



build as
nature

BUILD AS NATURE MANUAL

V1.1

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INTRODUCTION

The responsible management of natural resources—including land, water, air, minerals, forests, and biodiversity—is essential for preserving the natural environment and ensuring a high quality of life for both present and future generations. Achieving sustainable resource management begins with education and raising awareness. As climate change, rising temperatures, and habitat loss continue to pose global challenges, it is increasingly important to equip younger generations with the knowledge and skills needed to make environmentally responsible decisions.

Build as Nature is a serious educational game developed with this goal in mind. Built in Unity, it is a card-based town management game in which players develop a virtual town over a series of turns while protecting it from both natural and human-made disasters. Rather than relying solely on conventional engineering, players are encouraged to work with nature by using the natural water cycle and Nature-Based Solutions (NBS) to maintain a healthy balance between the town's Economy, Health, and Biodiversity.

Both the teacher and student experience take place entirely within the Build as Nature application. The software is organized around *scenarios*, which define the learning experience. Teachers can create their own scenarios or duplicate existing public ones, adapting them to suit their teaching needs. Public scenarios can also be shared with other educators, encouraging collaboration and the development of a growing library of reusable educational content. Every scenario created or duplicated by a teacher is stored in their private scenario list. Teachers can create rooms and slot their scenarios into them.

Each room is assigned a unique, automatically generated code that teachers can share with their students. Students can use this code to enroll in a room and experience the selected scenario, browse publicly available scenarios and play them. Before starting, students can read the room and scenario description, begin a new playthrough or continue from a previous session.

This manual explains how to use Build as Nature from both the teacher's and the student's perspective and describes all aspects of the software. Throughout the manual, students may also be referred to as *players*, while teachers may also be referred to as *content creators*. The term *user* is used whenever the instructions apply equally to both.



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WORD OF CAUTION

Build as Nature is a work in constant progress. The tool is updated frequently to add features and correct bugs — up to several times a day. Until the software reaches its final version, this manual is also a work in progress.

You may find discrepancies between some screenshots and the actual images in the software or notice that a recent feature is not yet described. This simply means a new version of the manual is on its way.

If you have any questions, please feel free to email the lead developer, who will answer promptly: **olivier.heidmann@gmail.com**.

FIRST STEPS IN THE GAME

SETTINGS THINGS UP

The game launcher is available at this URL: <https://tinyurl.com/2cvs77k2>

Build as Nature is compiled to run on computers using the **Windows 64-bit operating system**. The software is distributed as an archive containing the game launcher.

Folder	BaNLauncher_Data	12/7/2026 7:47 μμ	Φάκελος αρχείων	
Folder	D3D12	12/7/2026 7:47 μμ	Φάκελος αρχείων	
Folder	MonoBleedingEdge	12/7/2026 7:47 μμ	Φάκελος αρχείων	
File	BaNLauncher	22/10/2025 10:42 πμ	Εφαρμογή	657 KB
File	UnityCrashHandler64	22/10/2025 10:42 πμ	Εφαρμογή	1.496 KB
File	UnityPlayer.dll	22/10/2025 10:42 πμ	Επέκταση εφαρμο...	32.934 KB

Figure 1: Build as Nature archive content

Once the archive is downloaded, extract all the files and double click on the **BaNLauncher.exe** file to start the game launcher. The first time you open the game launcher it will download the latest version of the game. In the future, you may get additional small updates as we release patches for the game.

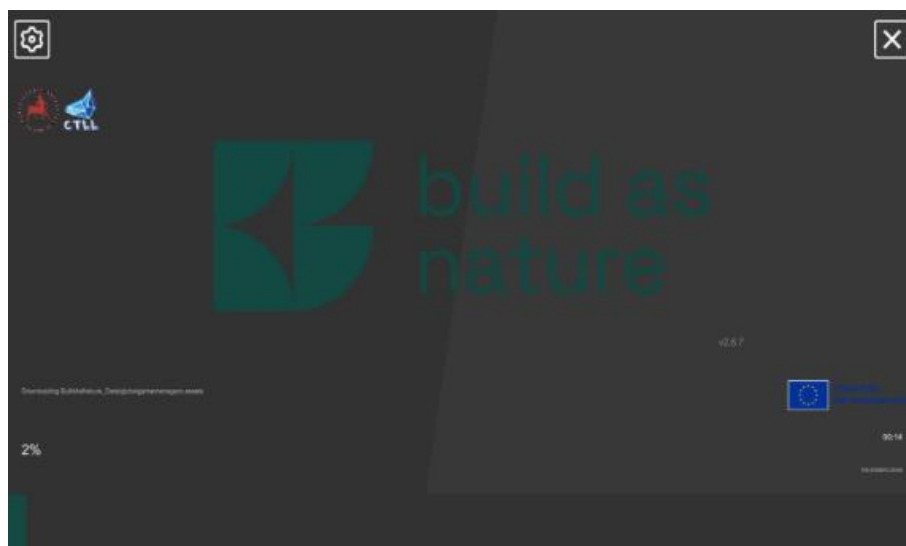


Figure 2: Build as Nature Launcher



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POSSIBLE ISSUES

When starting the game launcher for the first time, you might get a warning about running an unrecognized app from the Windows Smartscreen functionality, such as illustrated in Figure 2 and 3.



Figure 3: Windows Smartscreen warning

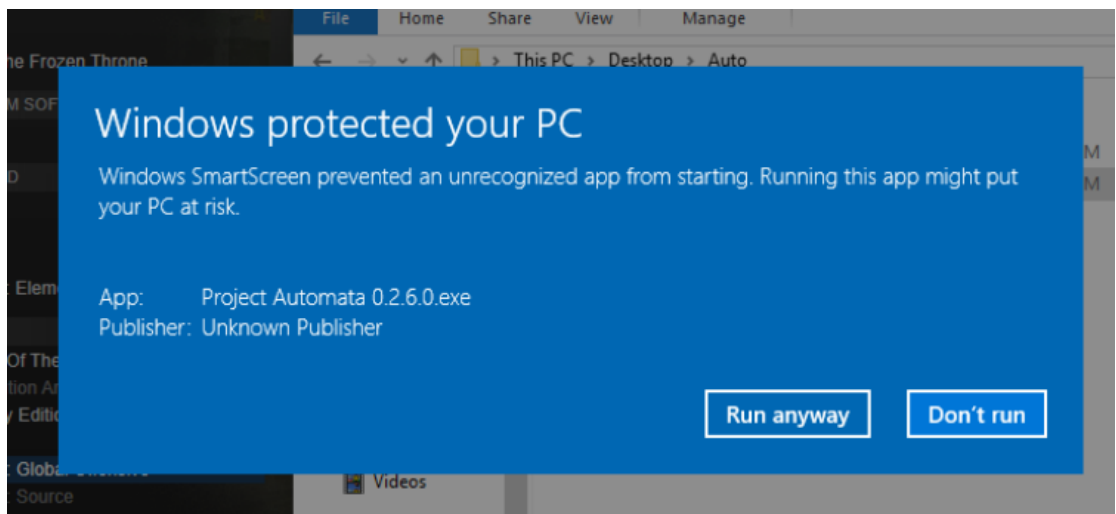


Figure 4: Alternate Windows Smartscreen warning

If you find yourself in the case illustrated by **Figure 3**, please click on More info and then run the game.

If you find yourself in the case illustrated by **Figure 4**, please click on Run anyway.



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MAIN MENU

This is the first screen you will encounter when you start the game. Click on Log in button to proceed to the authentication screen.



Figure 5: Main Menu

LOGGING IN

If you have an account already, you can enter your username and password and click **Sign In** to log in.

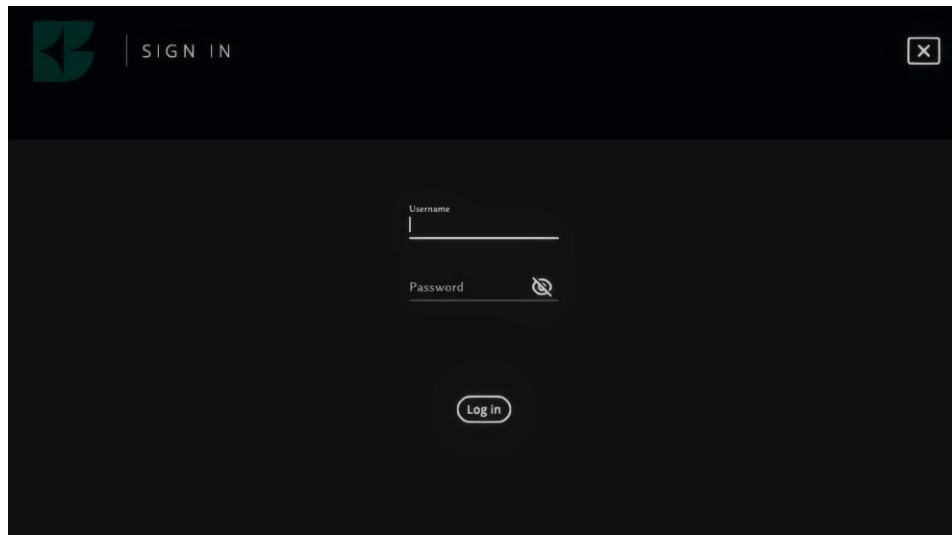


Figure 6: Authentication Screen

Next to the password field, an **eye icon** lets you reveal or hide what you are typing. Click it to toggle visibility. The password is hidden again automatically whenever you leave the screen, so a revealed password is never left on display.

CREATING AN ACCOUNT

If this is your first time using Build as Nature, you need to create an account. Click the registration option and enter a **username** and a **password**. No real name or email address is requested, to minimize the amount of personal data kept on our servers.

If you are a teacher or content creator, you can enter a special **teacher code** to unlock the teacher side of the platform. Contact us at the address in Word of Caution to obtain the teacher code.

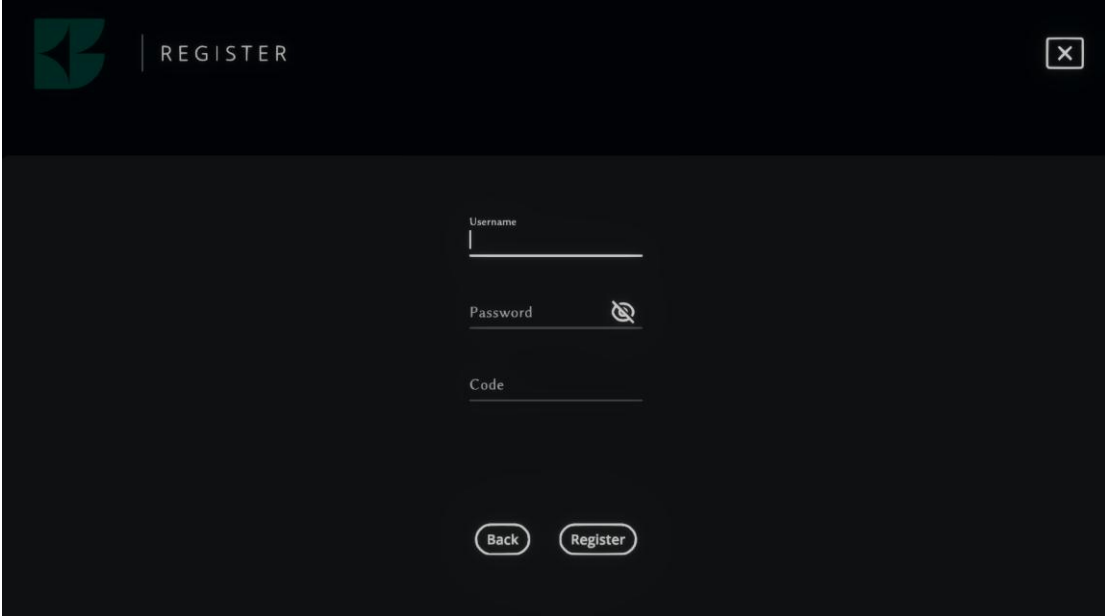
The screenshot shows a dark-themed registration form. At the top left is the 'build as nature' logo, followed by the word 'REGISTER' and a close button (X). The form contains three input fields: 'Username', 'Password', and 'Code'. The 'Password' field has an eye icon to its right for toggling visibility. At the bottom are two buttons: 'Back' and 'Register'.

