get back on their feet. However, politicians may use the chaos and disruption of disaster situations to further their own agenda instead, benefitting from reduced public scrutiny into their actions. Lobbyists may also use the fragile situation to persuade governments to adopt their policies and ideas.

## Take Action

- ▶ Advocate for recovery investment decisions by governments and public bodies to consider other local priorities and goals, and work towards long term targets as well as resolving the short-term situation.
- ▶ If you are able to, continue to scrutinize political decisions in relation to investments and spending, write to elected representatives and engage in government decisions, to push back against unethical and corrupt political behavior emerging during the crisis.
- ▶ Join mutual aid groups and community networks, if you can, to support your community to rebuild and heal directly.

## Gameplay Notes

- ▶ Discard 1 card from your hand, then remove 1 Community in Crisis from the player board of any one player (including yours).

You may take this action once per Incentive tag in this card's stack per round. (Each time you take this action, you may target the same or a different player.)



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## Recovery Policies

Recovery policies are the initiatives by the government, and sometimes businesses and networks, to help a community or area to regroup and move on from an emergency. Recovery policies sometimes include new regulations, to stop the same problems reoccurring. Sometimes policies are introduced that encourage people and businesses to spend in a certain way, or undertake new activities.

Recovery policies can be particularly effective where they incorporate wider priorities and targets - meaning that the area is rebuilt better, more resilient and more fair. The COVID-19 pandemic spurred many governments to develop policies around using open spaces for leisure activities like restaurants. Not only did this help businesses start up again, it helped people reconnect socially and spend time outside. Many governments are now investing more in disease and pandemic research.

Recovery policies are less effective where they involve weak regulations or investments into the same system that caused the disaster in the first place. After the 2008 Global Financial Crisis, regulations were introduced to restrict unsafe lending and try to prevent the crisis happening again - but many say these did not go far enough.

Recovery policies are commonly adopted after disasters as governments know they must be seen to do something to help populations get back on their feet. However, politicians may use the chaos and disruption of disaster situations to further their own agenda instead, benefitting from reduced public scrutiny into their actions. Lobbyists may also use the fragile situation to persuade governments to adopt their policies and ideas.


### Take Action

- ▶ Advocate for recovery policy announcements by governments and public bodies to consider other local priorities and goals, and work towards long term targets as well as resolving the short-term situation.
- ▶ If you are able to, continue to scrutinize political decisions, write to elected representatives and engage in government decisions, to push back against unethical and corrupt political behaviour emerging during the crisis.
- ▶ Join mutual aid groups and community networks, if you can, to support your community to rebuild and heal directly.



### Recovery Policies

→ Remove  for any 1 player

LIMIT  
Each round: once per 



1.10K

### Gameplay Notes

- ▶ Discard 1 card from your hand, then remove 1 Community in Crisis from the player board of any one player (including yours).

You may take this action once per Regulation tag in this card's stack per round. (Each time you take this action, you may target the same or a different player.)





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## Reforestation

Reforestation means regenerating the tree cover in areas impacted by natural causes — wildfires, floods or droughts — or human activities — logging, forest clearances for agriculture or mining. Reforestation can be done by planting new trees or by helping degraded forests to naturally revive and regenerate. Trees absorb greenhouse gas emissions, prevent soil erosion, and provide habitats for many animals and plants. They absorb air pollutants, filter rainwater and their root structures help to prevent floods and landslides.

The European Union has a forest strategy for 2030, meant to help Europe achieve its objectives of protecting ecosystems and reducing greenhouse gas emission. The strategy commits to planting at least 3 billion trees by 2030, in addition to those that the forest industry will plant.

However, while planting trees is important, their role and benefits are often inflated to shift the attention away from the need to reduce fossil fuel extraction and prevent further deforestation and forest degradation. Restoration projects cannot compensate for the clearing of forests. New trees can absorb less greenhouse gas emissions than the amount that more established forests already store in their rich soils. Protecting natural forests and preserving existing trees, in partnership with local communities and Indigenous People, remains the most important and difficult priority.

### Take Action

- ▶ Ask your municipality to start tree planting and forest regeneration initiatives locally.
- ▶ Support trustworthy associations and NGOs committed to planting trees.
- ▶ Get directly involved in reforestation programs, nationally or abroad.
- ▶ Protest deforestation and forest clearances, asking ecologists to support to assess their role in local ecosystems.



### Gameplay Notes

When you take this action,

- ▶ If there are 2–4 Ecology tags in this card's stack, add 1 Tree token to the board.
- ▶ If there are 5 or more Ecology tags in this card's stack, add 2 Tree tokens to the board.

You may take this action once per round.



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## Regenerative Agriculture

The United Nations estimates that the food system accounts for 80% of deforestation, 29% of greenhouse gas emissions and is the leading cause of biodiversity loss globally. Farming more sustainably is imperative to address these crises.

Regenerative agriculture generally refers to the adoption of less ecologically-damaging farming practices. Similar terms, often used interchangeably, are organic farming or agroecology. Rotating crops, reducing tillage (churning up the ground in preparation for crops), choosing locally adapted varieties of crops, applying compost as a fertilizer, and using organic alternatives to pesticides are a few examples of regenerative farming practices.

These practices regenerate soil fertility by improving its organic matter, thus strengthening plants' health without the need for pesticides. They boost soil carbon sequestration, water retention and improve biodiversity, increasing the presence of pollinators and beneficial insects. This creates healthier and more resilient farming systems that better withstand climate shocks.

Policy reforms and public subsidies must increase their support for truly regenerative farming practices, rewarding farmers that adopt them and regulating against unsafe practices. Regenerative farming practices provide society with essential public goods such as carbon sequestration, soil fertility, clean air and water.

### Take Action

- ▶ Buy organic products, for which farmers have used regenerative agricultural practices.
- ▶ Buy directly from the farmer, or shop at farmers' markets.
- ▶ Ask politicians to ensure that regenerative farmers are economically rewarded for their efforts, and ban unsafe practices.

### Gameplay Notes

- ▶ Add 1 Ecological Resilience token to your player board.

You may take this action once per Regulation tag in this card's stack per round.



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## Resilience Volunteers

Resilience volunteers are ordinary people who offer their time and labor to help solve pressing climate emergency issues. Resilience volunteers may support disaster relief efforts, build resilient structures, or even spread awareness of the climate emergency and its impacts.

Countries' haven't put forward enough resources to tackle the impacts of the climate emergency, so volunteering might be an important way to help fill this gap. In China, where extreme weather events cost the country \$44.5 billion each year, volunteers help communities and natural areas affected by disasters respond and recover more quickly.

However, volunteering requires the time and dedication of passionate people and an understanding of the challenges at stake. It requires people to do work without being paid a fair wage. Uninformed or poorly planned resilience building can even cause maladaptation, which is when efforts have unintended or even adverse effects that increase vulnerability to climate disasters.

Where these programmes are happening, there are organizations which formally support resilience volunteering – like the China Young Volunteers Association.

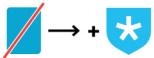
### Take Action

- ▶ Consider volunteering in your community on climate resilience, environmental protection, and disaster relief projects.
- ▶ Consider asking your business to donate money or goods when a disaster occurs.
- ▶ Donate to organizations which support and organize resilience volunteers in your country, or which help other countries respond to disasters.

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### Resilience Volunteers •



1.207

### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Resilience token of your choice to your player board.





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**Resource Redistribution**

Give **1** from your hand to another player.

LIMIT  
Each round: once per

1.050

## Gameplay Notes

- ▶ When you take this action, give another card from your hand to another player to add to their hand.

You may take this action once per Society tag in this card's stack each round.

In the Solo game, discard this card and draw a replacement.

## Resource Redistribution

Resource redistribution refers to the transfer of money, goods, and other resources between groups or countries. Redistribution plans may include putting a cost on harmful greenhouse gas emissions and giving the money raised to communities who are most vulnerable to climate change.