Figure 7: Registration Screen

The register password field also has the same show/hide **eye toggle** as the login field.



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DISPLAY ISSUES

In the rare event that the game does not display correctly, click the **Calibrate Your Screen** button to open the **Options** menu. From there, you can adjust settings such as the screen resolution and window display mode. The Options menu is explained in detail later in this manual.

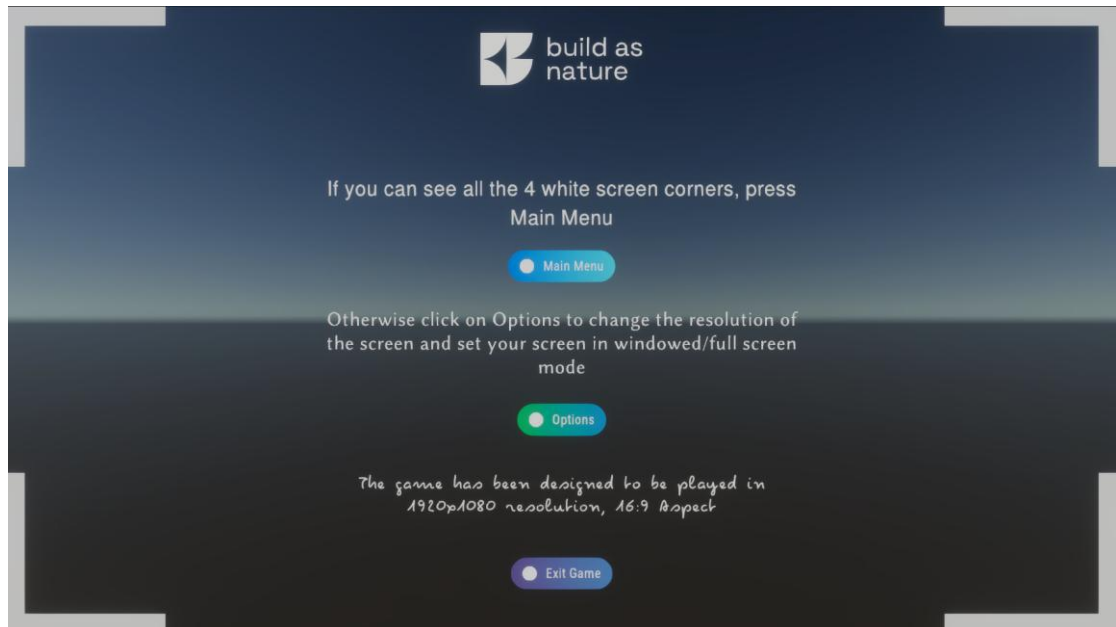


Figure 8: Screen calibration

Once you can see all 4 white screen corners, as shown in **Figure 8**, you can go back to the **Main Menu**.

HOME SCREEN

After logging in, you will arrive at the home screen of the main menu. Its content depends on the type of account you hold.

- Students can join rooms and play scenarios
- Teachers can create, edit, play and publish scenarios and can create rooms that students can join



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Figure 9: Teacher Home Screen

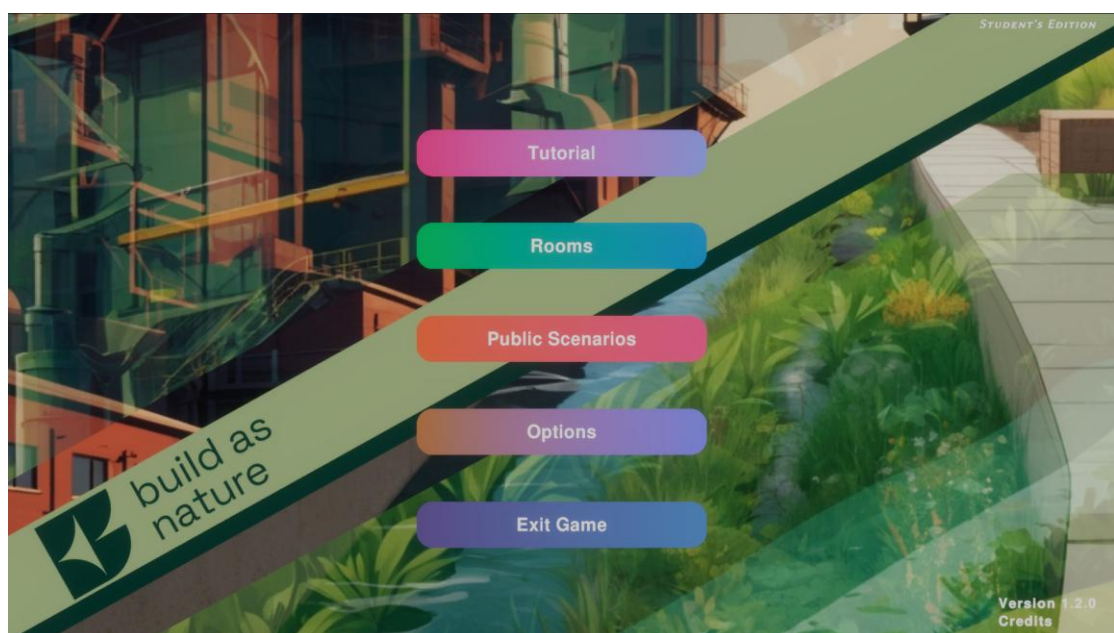


Figure 10: Student Home Screen



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OPTIONS SCREEN

Click on the **Options** button to open the Options screen. The Options are divided into 3 categories.

Gameplay

- **Language** — selects the interface language. The available languages are **English, German, Greek, Estonian, Icelandic and Portuguese.**
- **Card Style** — selects how cards are rendered on the table. Three styles are available: **2D** (flat illustration), **3D** (illustration with depth and lighting — the default), and **Used** (an aged, hand-worn paper look). The change applies as cards are spawned on the table.
- **Show FPS** — In order to help the user check how well the game is running, a FPS (frames per seconds) counter can be displayed by clicking on the SHOW FPS option.

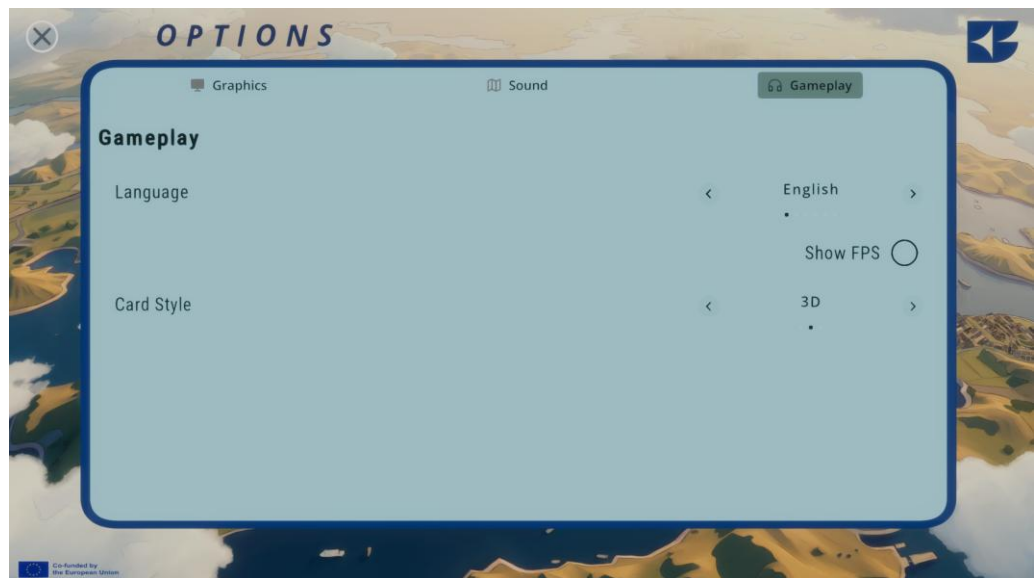


Figure 11: Gameplay Settings

If the FPS counter is enabled, it will appear in the top-right corner of the screen as three numbers stacked vertically. The top number displays the highest FPS, the middle number displays the average FPS, and the bottom number displays the lowest FPS.



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All numbers are colored according to their value, following this convention:

- Green indicates FPS above 60
- Blue indicates FPS between 45 and 60
- Yellow indicates FPS between 30 and 45
- Orange indicates FPS between 15 and 30
- Red indicates FPS below 15

You should generally aim for a number above 30 FPS. To achieve this, you can change the settings in the Graphics section.

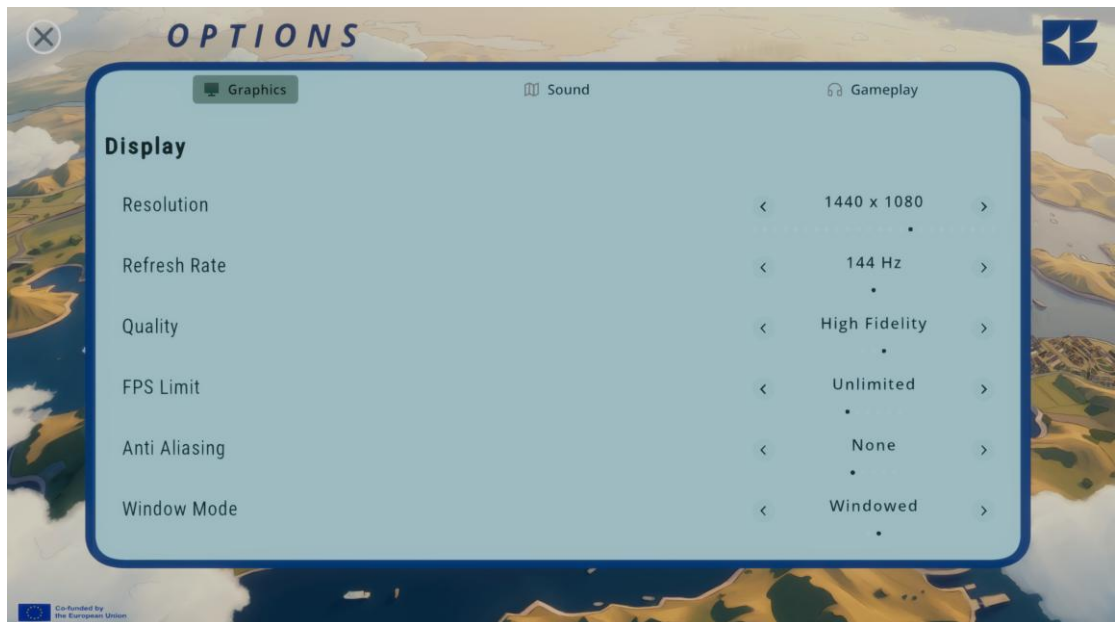


Figure 13: Graphics Settings

Graphics

- **Resolution**— allows you to change the game display resolution based on your screen.
- **Refresh Rate** — allows you to change the refresh rate based on your screen.
- **Quality** — a quality selector ranging from Performant to High Fidelity. If the game runs slowly, lower the overall quality.
- **FPS Limit** — caps the frame rate if you experience performance issues. The default is unlimited.



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- **Anti-Aliasing** — improves visual smoothness at some performance cost. It can be set to **None**, **FXAA** (a balance between quality and performance) or **SMAA** (best quality, not recommended on low-end computers). There are 3 different levels of **SMAA**.
- **Window Mode** — switches between **borderless window** and **windowed** screen mode.

Sound

- **Master**—controls the overall volume of the game.
- **Music** —controls the volume of music.
- **Sound Effects** —controls the volume of the game sound effects.