The climate emergency is strongly linked to inequality, with the richest 16% of the world's population responsible for 40% of greenhouse gas emissions. Many of the poorest communities are least responsible for the climate emergency but bear its greatest effects, and resource redistribution can help address this.

However, resources to help vulnerable communities adapt to the climate emergency are still in short supply and often don't reach the groups that need them most. As of 2022, low and middle-income countries need 5-10 times the adaptation finance that is currently available. According to the Organisation for Economic Cooperation and Development, 70% of the climate finance coming from high-income nations went to middle-income countries instead of low-income, highly vulnerable nations. To make matters worse, less wealthy communities are often to be excluded from decisions about how to spend these resources, even though they will be directly affected by the outcomes.

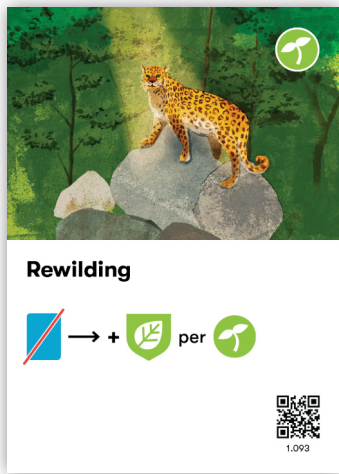
Flexible, democratically managed finance can allow communities to choose how to best use funds. In addition to high-income countries lowering their emissions, they can help lower-income countries reduce their greenhouse gas emissions while also providing dedicated support for adapting to crises and meeting other local societal goals.

Low political support for redistribution from wealthy countries can prevent resources from ever even being distributed. This is made more difficult by weak international law and governance mechanisms to encourage wealth redistribution.

## Take Action

- ▶ Familiarize yourself with resource redistribution policies relevant to your country.
- ▶ Advocate for the inclusion of vulnerable communities in the climate adaptation efforts of your city, town, or country, centering these people in decision-making processes.





## Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Ecological Resilience token to your player board for each Ecology tag in this card's stack.

## Rewilding

Rewilding is the act of restoring an ecosystem, such as a grassland or jungle, to a state where it no longer needs maintenance from humans. It typically involves cleaning up pollutants and contamination, removing fencing and barriers and ending destructive human activities in the area. In very damaged land it can also involve more active restoration efforts such as replanting and species reintroduction.

This kind of conservation can increase the diversity of species in an area, restore damage to ecosystems, and even remove greenhouse gas emissions from the atmosphere, storing them in plants or the soil. Rewilding can support local communities, who may see rewilded areas provide better flood protection, improve water quality and create better conditions for growing food.

However, there are concerns that rewilding efforts can be poorly managed. For example, rewilding in previously farmed areas needs planning to make sure people formerly in agricultural roles are retrained and given jobs initiating and defending rewilding efforts. When done incorrectly, rewilding efforts can actually damage ecosystems and biodiversity. This can happen, for instance, when reintroduced species lack enough predators in the food chain, leading to overpopulation of one species, throwing the ecosystem out of balance.

Rewilding is a more effective conservation tool when local communities are engaged in the process. Lessons on how restored ecosystems benefit communities could increase support for this technique.

Mismanagement of rewilding programmes and lack of communication with local communities could hinder the adoption of rewilding.

## Take Action

- ▶ Support the reintroduction of local species in your community, such as by planting local trees.
- ▶ Encourage your city or town to rewild degraded or unused areas.
- ▶ Encourage political representatives to introduce democratic and community-led rewilding projects on public land, increasing the amount of public land available to do so in countries which have been heavily privatized.



## Scale Up Recovery Support

Scale up recovery support is when efforts or funds to tackle or recover from an emergency situation are expanded rapidly. This could include the deployment of coordinators and information management support, recovery coordination teams, international aid contributions and the development of an inter-agency response plan.

Having adequate recovery support is important because it enables communities and economies to quickly recover from the kind of large-scale emergency situations that will become more frequent and intense under the climate emergency. If this kind of support is well-coordinated, planned and carefully managed by governments and relief agencies then people will be better supported after disasters, and recovery efforts carried out more quickly and effectively. This will then help with building long-term resilience, as communities learn how to adapt to crises and identify which infrastructure is needed to protect them.

Having recovery support or recovery plans does not guarantee people are safe from the impacts of the crisis, however. Recovery support can be effective in helping communities rebuild, but it is no substitute for tackling the climate emergency and underlying inequities and problems within societies in the first place.

Having adequate recovery support mechanisms comes from having robust plans and systems in place to respond to emergencies if they arise, so they can be deployed and scaled-up quickly. These mechanisms should be democratically and inclusively run, and involve people affected by the disaster so the plans are effective and accepted by the population. Recovery support can be coupled with coordination plans and International Disaster Response Forces.

Recovery support may be hindered by lack of public support for recovery efforts that don't affect everybody, or only affect certain groups of people - who are likely to be those people who are already vulnerable to disasters. Some countries may struggle to have adequate funds to run recovery programmes, and need support from wealthier countries.

### Take Action

- ▶ Look into whether your government has recovery coordination and disaster relief plans in place, and advocate for them to adopt them if not, or if they are not fit for purpose.
- ▶ Support efforts by your government to contribute to global recovery efforts and to develop inclusive recovery coordination strategies.
- ▶ Join mutual aid groups and community networks, if you can, to support your community to rebuild and heal directly.



### Scale Up Recovery Support

2-3 : Remove for any 1 player

4+ : Remove for any 1 player

LIMIT  
Once per round



1:107

### Gameplay Notes

- ▶ When you take this action, if there are 2–3 Society tags in this card's stack, remove 1 Community in Crisis from the player board of any one player (including yours). If there are 4 or more Society tags in this card's stack, remove 2 Communities in Crisis from the player board of any one (and one only) player.

You may take this action once per round.





## Small Scale Onshore Wind



REQUIRES  
 | LIMIT  
 Once per round



## Gameplay Notes

You must have at least 2 Grid tags in this card's stack to take this action.

- ▶ Add 1 Clean Energy token to your player board for each Wind tag in this card's stack.

You may take this action once per round.

# Small Scale Onshore Wind

Wind power isn't just limited to large wind turbines or vast wind farms. As wind power becomes a greater part of our energy system, small-scale onshore wind can also play an important role in a green energy transition, on par with individual solar panels for homes.

Small scale onshore wind refers to wind turbines installed on land that produce less than 100KW. These smaller turbines require significantly less money and land, allowing them to operate in areas where larger turbines could not. There are as many as a million small wind turbines currently in use worldwide. One of the greatest advantages of small scale onshore wind is it can generate power in remote locations. In the Majority World, this could help provide clean energy access to communities that have never had reliable access to electricity of any kind.

While small-scale wind power is an attractive alternative to fossil fuel power the amount of power they can generate depends largely on wind speeds. Turbines need to be placed away from buildings, trees, and other obstacles that could block the flow of wind, and they may not be able to operate if winds aren't strong enough.

New technologies and improvements designed to make small scale turbines more efficient could make it much easier for businesses and homeowners to install and generate consistent electricity. Still, small-scale onshore wind remains a new technology, and installation costs are relatively high. Most small scale turbines have been installed in the US, China, and Europe. Costs will need to fall significantly for these turbines to become accessible in the Majority World.

## Take Action

- ▶ Do some research and determine if it makes sense for you or your community to install small scale turbines in your community.
- ▶ Encourage your local government to offer subsidies for homeowners who want to install small wind turbines on their property.



## Social Movements

Movements change the world. Throughout history and across the world, coordinated networks of individuals and organizations have sought changes to societies – and won. Their stories are imprinted on our shared consciousness: from the debt rebellions of ancient history to ongoing anticolonial struggles. They are an expression of a shared desire to change lives for the better and peoples’ agency to do so.

The mass mobilization of activists dominates popular perceptions of what movements are and what they do. But banner-making and street protests are only the tip of the iceberg. Academics analyze evidence, charities provide on-the-ground services, lawyers tackle injustices in the courts, commentators and spokespeople debate ideas, and policymakers work to change laws. Movements encompass a diverse range of activities all seeking similar change.

Whether they’ve been growing for years or erupt quickly, movements often reach a ‘tipping point’ after which they have a big impact on politics. For example, the Black Lives Matter movement existed for years before having a global impact in 2020. But it is difficult to realize changes to entire systems, especially systems which are entrenching inequality and environmental destruction. That’s why movements have to recognise how one cause is inextricably linked to another.

### Take Action

- ▶ There are a multitude of social movements that you can get involved with worldwide, encompassing nearly every cause you can conceive of.

**Social Movements**

2-3 : Draw +1

4-5 : Draw +2

6+ : Draw +3

LIMIT  
Once per round

1.004

### Gameplay Notes

When you take this action,

- ▶ If you have 2–3 Society tags in this card’s stack, draw 1 additional Local Project card.
- ▶ If you have 4–5 Society tags in this card’s stack, draw 2 additional Local Project cards.
- ▶ If you have 6 or more Society tags in this card’s stack, draw 3 additional Local Project cards.

You may do this once per round





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## Soil Education

Soil covers most of our land. It supports life on earth, and is essential for agriculture, forestry, and ecosystem functions. However, modern agricultural practices, deforestation, mining and industrial pollution are degrading soils at alarming rates. According to the United Nations, over a third of the world's soil is already degraded, and over 90% could become degraded by 2050. Every 5 seconds, the equivalent of one soccer field is lost due to soil erosion. Degraded soils are also responsible for the release of greenhouse gas emissions into the atmosphere, between 25 and 40 billion tons per year, matching the greenhouse gas emissions emitted by all vehicles globally.

Improving our knowledge of soil and how to maintain healthy soil through conservation is critical. Reforestation, restoration of degraded land and adopting agroecological practices, like crop rotation, cover crops, agroforestry, composting, are all strategies that will boost the biodiversity of our fields, and improve soil health. On the contrary, monocultures of identical crops makes farmers dependent on the use of chemical inputs – such as fertilizers and pesticides – to protect plants, driving pollution, soil erosion and poor soil health.

### Take Action

- ▶ Campaign for your government to provide support and training for farmers seeking to transition to regenerative processes.
- ▶ If you work in agricultural request training and support from your union to transition to new methods.



#### Soil Education

Draw **5** then keep all cards that have a  or  tag.

LIMIT  
Once per round

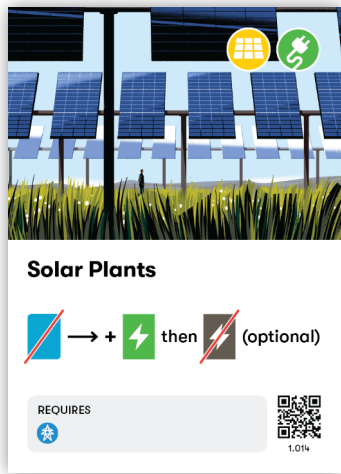
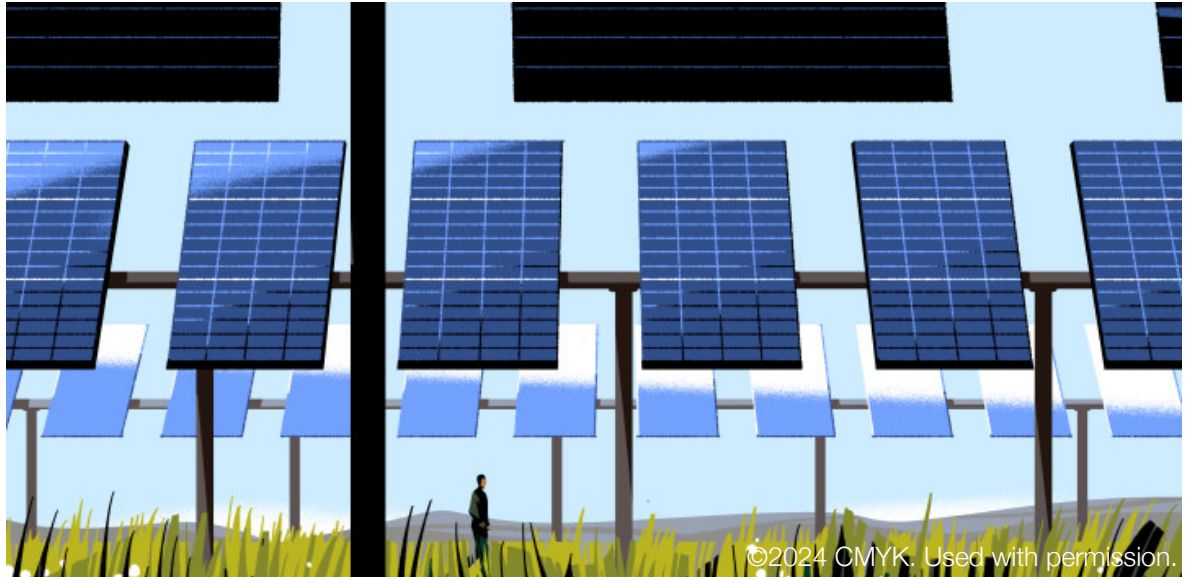


1116

### Gameplay Notes

- ▶ Draw 5 cards. Add any cards with Ecology and/or Innovation tags to your hand. Discard the others.

You may take this action once per round.



## Gameplay Notes

You must have at least 1 Grid tag in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Grid tag in this card's stack.
- ▶ Then optionally remove 1 Dirty Energy token from your player board.

## Solar Plants

Solar power converts energy from the sun into electrical energy via semiconductors in a solar photovoltaic panel, or by using thermal energy to turn a turbine in a concentrated solar power installation. Solar energy is renewable, cheap, and clean, creating no harmful greenhouse gas emissions as it generates electricity. The cost of generating electricity from solar panels fell 85% from 2010 to 2020 (SCL), and continues to drop. As a result, solar power made up half of all new power generation capacity in 2021.

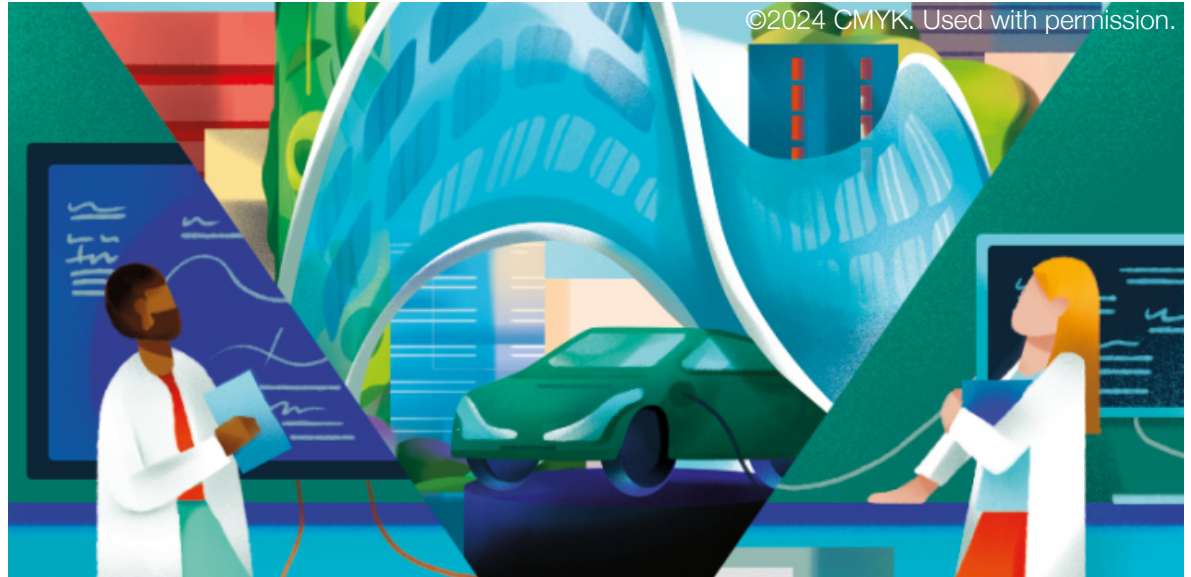
Although many people associate solar energy with putting panels on rooftops, generating larger amounts of electricity generally requires an array made up of many such panels, or a concentrated solar power plant. A concentrated solar power plant uses mirrors to concentrate sunlight on a receiver (often placed at the top of a tower). The receiver heats up, converting sunlight into thermal energy, which generates steam that turns a turbine to generate electricity.