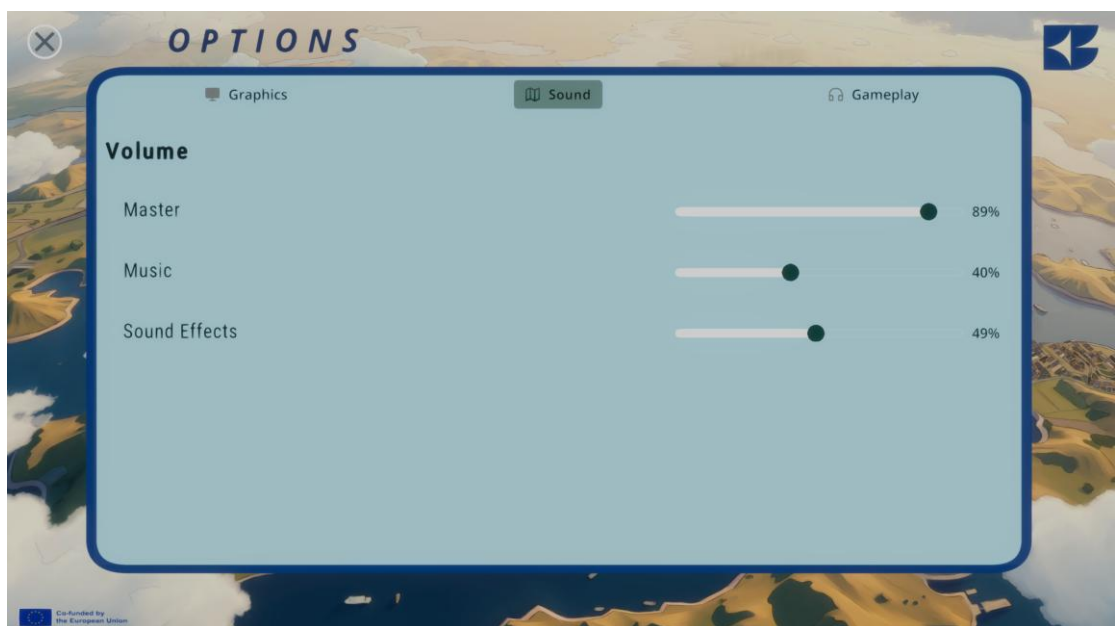


Figure 14: Sound Settings

You can access the Options screen at any time during gameplay by pressing the P key on your keyboard.



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CREDITS SCREEN

By clicking on the **Credits** text on the Main Menu the Credits screen will appear.

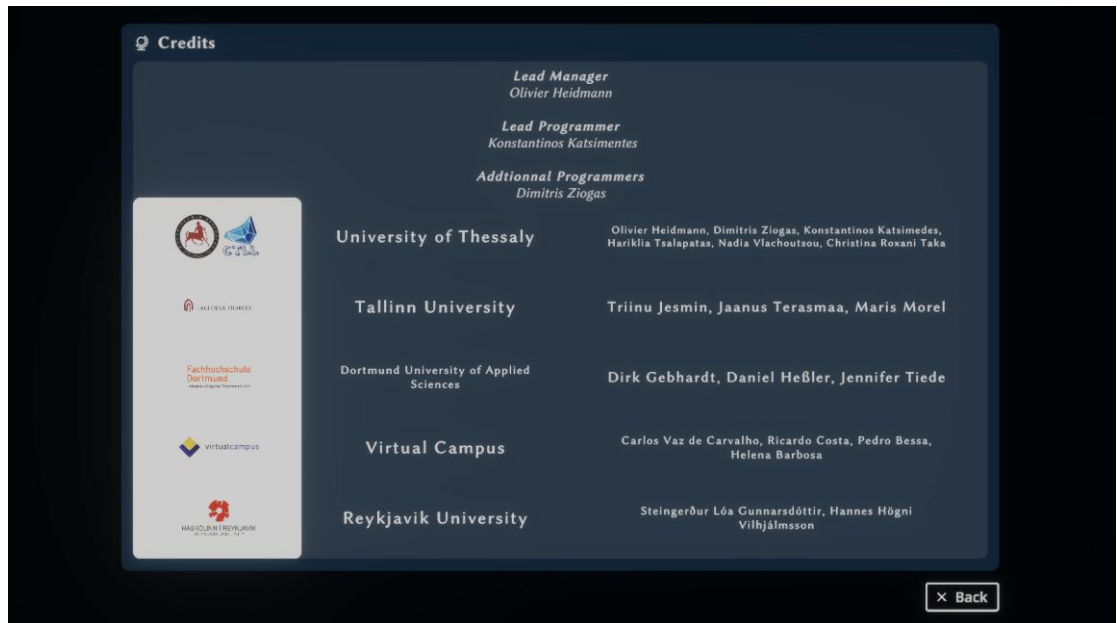


Figure 15: Credits Screen

It displays the Erasmus+ disclaimer, the partners involved in the project and of all the participating individuals.

THE TEACHER EXPERIENCE

There are four categories available on the home screen:

- Tutorial
- My Scenarios
- Rooms
- Public Scenarios

The Tutorial will be covered later in this manual, but it is recommended that you complete it after reading the manual to gain a better understanding of the game's mechanics.

MY SCENARIOS

My Scenarios screen displays all the scenarios you have created. Each entry shows a title and a description.

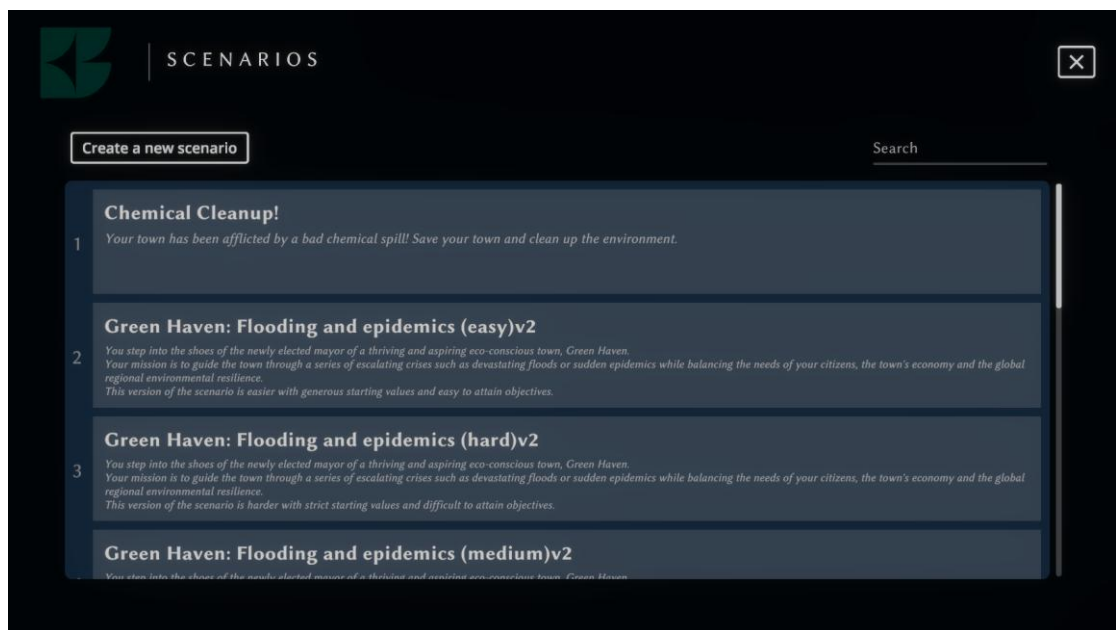


Figure 16: Teacher My Scenarios screen

Clicking a scenario brings up its entry, with all the details and the actions available:

- **Edit** — opens the scenario editor to modify that scenario.
- **Play** — lets you play the scenario yourself, as a student would.
- **Publish** — makes the scenario public for all teachers and students.
- **Clone** — duplicates the scenario to your My Scenarios list.



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- **Delete** — permanently removes the scenario.
- **Back** — returns to the My Scenarios screen.

At the top-left of the screen, the **Create a news scenario** button starts the authoring flow. A search bar at the top-right lets you find scenarios by name.

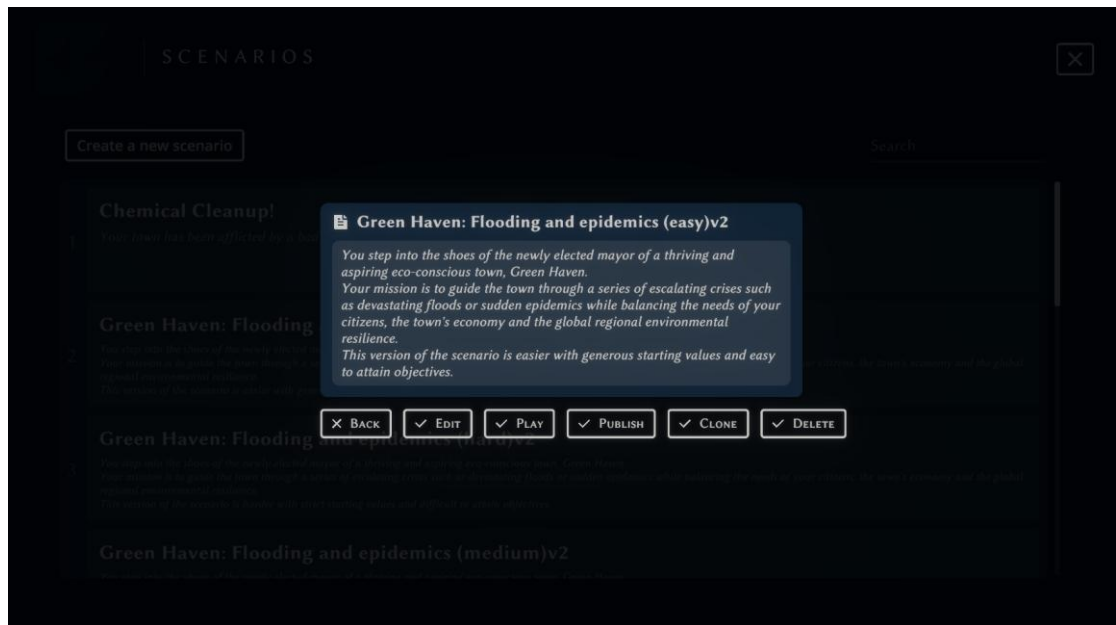


Figure 17: Teacher scenario entry

PUBLIC SCENARIOS

The Public Scenarios screen shows every shared by the teachers across the game.

An icon on the right of an entry marks the scenarios you authored.

You can filter them by selecting one of the three options at the top-left corner of the screen or you can find scenarios by name using the search bar at the top-right corner.