Solar power complements wind power well because, although it depends on variable weather, the sun provides solar energy during the day and wind speeds are often highest during the nighttime hours. Both of these 'intermittent' energy sources also benefit greatly from energy storage and other energy 'flexibility' measures.

## Take Action

- ▶ Install solar panels on your home or business, or support solar power by purchasing green energy options from your energy provider.
- ▶ Invest in renewable energy sources for your business.
- ▶ Advocate for policies that support the adoption of solar energy.

# Climate



## Solar R+D

Both the public and private sectors have been investing in research and development (R&D) for solar power since the 1950s. Technological improvements have made solar panels significantly cheaper, and more efficient, and helped enable solar to provide electricity to the grid. In fact, if you plot the 'curve' of solar cost and efficiency over the last century, it has progressed faster than any other energy source.

Today, research and development continue to create exciting new possibilities for solar power. Scientists are frequently setting records for how efficiently solar panels can convert sunlight to electricity. While the solar cells that powered satellites in the late 1950s had an efficiency of around 8%, in 2022, the U.S. National Renewable Energy Laboratory set a record with a cell that achieved 40% efficiency.

Scientists are also using new materials to create better performing, cheaper cells. Thin-film cells are made from inexpensive materials but are not as efficient as standard cells. 'Tandem cells', combining different types of materials, can split the difference between cost and efficiency but currently are not as stable as standard cells at large scales. Finally, scientists are also experimenting with new ways to reuse the small amounts of rare materials used in manufacturing solar panels, and continuing to trial more common, less impactful materials that might lower their environmental footprint.

### Take Action

- ▶ Tell your legislators that you support devoting more resources to solar energy research and development.
- ▶ Support solar power by purchasing green energy options from energy providers.
- ▶ Support solar-focused research and development by investing in companies that are dedicated to advancing solar technology.



#### Solar R+D

Draw **8** then keep all cards that have a  or  tag.

LIMIT  
Once per round



### Gameplay Notes

- ▶ Draw 8 cards. Add any cards with Solar and/or Innovation tags to your hand. Discard the others.

You may take this action once per round.





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## Special Drawing Rights

The International Monetary Fund (IMF) is an international organization that can give nations emergency funds in times of crisis. These are called 'special drawing rights'. To help with the economic impact of the COVID-19 pandemic, the IMF gave US\$660 billion of these funds to countries around the world..

These were particularly useful for Majority World countries who needed the funds more than wealthier nations, which could afford to tackle the crisis with their existing resources. But wealthier nations, including in Europe, still have the funds sitting unused with their central banks.

Speed is of the essence to tackle the climate and ecological emergency, so all resources must be put to good use. This is why many countries in the Majority World argue that the special drawing rights held by wealthy nations should be redistributed to help tackle the emergency in poorer and more climate-exposed countries. This could be done by central banks giving their special drawing rights to multilateral development banks. These are special banks set up by countries to help invest in the development of societies.

The idea is catching on. But there needs to be more political will for it to happen and generosity from wealthier nations. These nations keep their special drawing rights in reserve in case of emergency. But the emergency is here and it's happening to other countries.

### Take Action

- ▶ Support the Bridgetown Agenda, a proposal from the Prime Minister of Barbados that seeks to reallocate SDRs.

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**Special Drawing Rights •**

1-2 : + to any 1 player

3-4 : + to any 1 player

5+ : + to any 1 player

LIMIT  
Once per round. (Can mix types.)

1.219

### Gameplay Notes

When you take this action,

- ▶ If you have 1–2 Regulation tags in this card's stack, you may give 1 Resilience of any type to any one player.
- ▶ If you have 3–4 Regulation tags in this card's stack, you may give 2 Resilience tokens of any type to any one (and one only) player.
- ▶ If you have 5 or more Regulation tags in this card's stack, you may give 3 Resilience tokens of any type to any one (and one only) player.

The tokens can be of different types. You may give the tokens to yourself. Place the tokens on the receiver's player board.

You may take this action once per round.





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## Supply Chain Resilience

More than ever, goods and services used in one country are supplied by another. For example, your food or mobile phone may come from a farm or factories far away. They reach you through a 'supply chain', which connects the places they were produced to those where they're used.

The effects of the climate emergency are impacting supply chains. For example, extreme heat in key farming countries has led to smaller harvests in recent years. Less food in one place can mean higher prices in another, which will impact nutrition, poverty, and even political stability. Some supply chain routes are particularly vulnerable, like the Suez Canal, which was easily blocked by one ship - the Ever Given - in 2021. Worsening climate and ecological shocks and their knock-on impacts, like conflict, could increasingly disrupt these delicate supply points.

Supply chains can be made more resilient. That can be done by businesses in a supply chain better understanding and acting on risks. Supply chains can be made shorter, including by moving production closer to home, so there are less points at which a chain could be disrupted. But any changes to supply chains must consider the impact on the countries and communities who supply them, who could lose out on economic opportunities.

### Take Action

- ▶ Support local manufacturing and food production.
- ▶ Buy fairtrade and products with sustainable guidance and attention to the climate emergency.




### Gameplay Notes


- ▶ Discard 1 card from your hand, then add 1 Social Resilience token to your player board for each Regulation tag in this card's stack.




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**Systemic Risk Planning**

+ 

LIMIT  
Once per round



1.081

## Gameplay Notes

- ▶ Add 2 Social Resilience tokens to your player board.

You may take this action once per round.

# Systemic Risk Planning

International air travel has helped connect the world as never before. But in 2020, it helped spread the COVID-19 pandemic globally within months. Over a decade before, during the 2007/8 financial crisis, a crisis in the American mortgage market soon became a global economic crisis. This was because financial companies had become so connected. These are examples of risks that emerge out of entire systems: systemic risk.

The risks created by the climate emergency are also systemic. Food systems are a prime example. They rely on a small number of crops, grown in a small number of places, which are highly vulnerable to climate shocks. Food is distributed unequally, with hundreds of millions left to starve in climate-vulnerable countries, while a lot of food is wasted. Food production also produces about a third of all greenhouse gas emissions and is a major cause of ecosystem destruction.

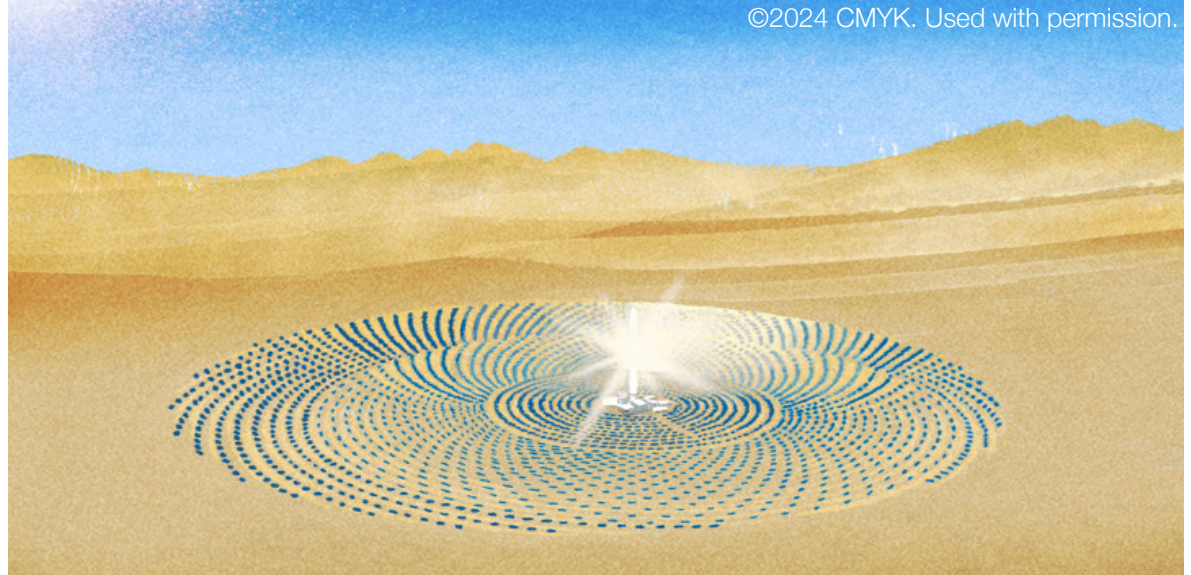
Becoming resilient to the effects of the climate emergency requires societies to reduce systemic risk. In the case of food systems, this means diversifying where and what food is grown, minimizing waste, and ensuring fairer distribution of food.

Systemic risk planning is also needed in other systems, including financial, health, and political systems, all of which are vulnerable to the worsening impacts of the climate emergency.

## Take Action

- ▶ Consider undertaking systemic risk planning for your organization, identifying risks that might get worse during the climate emergency: food, health and financial.
- ▶ Ask your local and national politicians what systemic risk planning has been carried out in the face of the climate emergency, and what you need to know.





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## Thermal Solar

Thermal solar converts sunlight into thermal energy, heating up water to generate steam that, in turn, spins a turbine to generate electricity. While there are many kinds of plants that utilize the power of the sun in this way, they all utilize mirrors to reflect and concentrate sunlight on to a single point.

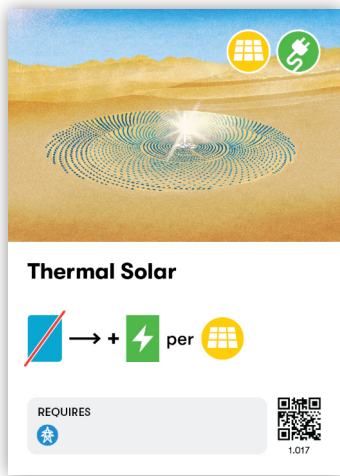
Heat is easier to store than electricity, so thermal solar plants have the benefit of generating electricity that can be stored and used later, without the need for additional battery technologies, for example. Additionally, because thermal solar generates very high temperatures, it can also be used to replace fossil fuels in the production of steel and cement, for example.

Thermal solar requires much more land than solar panels to operate efficiently, and has to be installed at the utility scale. It also needs quite a bit of water to operate, which may be a challenge in the future, as the climate crisis causes more and more extreme droughts.

While thermal solar is expensive to install, it is cheap to run and much more flexible than many other renewable technologies. With that in mind, government and industry support for installing thermal solar could greatly increase its adoption.

### Take Action

- ▶ Talk to your energy supplier about switching to solar powered electricity, and see if your company can do the same.
- ▶ Contact your elected officials to express your support for solar energy programs and policies, such as motivation for solar installation or funding for solar research and development.



### Gameplay Notes

You must have at least 1 Grid tag in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 1 Clean Energy token to your player board for each Solar tag in this card's stack.

# Climate



## Tree Farms

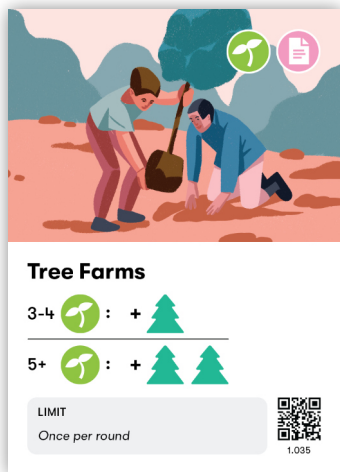
Planting trees on land that was previously used for pasture or crops or on former industrial sites can be a triple win. Trees remove carbon dioxide from the air and store it in their trunks and branches, or in the soil when fallen leaves and twigs decompose. They boost soil health, clean up pollutants and reduce local flood risk. Tree farms provide wood for construction, reducing the pressure to harvest more wild forests.

Before establishing a farm on a particular plot of land it's important to assess whether that land could be better used for something else - like regenerative agricultural spaces, wildlife areas or homes. Tree farms should not replace native ecosystems, and must be managed carefully and sustainably.

It's also important not to count tree farms as forests, since they don't provide all of the benefits a more wild forest ecosystem does. Calculations of how much carbon a tree farm stores should take into account the fact that harvested trees will eventually degrade, which releases greenhouse gas emissions back into the atmosphere.

### Take Action

- ▶ Support legislation and local policymakers' plans to create local tree farms where appropriate.
- ▶ Buy furniture and other products made from sustainably sourced wood, if you can't find second-hand and restored options.
- ▶ Join or start community stewardship projects to protect and manage local tree farms, woodlands and forests.



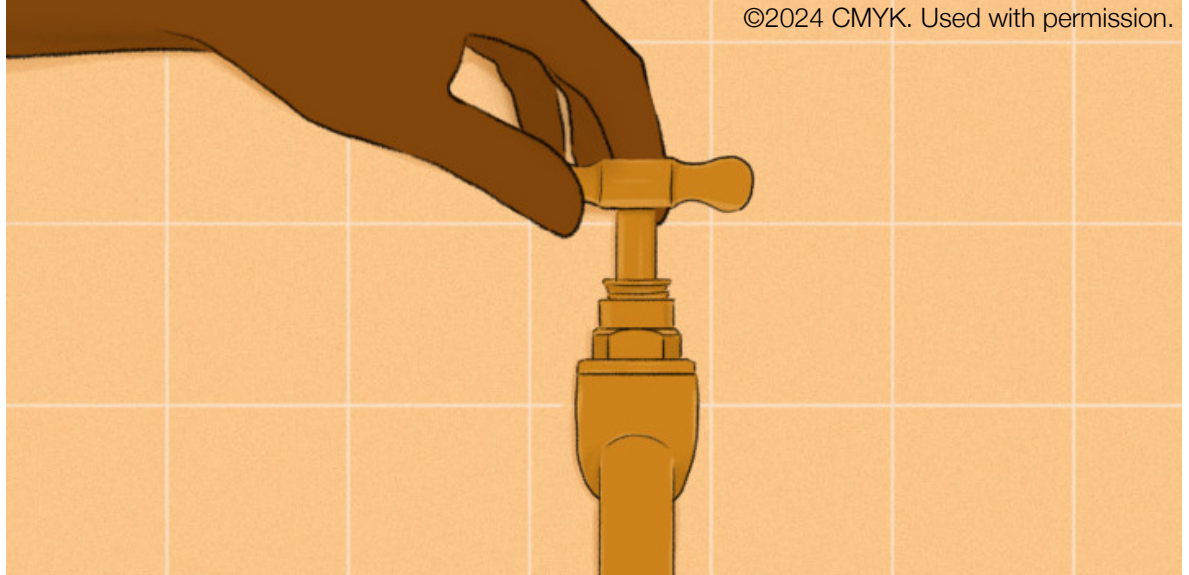
### Gameplay Notes

When you take this action,

- ▶ If you have 3–4 Ecology tags in this card's stack add 1 Tree token to the board.
- ▶ If you have 5 or more Ecology tags in this card's stack add 2 Tree tokens to the board.

You may take this action once per round.





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## Universal Basic Services

Public services and social security provide people with a set of basic needs to help them in life, such as free primary school education, public roads, and unemployment support. The idea of Universal Basic Services takes this principle further. It extends free services to ensure that everyone's material safety, opportunity to contribute to society, and participation in political decision-making can occur — even if someone lacks financial income.

This could mean expanding public housing and providing everyone with a right to a home, universal access to public healthcare, and free public transport. Free child and adult care could be provided as Universal Basic Services too, as could a basic food supply.