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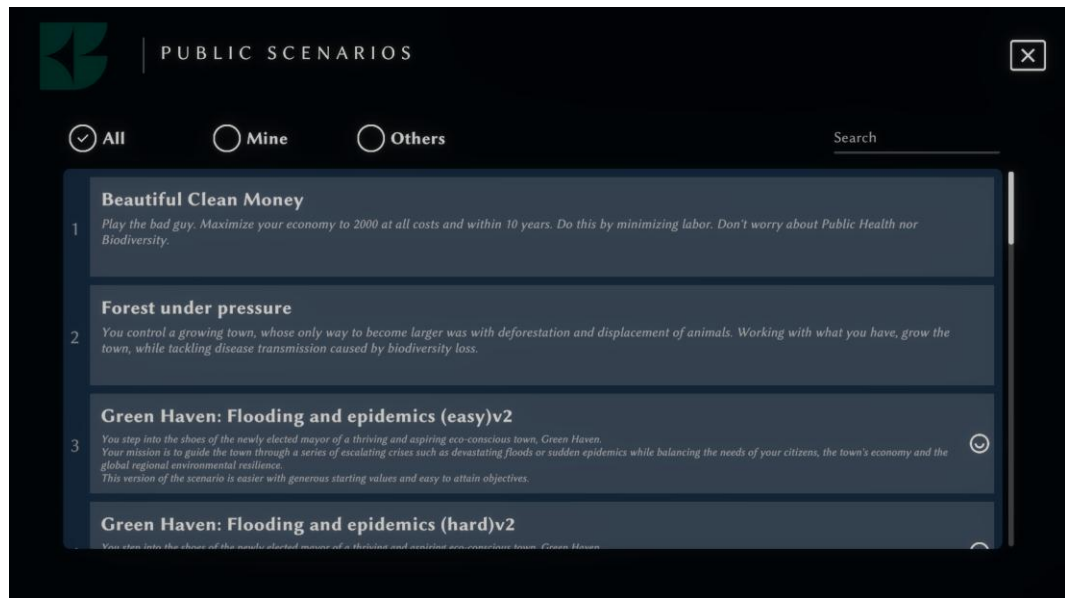


Figure 18: Teacher Public Scenarios Screen

Clicking a scenario brings up its entry, with all the details and the actions available:

- **Edit** — opens the scenario editor to modify that scenario. This option appears only in the case you are the author of the scenario.
- **Preview** — lets you play the scenario yourself, as a student would.
- **Delete** — permanently removes the scenario. This option appears only in the case you are the author of the scenario.
- **Back** — returns to the Public Scenarios screen.



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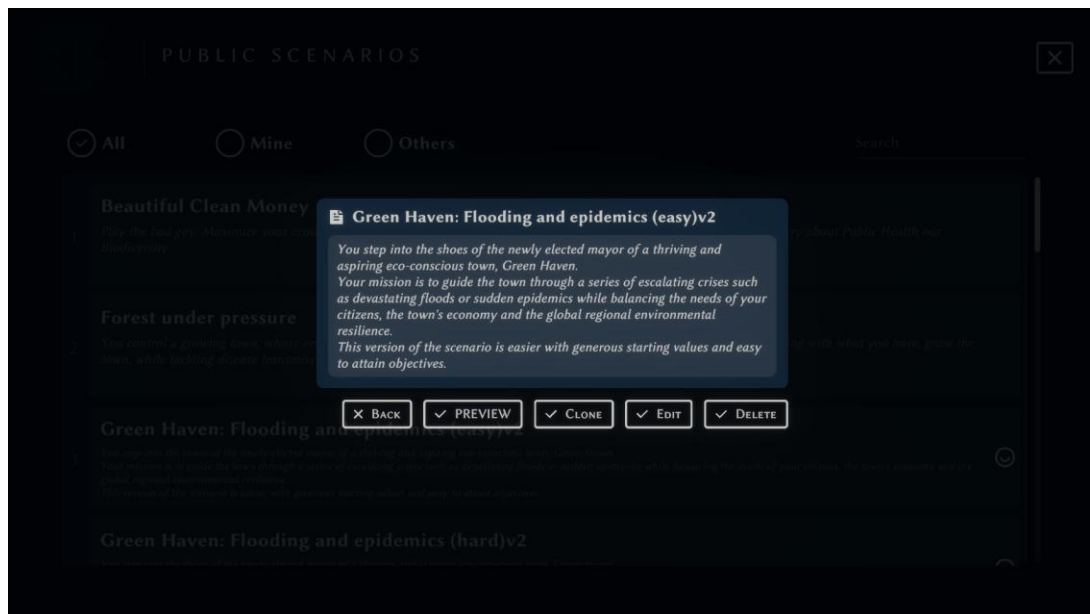


Figure 19: Teacher public scenario entry

ROOMS

The Rooms screen displays all the rooms you have created.

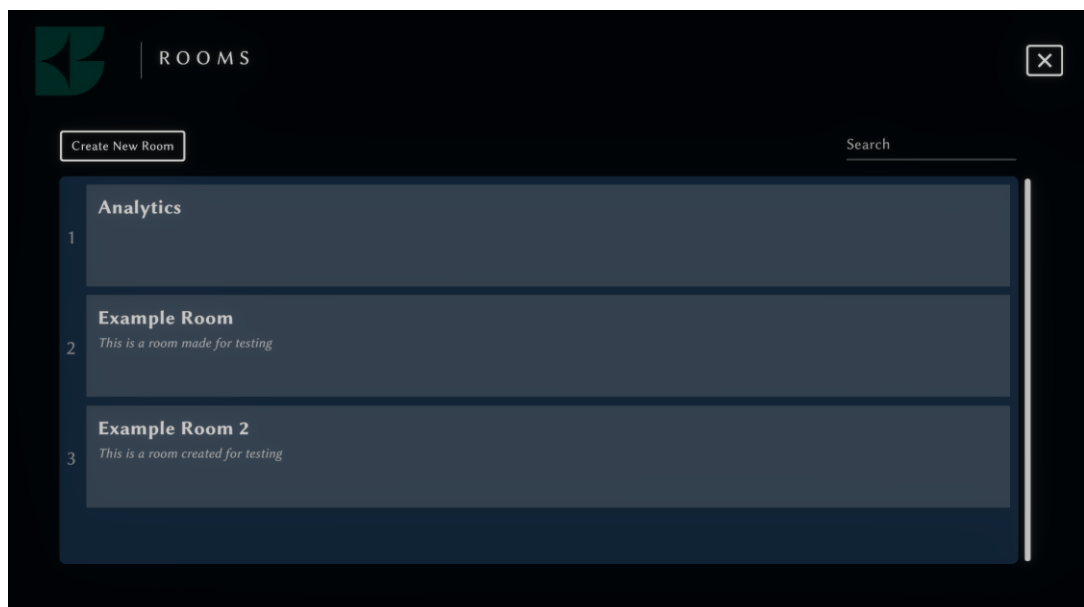


Figure 20: Teacher Rooms screen



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You can find rooms by name using the search bar at top-right corner of the screen and you can create a new Room by clicking on the **Create New Room** button.

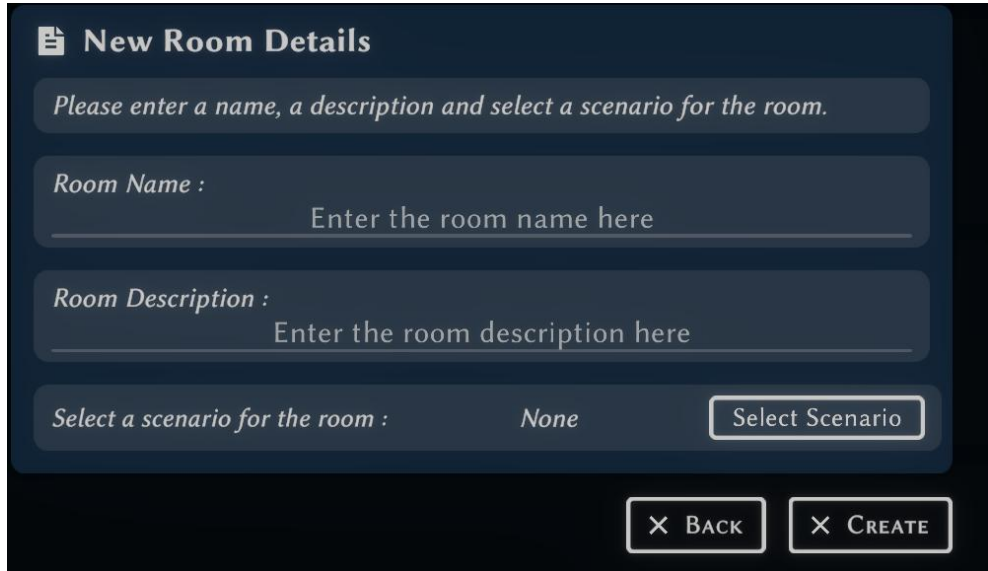


Figure 21: Create new Room screen

At this screen you will be prompted to enter a name and a description for the new room and slot a scenario to it by selecting one from your My Scenarios list. Once you have entered all the required information, click on the **Create** button to create the new Room.

Clicking a room brings up its entry, with all the details and the actions available:

- **Analytics** — opens the Analytics panel for the Room
- **Delete** — permanently removes the Room
- **Back** — returns to the Rooms screen.



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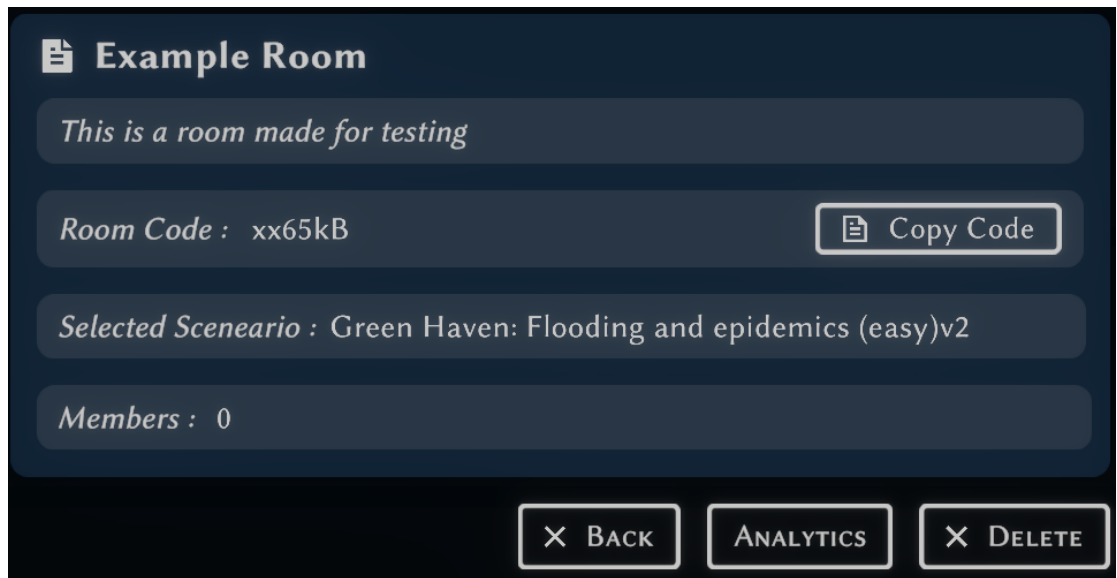


Figure 22: Teacher selected Room entry

Along with the name and description of the Room you can also see the **Room Code**. Each room is generated with a unique code. Giving that code to your students will allow them to join the Room and play the scenario you selected. You can click on the **Copy Code** button to copy the code to the clipboard, so it's easier to distribute it.

You can also see the number of students that have joined the Room.

ANALYTICS PANEL

As mentioned, you can view detailed analytics for your rooms.

You can see how many students have played the room scenario; how many students have reached the scenario objectives and several in-game variables.

The in-game variables available are the following:

- Economy— shows the total system Economy per turn.
- Health— shows the total system Health per turn.
- Biodiversity— shows the total system Biodiversity per turn.
- Water Pollution % — shows the total system Water Pollution per turn.
- Economy Spent—shows the amount of Economy spent per turn.
- Engineering Cards—shows the number of Engineering Cards on the board per turn.
- NBS Cards— shows the number of NBS Cards on the board per turn.

- Card Activity — shows the number of Card Combinations, Imported Cards, Produced Cards and Recycled Cards.
- Objectives and Summary — shows whether the scenario objectives have been reached and how much time the student spent playing the room scenario.

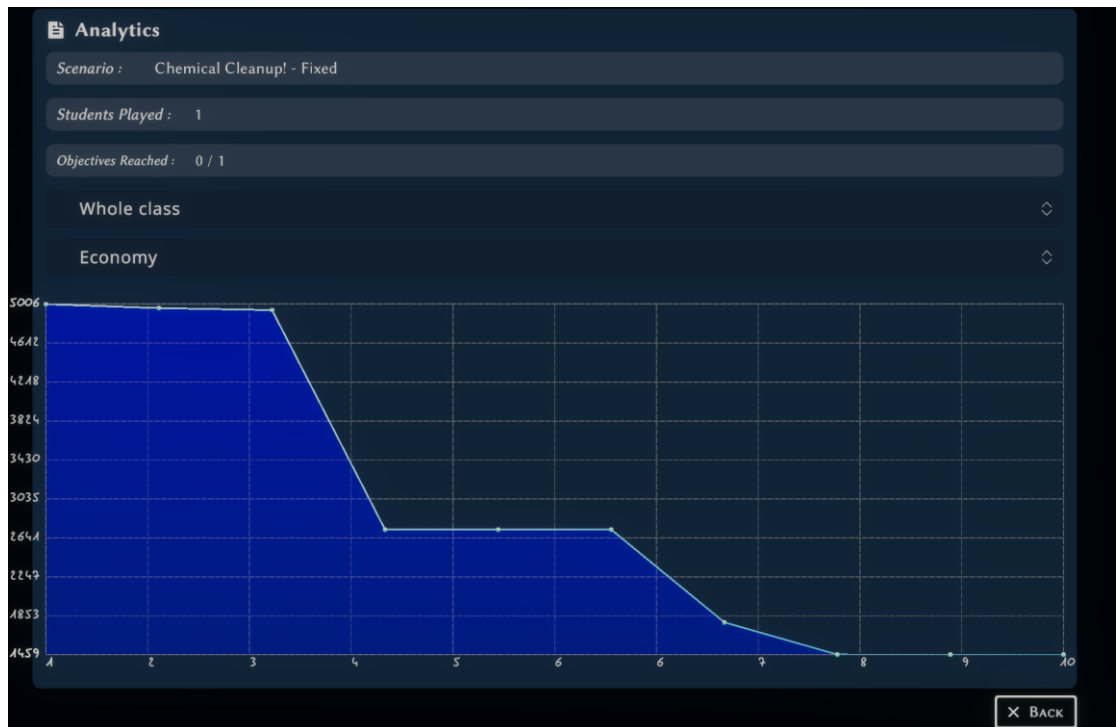


Figure 23: Room Analytics screen

You can change the displayed information by using the second dropdown menu to select one of the available variables. You can also use the first dropdown menu to view this information for the entire class or for an individual who has joined the room.



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THE SCENARIO EDITOR

Clicking on the **Create a new scenario** button, at the **My Scenarios** screen will load the **Scenario Editor**. Here you can create new scenarios, set up the card table and adjust several variables related to scenario.

Some of the elements of the game interface will be explained later in this manual. This section will focus on the Scenario Editor experience.

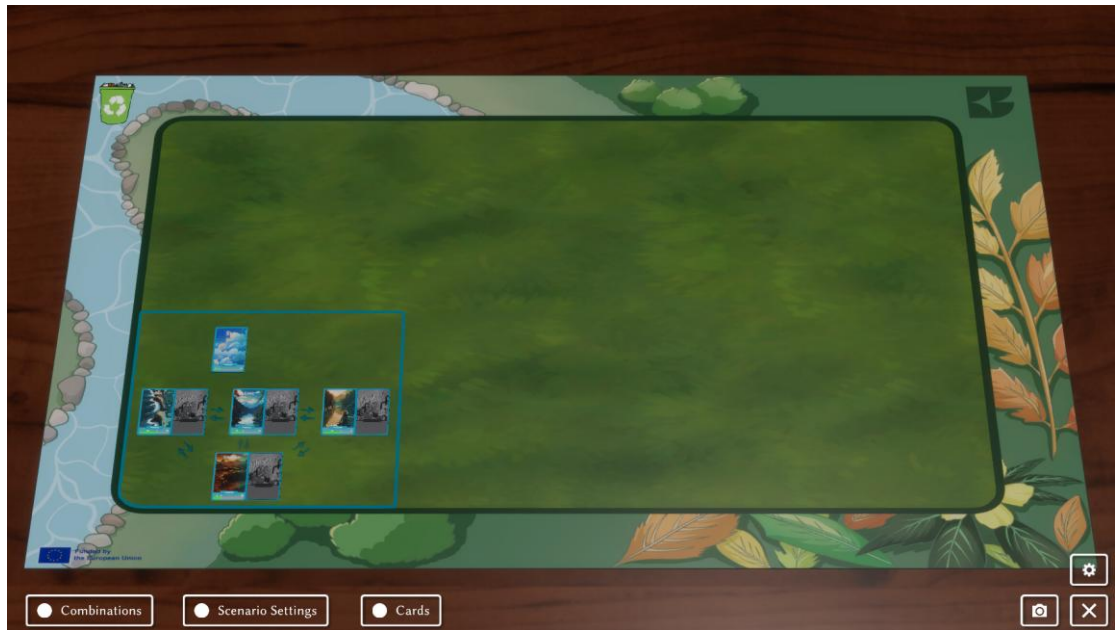
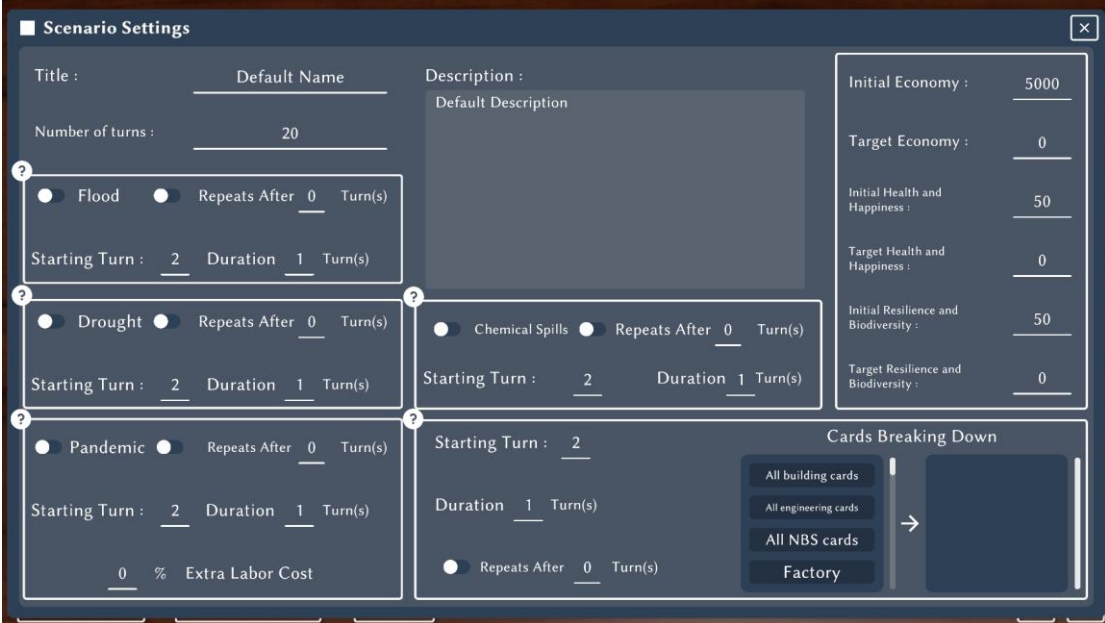


Figure 24: Scenario Editor screen

SCENARIO SETTINGS

Clicking on the **Scenario Settings** button will open the Scenario Settings panel as shown in the figure below.



Scenario Settings

Title : Description :

Number of turns :

☐ Flood ☐ Repeats After Turn(s)

Starting Turn : Duration Turn(s)

☐ Drought ☐ Repeats After Turn(s)

Starting Turn : Duration Turn(s)

☐ Pandemic ☐ Repeats After Turn(s)

Starting Turn : Duration Turn(s)

% Extra Labor Cost

☐ Chemical Spills ☐ Repeats After Turn(s)

Starting Turn : Duration Turn(s)

☐ Repeats After Turn(s)

Initial Economy :

Target Economy :

Initial Health and Happiness :

Target Health and Happiness :

Initial Resilience and Biodiversity :

Target Resilience and Biodiversity :

Cards Breaking Down

☐ All building cards

☐ All engineering cards

☐ All NBS cards

☐ Factory

Figure 25: Scenario Settings

This panel allows you to insert and adjust the following information about the scenario:

- The name of the scenario.
- The description of the scenario.
- The scenario. duration, in in-game turns.
- The initial Economy value.
- The target Economy value.
- The initial Health and Happiness value.
- The target Health and Happiness value.
- The initial Resilience and Biodiversity value.
- The target Resilience and Biodiversity value.

You can also enable one or several disasters to happen during the duration of the game:

- Flood
- Drought
- Pandemic
- Chemical Spills

For each disaster, use the toggle next to its name to enable or disable it. You can then configure whether it repeats, its repetition rate, the turn on which it first occurs, and its duration.

Lastly, you can enable the **Card Breaking Down** effect, which temporarily disables selected cards for the duration specified in the settings. The list on the left contains all available cards. Click a card's name to move it to the list on the right. Any cards in the right-hand list will be deactivated whenever this effect is enabled.

You can hover your mouse over the  icons to view detailed information about each disaster and their gameplay effects.

SETTING THE INITIAL BOARD STATE

As shown in Figure 24 the initial board does not contain any cards apart from the Geography Cards which are spawned by default and cannot be removed.

If you want to populate the board with cards, to set an initial state, you can click on the **Cards** button. A new panel will appear on the right side of the screen as shown in Figure 26.



Figure 26: Scenario Editor Cards panel



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Here is a list of all the available game cards. Use the  buttons to adjust the quantity of each card or enter the desired number directly into the input field.

Once you have selected the cards you want, click **Spawn Cards** to place them on the board.

Keep in mind that the board has **168 card slots** available, and some cards occupy **two slots** instead of one. You can monitor the total number of occupied slots by checking the **Total** counter at the top of the panel.



Use the  button to clear the card counts. Only **unstacked cards** will be removed; any cards that are already stacked together will remain on the board.

Once you have set up the board with cards and the variables in the Scenario Editor you can



click on the  button at the bottom right corner of the screen and pick one of the available options.

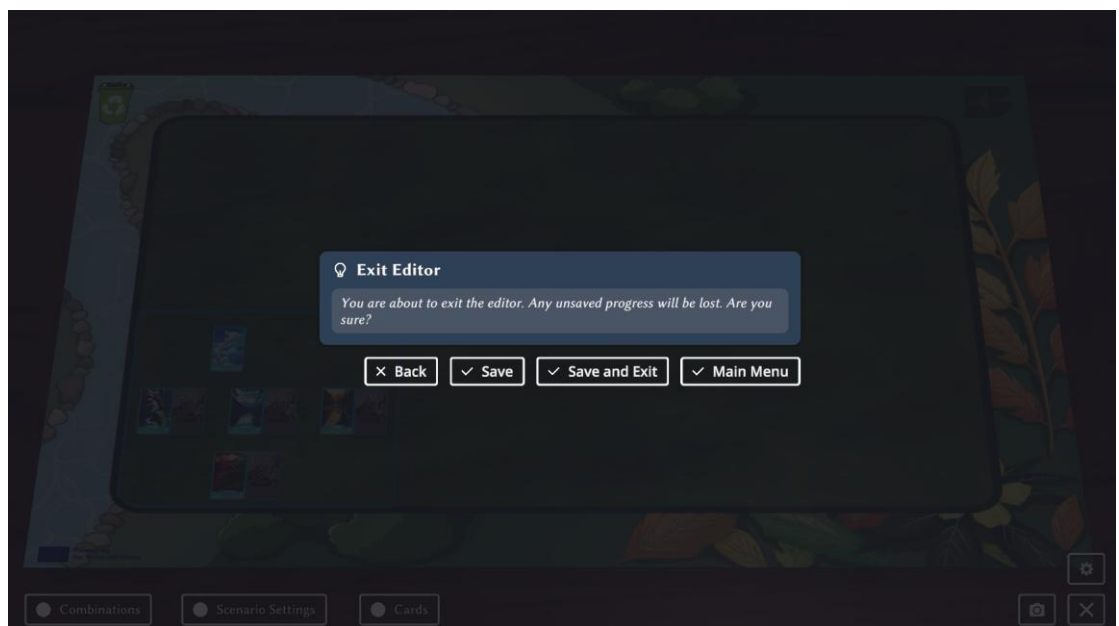


Figure 27: Scenario Editor Exit Menu options



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THE STUDENT EXPERIENCE

Students launch the game and log in by following the same procedure as teachers, as described above.