Moving to a society with Universal Basic Services might reduce environmental impacts. Public services tend to provide essentials like healthcare while producing fewer greenhouse gas emissions than private alternatives, as is the case with public healthcare in Europe compared to the private system in the United States. Universal Basic Services can also offer an alternative to carbon-intensive lifestyles. For example, universal access to free, high quality public transport could reduce private car and aircraft use.

While public services are being cut and sold off around the world, the idea of Universal Basic Services as a method of tackling the climate emergency is gaining traction.

### Take Action

- ▶ Follow the Social Guarantee.



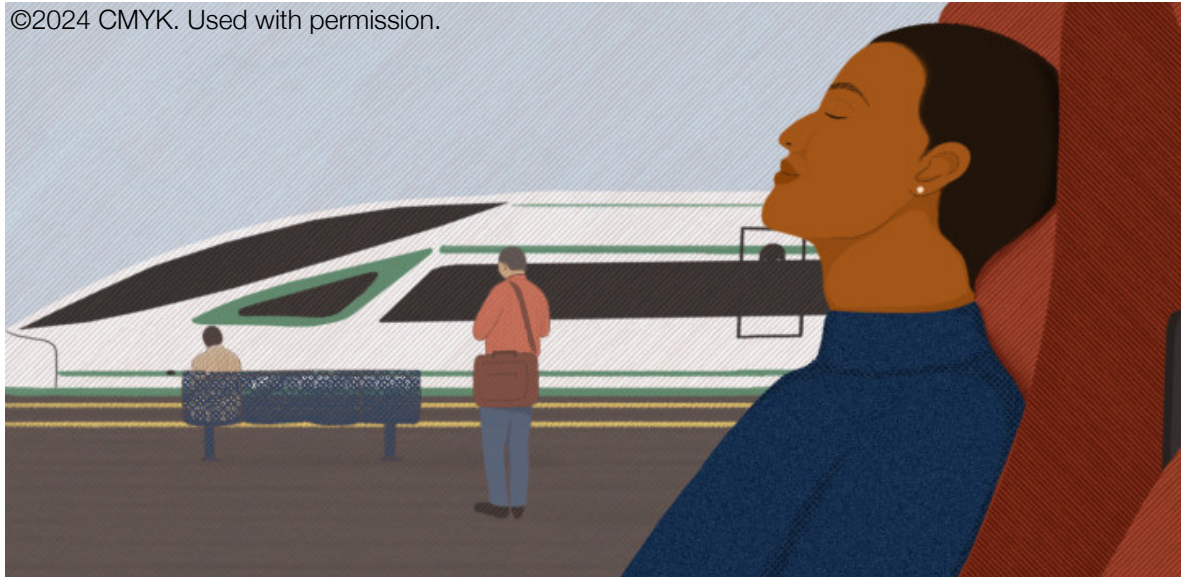
#### Universal Basic Services



1.090

### Gameplay Notes

- ▶ Discard 1 card from your hand, then add 1 Social Resilience token to your player board for each Society tag in this card's stack.



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### Gameplay Notes

- ▶ When you take this action, increase your Energy Demand by 1 and remove 1 Transportation Emissions token from your player board.

You may take this action once per Grid tag in this card's stack each round.

## Universal Public Transport

Public transit systems — buses, trains, trams, trolleys, ferries, and the like — have the potential to dramatically cut the need for, and so the climate impact of, transport systems. Even if they run on fossil fuels, such systems can massively reduce greenhouse gas emissions because they carry multiple passengers, unlike small private vehicles. They also tend to be more affordable than running individual vehicles, and therefore more widely accessible.

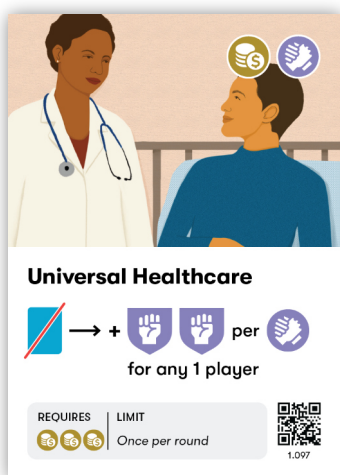
Critical to widespread adoption, however, is the public transport system being comprehensive, fast and convenient. Government subsidies can help bring down fares and improve speeds. Technologies such as geotracking can make it easy to plan trips with minimal waiting time, as can “first leg, last leg” options for getting to and from a mass transit stop. Finally, perception is key: when there is a widely accepted sense that public transit networks are functional and effective, people will be far more likely to use them. This can be encouraged by ending advertising for fossil-powered private vehicles, for example, and opening up dedicated routes for public transport vehicles that private vehicles can’t use.

### Take Action

- ▶ Take public transport whenever possible.
- ▶ Encourage your employer to subsidize mass transit.
- ▶ Encourage your local government to prioritize fast public transport infrastructure.
- ▶ Campaign to ban fossil-fueled vehicles advertising.



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## Universal Healthcare

The World Health Organization (WHO) has warned that the climate emergency is the single biggest health threat facing humanity. This threat is direct, such as increasingly extreme heat, which causes dehydration and death. It is also indirect, as in the case of extreme heat that destroys crops, hitting the earnings of farming communities, and causing poverty, malnutrition, and disease.

Universal access to healthcare is therefore essential to protect people from these growing threats to health. The millions of people most exposed and vulnerable to climate and ecological shocks also have poor access to healthcare and to the essentials that enable good health, like water, shelter and enough food.

But tackling the climate emergency is also a huge opportunity for health. For example, millions of people die from fossil fuel air pollution each year, totaling over 10 percent of global deaths. Reducing the use of fossil fuels will save lives and significantly lower the burden on health services. Greener transport options, like cycling and walking, and more sustainable diets can also improve health.

Many governments have yet to put health at the forefront of their strategies to tackle the climate emergency, although efforts to create climate adaptation and risk plans in some countries are starting to include discussions about healthcare and human life.

### Take Action

- ▶ The Global Climate and Health Alliance campaigns for action on climate and ecological change that protects and promotes health.

### Gameplay Notes

You must have at least 3 Incentive tags in this card's stack to take this action.

- ▶ Discard 1 card from your hand, then add 2 Social Resilience tokens per Society tag in this card's stack.

You may add tokens to any one (and one only) player board (including yours), once per round.



# Climate



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## Vertical Farming

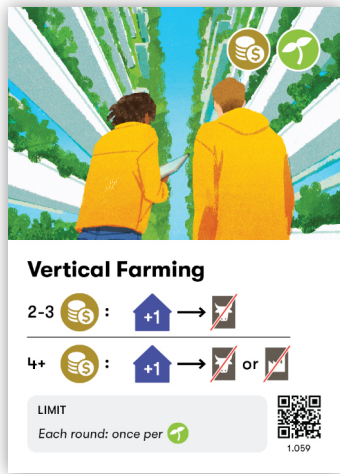
Agriculture's large environmental footprint comes in many forms: converting natural lands to cropland and pasture; polluting land and water with fertilizers and pesticides; draining aquifers; using fossil fuel energy to run equipment. Could we reduce that by growing crops more intensively indoors instead of outside? That's the idea behind vertical farming.

Vertical farms grow vegetables in stacks in warehouses, shipping crates, and other indoor spaces. They can reduce demand for water, agricultural chemicals, and land for growing some types of crops. They may also reduce the need to ship fresh produce long distances under refrigerated conditions. On the flip side, vertical farms are hefty consumers of energy for heating, cooling, and lighting. In addition, because they aren't suited to grow the corn, rice, and wheat that contribute the bulk of the calories people consume, they don't contribute significantly to global food security.

Whether vertical farms offer a net benefit from a climate emergency perspective depends on the details of their deployment, such as whether the energy used to maintain them comes from renewable sources. But, managed well, they could be an effective contribution to more regenerative, ecologically safe agriculture.

### Take Action

- ▶ Grow vegetables, herbs, etc., for your own use with an eye to minimizing greenhouse gas emissions.
- ▶ Support the development of renewable energy sources in your community as a way to improve the climate-friendliness of vertical farming and other innovations in the future.
- ▶ Encourage people exploring vertical farming to carefully consider costs and benefits.