There are three categories available on the home screen:

- Tutorial
- Rooms
- Public Scenarios

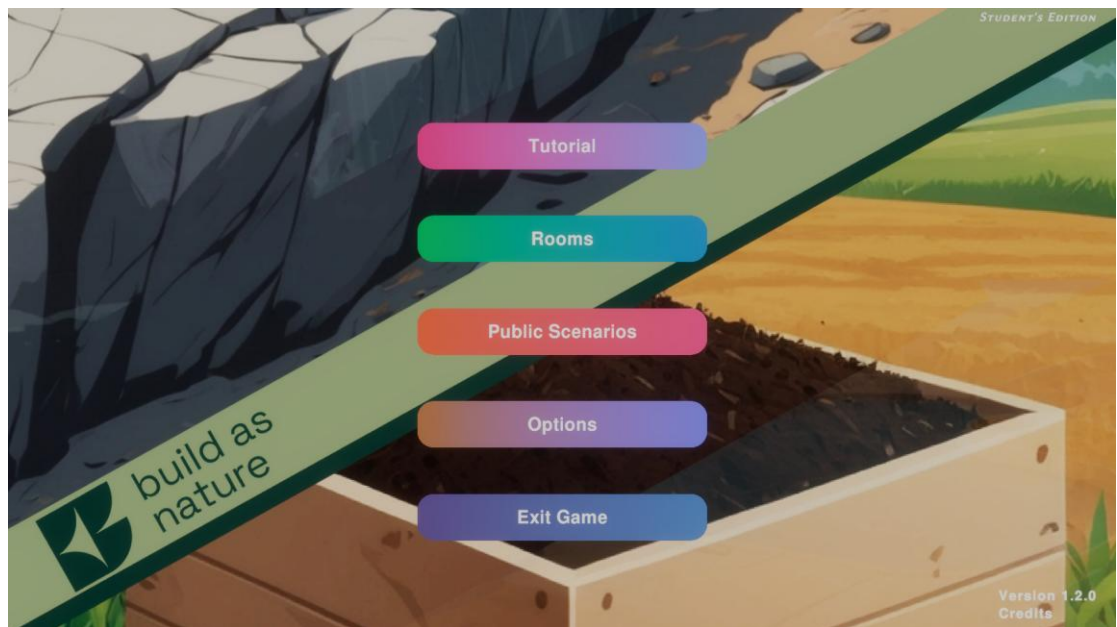


Figure 28: Student Home Screen

ROOMS

The Rooms screen shows all the Rooms the student has Joined. Each entry shows the title and the description of the room.

You can search for a specific Room by using the search bar at the top right corner of the screen.

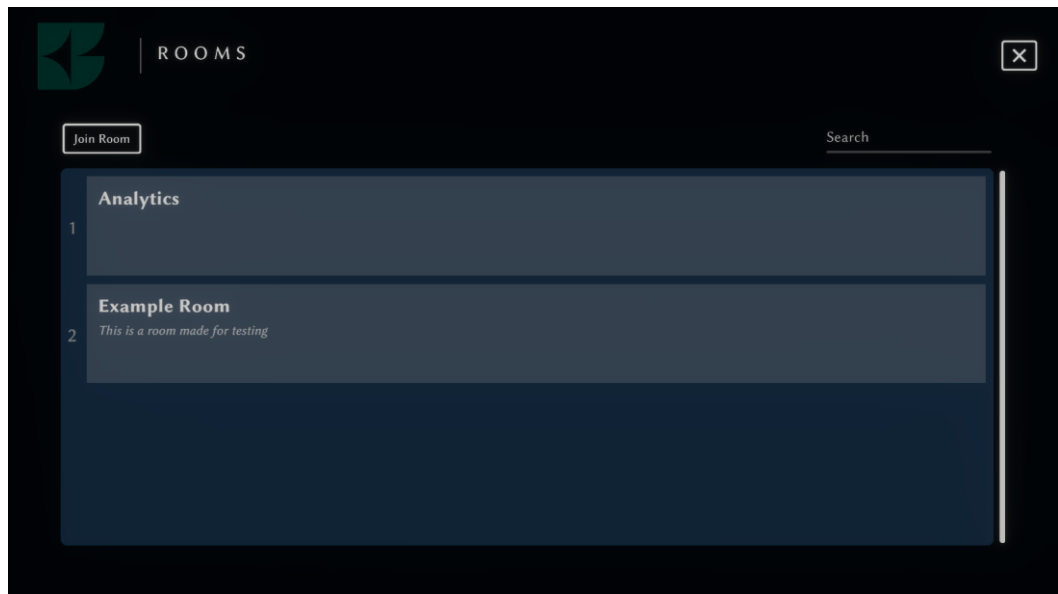


Figure 29: Student Rooms screen

Clicking a Room brings up its entry, with all the details and the actions available:

- **Leave** — you are removed from the Room, and you will no longer have access to it.
- **Play** — lets you play the scenario that is slotted into the Room.
- **Back** — returns you to the Rooms screen.

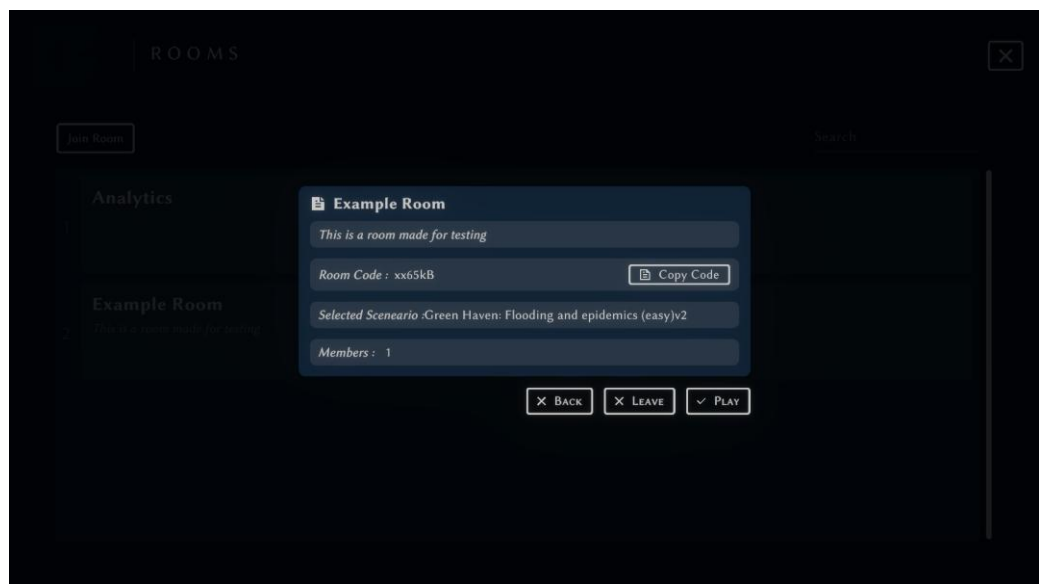


Figure 30: Student Room entry screen

To join a room, click the **Join Room** button and enter a valid **Room Code**. The Room Code will usually be provided to you by your teachers.

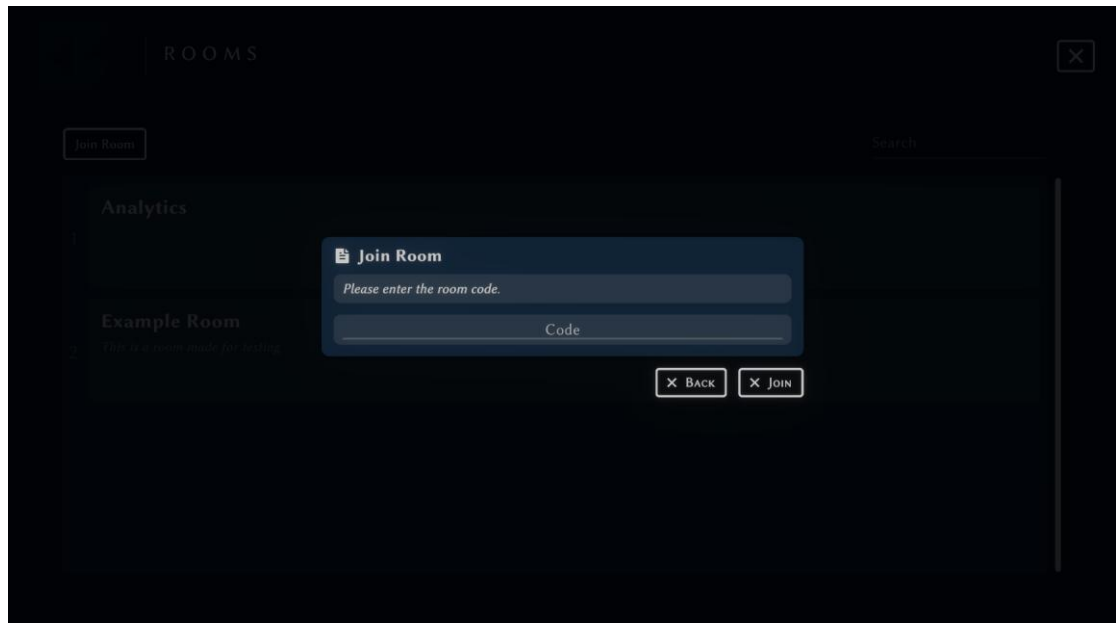


Figure 31: Join Room screen

Once you have joined a new Room, it will appear on the Rooms screen, and you can access it as described above.

PUBLIC SCENARIOS

You also have access to the **Public Scenarios** repository, which contains scenarios published by teachers. These scenarios are available for anyone to play without first joining a Room.

You can search for specific scenarios by using the search bar at the top right corner of the screen.

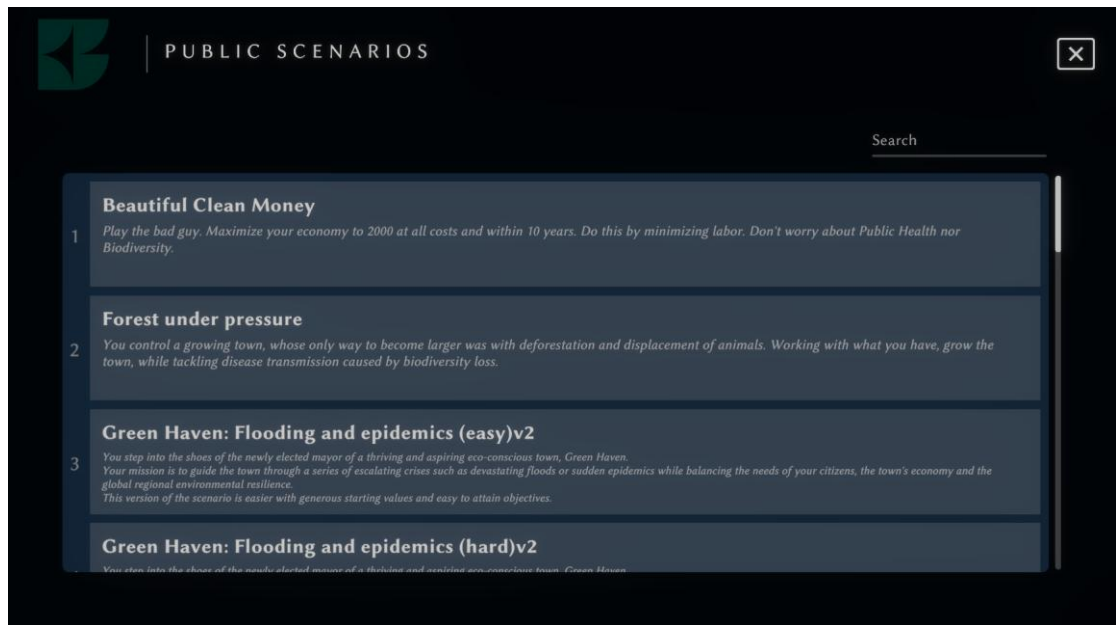


Figure 32: Student Public Scenarios screen

Click on a scenario entry and then click on the **Preview** button to play the selected scenario.

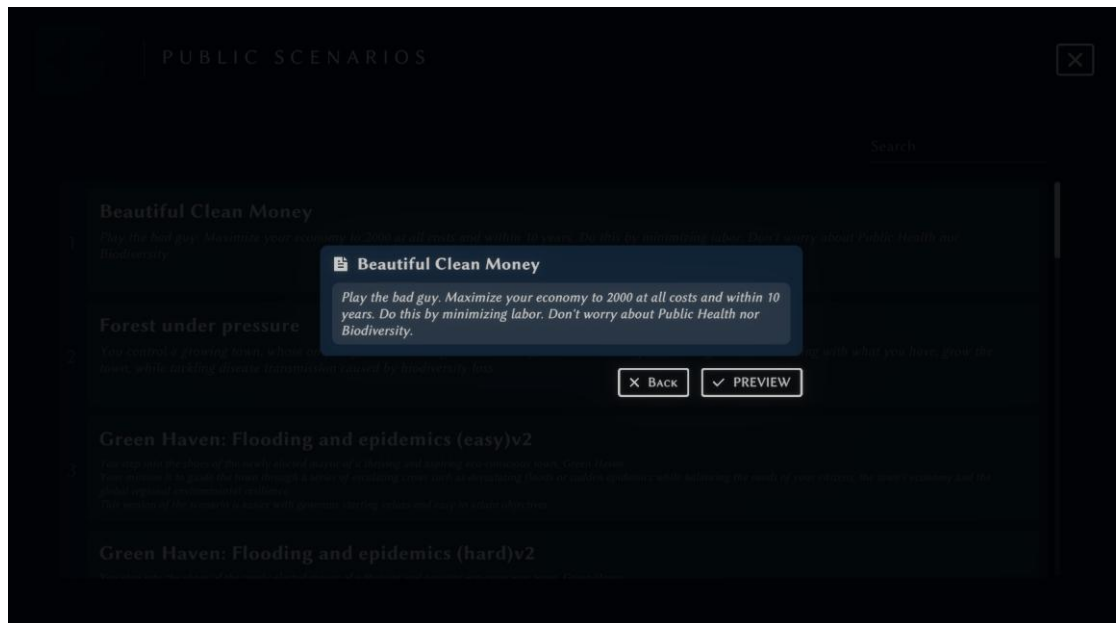


Figure 33: Student Public Scenario entry

Keep in mind that when you experience public scenarios you cannot save your progress.



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THE GAME INTERFACE – GAME MECHANICS

The Card Table is where the game is being played. The player can interact with it by placing and combining cards and there are several UI elements that provide different kinds of information for the player.

The interface is organized around a **top bar** and the **playing board**.



Figure 34: Game interface example

THE TOP BAR

The top bar displays the town's three **meta-stats**, the available **Labor** and the **time controls**.

The three meta-stats are the heart of the game:

- **Economy** — indicates how well the town is faring financially. Economy is also the **currency** you spend on importing cards from the market. It is influenced by cards and policies.
- **Health and Happiness** — reflects the wellbeing of the population.
- **Resilience and Biodiversity** — reflects the ecological health and diversity of the environment. It uses biodiversity measures to express how varied the living systems in the town are.

Clicking a meta-stat opens a **details panel** breaking down what pushes the value up or down each turn

You can view even more details for each card category, disaster and policy that are impacting those values by clicking on the  button



Figure 35: Meta stat details panel

Labor is the available workforce. Cards must be **Active** to do their work, and active cards consume Labor. The amount of Labor recalculated each turn is driven directly by the town's Economy and Health and Happiness. Higher values produce higher amounts of Labor.

As with the meta stats, you can click the **Labor** icon to view detailed information about the cards that currently have Labor allocated to them.



Figure 36: Labor details panel

TIME CONTROL

At the top right corner of the screen there is information about the current game turn, a countdown showing in how many seconds the current turn will and the time controls.

Time in Build as Nature is **real-time based**, a turn is called a **year** and passes automatically.

You can use the buttons below the timer to control the in-game time speed:

- **Pause** — Time is frozen.
- **Play** — Runs the game at normal speed. Each turn lasts **150 seconds**.
- **2x** — Doubles the game speed. Each turn lasts **75 seconds**.
- **5x** — Increases the game speed by a factor of five. Each turn lasts **30 seconds**.

THE BOARD AND THE GEOGRAPHY ZONE

The board holds your cards. A dedicated **geography zone** (marked with a blue border) is where the five **Geography** cards are placed— **Sky, Sea, River, Lake and Ground**. These are the foundations of the town's water and resources:

- **Sky** — causes rain and stores water evaporated during the year.
- **Sea, River, Lake, Ground** — the four Geography cards that **store water**.



Figure 37: Geography Zone



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All five **Geography** cards are spawned by default in that designated area, they cannot be moved or destroyed, as they are a core part of the gameplay.

You cannot place any other cards inside the designated geography area.

Pumps cards may only be placed on Geography cards (and never on Sky), because they extract stored water from the land and water bodies.

CARD CATEGORIES

There are seven different kinds of cards in the game:

- **Geography.** —. As explained above, they are a core part of the gameplay, and they are the main source of water. You can spot them with their light blue border.
- **Basic.** —. These cards are the building blocks of the game. You can combine them to create new cards, and they can be used as fuel for some cards to produce new cards. You can spot them with their light brown border.
- **Producer.** —. These cards produce basic cards as long you as have them enabled. You can spot them with their dark brown border.
- **Building.** —. These cards generally provide labor and can produce specific basic cards. You can spot them with their red border.
- **Engineering.** —. These cards are the industrial solution to several problems related to that you will encounter during the game. You can spot them with their brown border.
- **Nature Based Solution (NBS).** —. These cards are the nature-friendly solutions to the water problems you will encounter during the game. You can spot them with their green borders.
- **Water.** —. These cards represent different kinds of water. The general aim is to transform them into usable and clean materials that will be used by the other cards. You can spot them with their dark blue border.

IMPORT MARKET

The **Import Market** is where you spend **Economy** to bring new cards onto the board. It is organized into tabs by card kind: **Basic, Producer, Building, Engineering, NBS and Water.**

You can access the import market by clicking on the button at the top of the board, as shown below.



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Figure 38: Import Market buttons

Prices are **dynamic**:

- When **Biodiversity and Resilience is low** imported cards become **more expensive** — degrading the environment makes everything harder to sustain.
- During specific disasters the prices might also fluctuate.

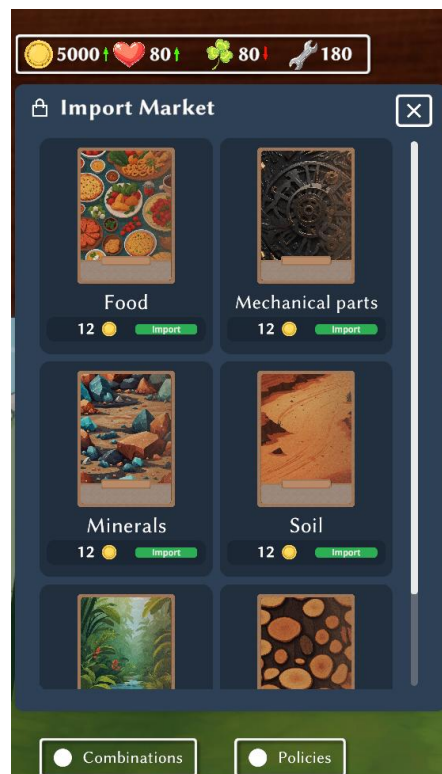


Figure 39: Import Market for Basic Cards

PLACING, STACKING AND DRAGGING CARDS

You can interact with the card on the board by using the mouse:

- **Drag** a card to move it on the board.
- **Stack** cards together by placing a card on top of another card. Stacked cards can move together or you can separate them at any time (Figure 40).
- **Storage area** cards (such as in building cards) cannot have cards stacked on them. Instead, they are used to feed the associated cards.
- When a placement is invalid, the card bounces back to its original position. A green indicator below the card signifies a valid placement (Figure 41), while a red indicator signifies an invalid placement, causing the card to return to its original position (Figure 42).



Figure 40: Stacked cards example



Figure 41: Valid card placement



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Figure 42: Invalid card placement

CARDS WITH STORAGE AREA

Most of the **buildings, engineering and nature-based solution** cards in games, have a storage area. A storage area usually means that you must provide the card with certain materials to get it to **Activate**.

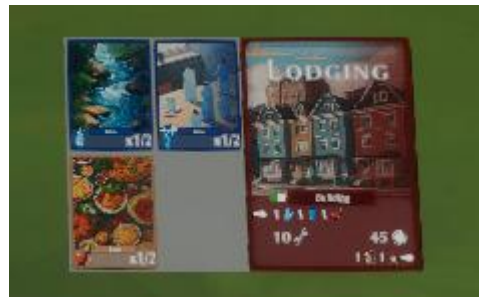


Figure 43: Card storage area example

You can drag and drop the corresponding basic cards in that area, and they will be stored inside. You can also drop a whole stack of cards in. Cards are of the wrong type or if the storage area gets full, they will bounce back to their original position.

You can take them out at any time by clicking on the card icon in the storage area and the selected card will appear on the board around the storage area.

Keep in mind that if the card is activated and completes its **work cycle** some of the stored resources will be consumed.



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CARD COMBINATIONS

The heart of the game is **combining cards**. When a stack of resource cards matches a recipe, the game crafts a new card after a short delay:

1. Geography and Producer cards generate **basic resources** (Wood, Soil, Vegetation, Minerals, Food, Mechanical Parts, and the various water types).
2. You drag these resources into stacks that match a **recipe**.
3. After the recipe's required time, the stack is consumed and a new **NBS, Engineering** or **Building** card is produced.

NBS, Engineering and Building cards then apply their effects to the town. See [Cards and Resources](#) for what is available. -----

Clicking on the **Combinations** button at the bottom left of the screen to view the list with all the available card recipes.



Figure 44: Combinations Panel

You can search for a specific card recipe by typing the card's name into the search bar at the top-right of the panel.

RECYCLING CARDS

A recycling bin lets you dispose of cards you no longer need. Dropping a card, or a whole pile of cards, onto the bin **refunds a fraction (10%) of each card's price** back to your Economy. A floating pop-up shows the **total** amount refunded, scaled to the number of cards

The recycling bin is located at the top-right corner of the game board as shown below.



Figure 45: Recycling bin location

POLICIES

There are several policies you can enforce during the game, each having a different gameplay effect. You can have **up to three** policies activated at any time. You can access the policies panel by clicking the Policies button at the bottom-left corner of the screen.