### Gameplay Notes

When you take this action,

- ▶ If you have 2–3 Incentive tags in this card's stack, increase your Energy Demand by 1 and remove 1 Agriculture Emissions token from your player board.
- ▶ If you have 4 or more Incentive tags in this card's stack, increase your Energy Demand by 1 and remove 1 Agriculture Emissions token or 1 Industry Emissions token from your player board.

You may take this action once per Ecology tag in this card's stack each round.

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## Walkable Cities

Most western, modern spaces are designed for cars, not pedestrians. Changing that up could not only reduce greenhouse gas emissions from vehicles but also noise, congestion, and air pollution. It can enhance our wellbeing by increasing our social interactions and exercise. Driving less can cut down on spending on cars for individuals and governments alike.

Boosting walking starts with boosting walkability. Locating destinations near each other is pivotal. But so are providing safe and convenient walking paths, adding aesthetic features so walkers enjoy the journey, changing culture to make walking acceptable, while providing transport solutions for people with limited mobility.

### Take Action

- ▶ When possible, and if you are physically able to, walk, wheel or cycle to your destination instead of driving.
- ▶ Identify and promote policies and practices that incentivize walking to your politicians and local government (e.g., mileage-based auto insurance rates, pedestrianized streets and low emissions transport zones), and that support expanded access to public transit, reducing the need to devote so much valuable city space to individual private cars.
- ▶ Let community leaders know how much you appreciate existing walking infrastructure, and encourage them to install more. You could also set up community groups to campaign for better walking infrastructure and clean streets.



### Walkable Cities



REQUIRES  
B B

LIMIT  
 Once per round



1.077

### Gameplay Notes

You must have 2 Regulation tags in this card's stack to take this action.

- ▶ Remove 1 Transportation Emissions token from your player board.

You may take this action once per round.



## Gameplay Notes

- ▶ Discard 2 cards from your hand. Then remove 1 Emissions token (of any kind) from your player board and decrease your Energy Demand by 1.

You may take this action once per Incentive tag in this card's stack each round.

# Wellbeing Budget

Decisions on how to spend government money are partly determined by whether they might increase gross domestic product (GDP). GDP is a measure of the goods and services produced in a country. Many governments assume that more GDP will mean greater wellbeing, as goods and services increase and improve. But evidence shows that GDP growth is actually poorly related to wellbeing. For example, building more coal power plants will increase GDP, not accounting for the impacts of deadly air pollution and greenhouse gas emissions created by burning coal .

A big shift in mindset and culture is needed in how governments spend money and measure the success of a society and its economy. This can be difficult in political cultures that are focussed on the short term and wrongly assume that economic growth always improves the wellbeing of people and the planet.

Some governments are now introducing spending budgets that directly target wellbeing, using a variety of statistics to determine how the money will be spent. This can include assessing the impact of government investments on mental health, the environment, and the rights of Indigenous Communities.

However, government budget cycles - allocating money for a financial year, or a multi-year parliament -are short, so this might be the wrong approach for delivering the consistent and long term investments that are needed to tackle deep problems like mental health and environmental destruction.

## Take Action

- ▶ Check out the Wellbeing Economy Alliance (WEAll), a global coalition working towards a wellbeing economy.
- ▶ Read Doughnut Economics, by Kate Raworth, which offers a variety of visions for a safe and prosperous planet.





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## Wetland Restoration

Wetlands are areas of land in freshwater areas or along coastlines where the soil is waterlogged. Often, wetlands are viewed as wastelands waiting to be filled and developed. In reality, they are precious beyond price.

The plants that inhabit wetlands filter nutrients and contaminants from the water and help stabilize the soil, reducing erosion. They are rich habitats for animals and other living things. And as they grow, they suck carbon dioxide from the air and store the carbon it contains in their tissues and in the soggy soil beneath them. Peatlands, in particular, can store large amounts of carbon in layers of partly-decayed vegetation built up over time.

Wetlands do emit methane, a potent greenhouse gas, but the amount of greenhouse gas emissions they absorb is much greater, far outweighing their contribution to the climate emergency.

Restoring and protecting wetlands can improve their capacity to absorb greenhouse gas emissions from the atmosphere and store it for long periods of time. Caring for wetlands reduces climate risk while enhancing the numerous other ways they support the wellbeing and flourishing of people and ecosystems.

### Take Action

- ▶ Think of wetlands as valuable habitat instead of “wasted land” that could be filled or excavated for other uses. Protest efforts to develop and build on them, and join community groups that aim to protect them.
- ▶ Encourage local lawmakers to protect existing wetlands and restore damaged ones.
- ▶ Initiate or volunteer with an invasive species removal project in a wetland near you.



### Gameplay Notes

When you take this action,

- ▶ If you have 3–4 Ecology tags in this card's stack, add 1 Ocean token to the board.
- ▶ If you have 5 or more Ecology tags in this card's stack, add 2 Ocean tokens to the board.

You may take this action once per round..



## Wilderness Protection

'Wilderness' is an area which has been largely undisturbed by human activity. It most often refers to ecosystems on land – like forests – but can also be used to describe marine life in the world's oceans.

Protecting wilderness is an important part of modern conservation, as these areas provide ecologically rich environments for many of the Earth's plant and animal species to live and thrive in. In addition to supporting ecosystems to flourish, intact wilderness areas can help mitigate the climate emergency by absorbing greenhouse gas emissions from the atmosphere.

Despite their benefits, wilderness areas are increasingly under threat. As of 2022, less than 25% of the Earth's land and just 13% of the ocean remain wild, and this area is rapidly diminishing as human activity continues to grow and intensify. New roads built for logging, mining, and agriculture have shrunk forests by 12% from 2000 to 2022 – an area twice the size of Chile.

Legal protections on wild areas and cooperation between countries to require and design protective laws can help improve wilderness protection. The Convention on Biological Diversity, a treaty between countries that aims to protect land and marine ecosystems, is a global starting point. Providing training and support for local people to steward, maintain and protect ecosystems or find jobs in other sectors can help them find alternative livelihoods to logging and mining.

Lobbying from powerful businesses, industry representatives and financial investors to deregulate protected wilderness areas is common, hindering these efforts.

### Take Action

- ▶ Support the WILD Foundation, an organization dedicated to preserving wilderness areas around the world.
- ▶ Consider buying sustainably sourced goods which do not damage wilderness areas, especially when shopping for wood and food products.
- ▶ Advocate for increased legal protections of wilderness in your country and community.



### Gameplay Notes

- ▶ Add 1 Ecological Resilience token to your player board.

You may take this action once per Ecology tag in this card's stack per round.





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## Wind R+D

Despite wind energy’s enormous growth over the past decade, there is still room for improvement. Research and development (R&D) could, for example, dramatically speed up the scale at which wind energy can be installed and the rate at which energy is generated, reducing costs in the process.

One of the significant challenges regarding wind energy is finding ways to increase the efficiency of wind turbines so that they can generate more electricity from the same amount of wind. This requires research into new materials and designs for wind turbine blades, as well as improvements in the technology used to control the speed and direction of the blades.

R&D might also improve the reliability of wind turbines, ensuring they operate more consistently and require less maintenance, especially where offshore wind turbines are concerned. This includes research into new sensors and monitoring systems, for example. Innovation might also unlock the potential of floating offshore wind, for example, which could be cheap to install, grant access to wind further out to sea, while opening the potential to move turbines around based on advantageous conditions and energy demand. Finally, R&D may also include understanding and reducing the environmental footprint of the materials used to make wind turbines, as well as the impacts they have on bird and bat populations.

### Take Action

- ▶ Personal: Support wind energy by purchasing green energy options from energy providers.
- ▶ Professional: Invest in wind energy companies as a business or organization.
- ▶ Political: Advocate for policies that encourage and fund research and development of wind energy technology.

**Wind R+D**

Draw **8** then keep all cards that have a  or  tag.

LIMIT  
Once per round



1.111

### Gameplay Notes

- ▶ Draw 8 cards. Add any cards with Wind and/or Innovation tags to your hand. Discard the others.
- You may take this action once per round.



## Gameplay Notes

- ▶ Reduce your Energy Demand by 1.

You may take this action once per round.

# Women and Girls' Education

Access to high-quality, universal education is a fundamental human right for all, yet is denied to many women and girls. Education is a cornerstone of gender equality and can lead to more working options, better individual and household health and increased overall well-being. Today, 129 million girls are out of school worldwide. Education enables women and girls to become active community members, decision-makers, and leaders who are involved in all spheres of life. Increasing education on climate change, in particular, helps them to take part in climate action work, economic development efforts and the creation of low-carbon technologies.

## Take Action

- ▶ Value and pursue your own education, and share your educational story with others.
- ▶ Encourage policymakers and community leaders to provide high-quality, free education for all, including those who are most vulnerable to the negative impacts of climate change.
- ▶ Do what you can (tutor, help with child care, contribute to scholarships, etc.) to support free educational opportunities for others.
- ▶ Contribute or start community-run free childcare and mentorship schemes, or campaign for the government to provide these.



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## Women's Empowerment

The fundamental human rights of women, as well as trans and non-binary people, around the world are at risk from discrimination, injustice, oppression, a lack of reproductive rights and violence. Women's empowerment is critical to achieve these rights, to ensure gender equality, economic development and poverty reduction, and to increase women's representation and participation in social and political spheres.

The violation of women's rights and subjugation of women happens in all countries, and across all industries and sectors. It reinforces harmful gender norms, stereotypes, and discrimination against women, limiting their opportunities for education, employment, and decision-making. It is often linked to the oppression of LGBTQIA+ communities, who are also persecuted by patriarchal systems.

Women's empowerment might include healthcare, education, legal protections, support to access dignified jobs and more. Schemes should contextualize the different ways in which women across different cultures, regions, and communities might need to be supported. For example, migrant women may face overlapping forms of social exclusion whereby they struggle to access work and healthcare due to visa barriers and lack of translation support. Empowering women in the face of the climate emergency is particularly important since many women face higher levels of vulnerability to its impacts due to existing gender inequalities. For example, in situations where women are prevented from accessing their finances, or gaining work, they lack the agency to migrate when affected by the climate emergency. These women may need additional support in gaining new skills for climate smart employment opportunities. Increased exposure to heat stress, extreme weather events, and air pollution can exacerbate existing health conditions in women and pose risks during pregnancy and childbirth. Not considering women-specific needs in decision-making for climate emergency adaptation plans and strategies can result in further marginalization of women.

Education and skills development, fair and equal economic opportunities, tackling prejudice and hatred, and improving access to health and reproductive rights are some of the ways in which women empowerment can be achieved.

### Take Action

- ▶ Value and pursue your own education, and share your educational story with others.
- ▶ Encourage policymakers and community leaders to provide high-quality, free education for all, including those who are most vulnerable to the negative impacts of climate change.
- ▶ Do what you can (tutor, help with child care, contribute to scholarships, etc.) to support free educational opportunities for others. Promote gender equality in the workplace, such as equal pay for equal work, parental leave, and flexible work arrangements for working mothers.
- ▶ Contribute or start community-run free childcare and mentorship schemes, or campaign for the government to provide these.

**Women's Empowerment**

→ + per

or + per

or + per

1.222

### Gameplay Notes

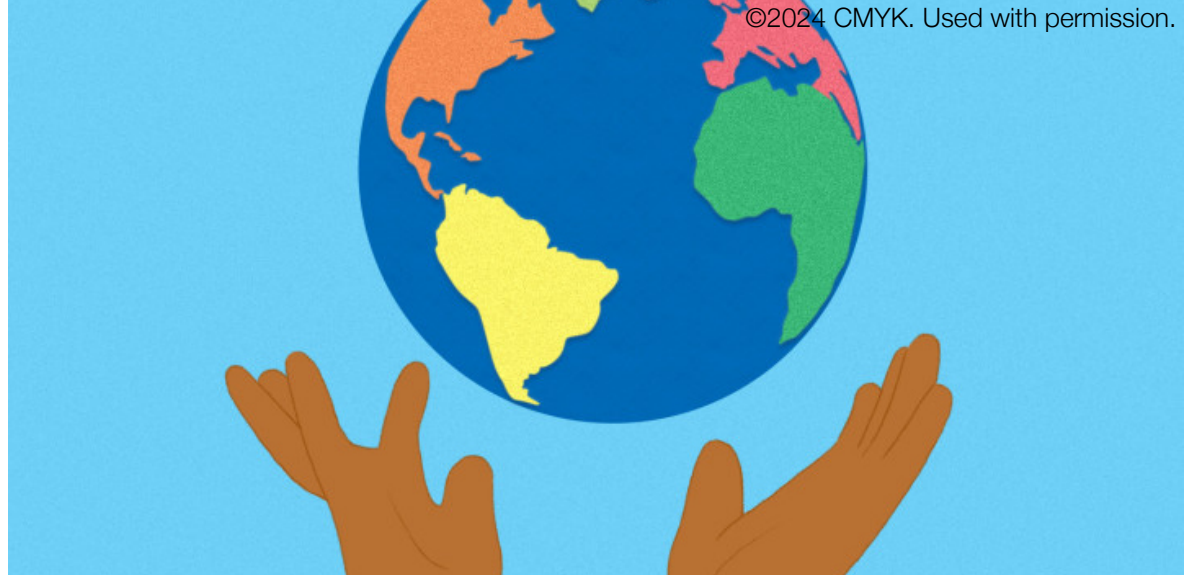
Discard 1 card from your hand to:

- ▶ add 1 Social Resilience token per Society tag in this card's stack,
- ▶ or add 1 Ecological Resilience token per Ecology tag in this card's stack,
- ▶ or add 1 Infrastructure Resilience token per Infrastructure tag in this card's stack.

Add these tokens to your player board.



Climate



## Youth Climate Movement

The youth climate movement is playing a significant role in the global agenda for climate action. Young people are actively involved in advocating for climate action and raising awareness about the urgent need to address the climate emergency.

Several youth-led organizations at local, national, and international levels around the world are dedicated to climate activism. The rise of global youth-led movements, such as Fridays for Future, the Sunrise Movement, Te Ara Whatu and more, has played a significant role in popularizing youth involvement in the climate movement and bringing it to widespread attention.

The youth climate movement has had a huge amount of success in encouraging governments, corporations and community leaders to take action on the climate emergency.


The climate emergency impacts the physical and mental health of young people, disrupts education and reduces economic opportunities for young people, particularly when it results in them having to move away from their homes or to different countries. The climate youth movement seeks to address this by demanding stronger climate policies and more ambitious climate action from governments.

Skepticism, resistance and lack of awareness in general society often hinders the progress of the youth climate movement. They do not have much political power and influence, and often have limited resources and support. This affects their ability to drive policy changes and implement climate solutions.

Providing platforms and spaces for youth activists to voice their concerns, ideas, and solutions, and actively listening to their perspectives and experiences will help the youth climate movement. Recognizing and supporting youth as leaders in climate action, and involving them in decision-making processes at all levels is also crucial.

### Take Action

- ▶ Join a protest movement yourself, and use your position in it to advocate for climate justice and equity, recognizing that the climate emergency disproportionately affects marginalized and vulnerable communities, including those in low-income communities, and Indigenous Peoples.
- ▶ If you have children, support them to learn about the climate emergency and join local youth movements if they want to..
- ▶ Get involved or participate in protests, strikes, and campaigns to demand climate action and holding decision-makers accountable for their commitments. You could volunteer to steward or play a pastoral role at youth strikes if you are an adult and the organizers are looking for support.




**Youth Climate Movement**

2-3 : Draw +1

4-5 : Draw +2

6+ : Draw +3

LIMIT  
Once per round



1.223

### Gameplay Notes

- ▶ When you take this action, draw 1, 2, or 3 additional Local Project cards if you have 2–3, 4–5, or 6 or more Society tags in this card's stack.

You may do this once per round.