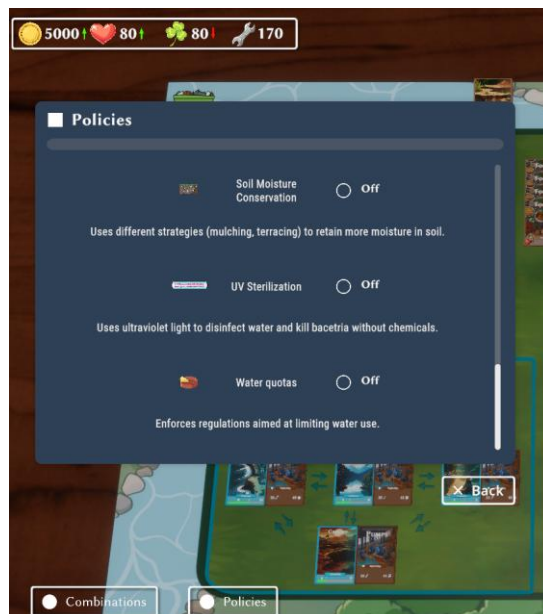


Figure 46: Policies Panel



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BOTTOM RIGHT SIDE BUTTONS

There are a few more buttons at the bottom-right corner of the screen:

-  hover over this icon to get a tooltip giving a short explanation about the goal of the game.
-  click on this icon to view the objectives panel. Here you can view the scenario objectives set the creator of the room and your current progress.
-  click on the camera icon to change the camera angle.
-  click on this icon to access the options menu.
-  click on this icon to access the exit menu options.

EXITING THE GAME

At any time, you can leave the game and return to the main menu through the exit menu by using the icon described above:

- **Back** — closes the menu and returns to the game.
- **Save** — saves your current progress and resumes play.
- **Save and Exit** — saves your progress and returns to the main menu.
- **Exit** — returns to the main menu **without** saving.

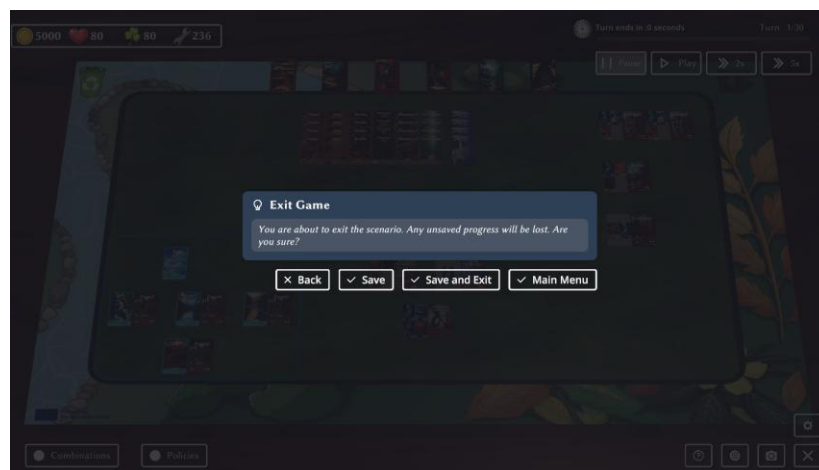


Figure 47: Exit menu options



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The entire interface uses **tooltips**, so hover the mouse over a card or button for a moment to get more information about its role.

ENDGAME SCREEN

The game ends when the scenario reaches its final year (its duration). Time pauses and the end game screen appears with three options:

- **Analytics.** — shows the analytics panel where you can view several graphs about in-game stats and variables per turn.
- **Save and Exit** — saves your progress and returns you to the Main Menu.
- **Main Menu** — returns you to the Main Menu without saving your progress.

CARDS AND RESOURCES

Cards are the building blocks of Build as Nature. Every card belongs to a **kind**, which determines how you obtain it, where it can go and what it does.

This section is a complete catalogue of the cards in the game, grouped by kind, with the in-game description of each. You can read the same descriptions in game by either **right clicking** on a card on the board or **left clicking** on card that appears on any UI interface.

GEOGRAPHY CARDS

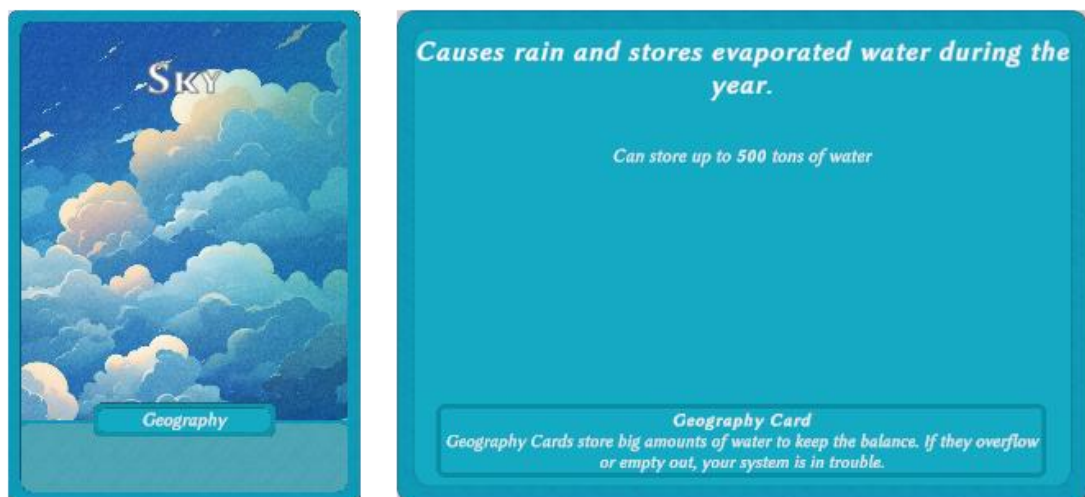
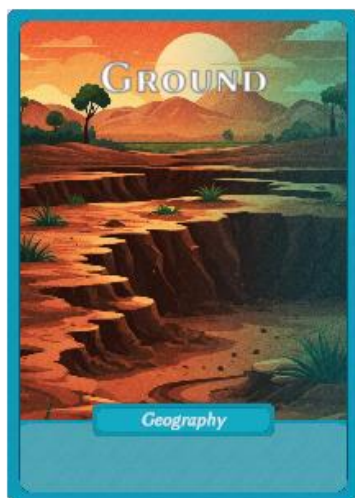


Figure 48: Sky details



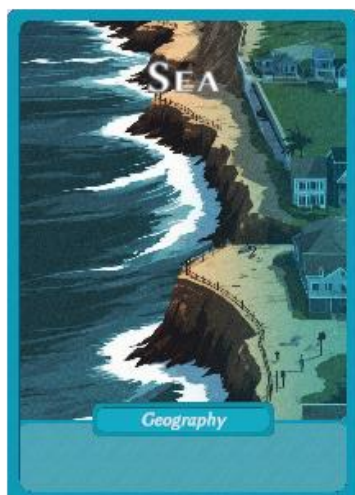
One of the 4 Geography cards that store water.

Can store up to 200 tons of water

Geography Card

Geography Cards store big amounts of water to keep the balance. If they overflow or empty out, your system is in trouble.

Figure 49: Ground details



One of the 4 Geography cards that store water.

Can store up to 500 tons of water

Geography Card

Geography Cards store big amounts of water to keep the balance. If they overflow or empty out, your system is in trouble.

Figure 50: Sea details



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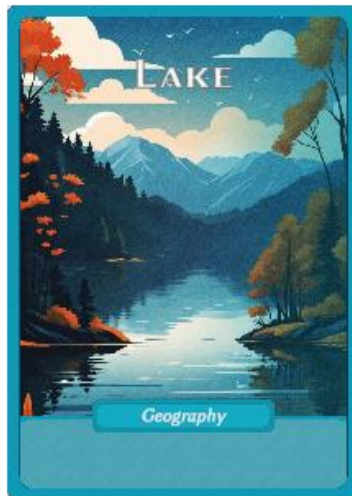
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One of the 4 Geography cards that store water.

Can store up to 100 tons of water

Geography Card

Geography Cards store big amounts of water to keep the balance. If they overflow or empty out, your system is in trouble.

Figure 51: Lake details



One of the 4 Geography cards that store water.

Can store up to 50 tons of water

Geography Card

Geography Cards store big amounts of water to keep the balance. If they overflow or empty out, your system is in trouble.

Figure 52: River details



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BASIC CARDS

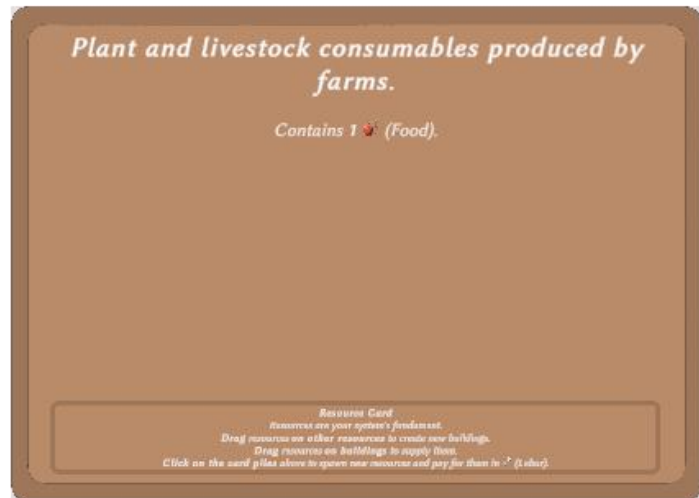
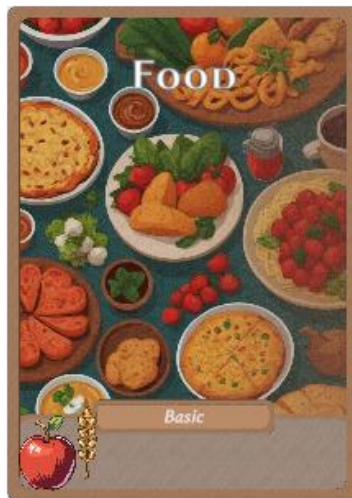


Figure 53: Food details



Figure 54: Mechanical Parts details



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Figure 55: Minerals details

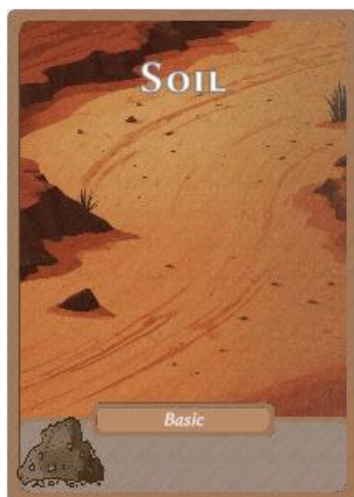


Figure 56: Soil details



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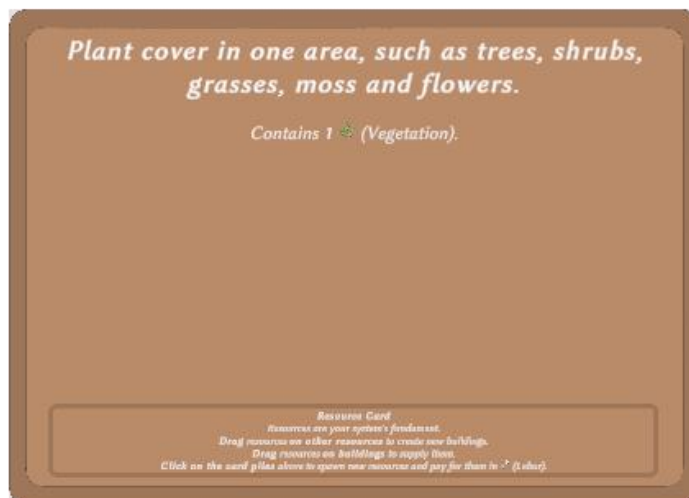
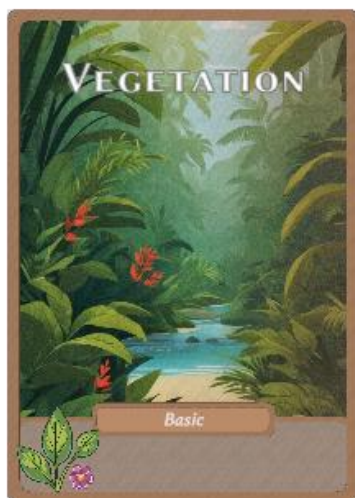


Figure 57: Vegetation details

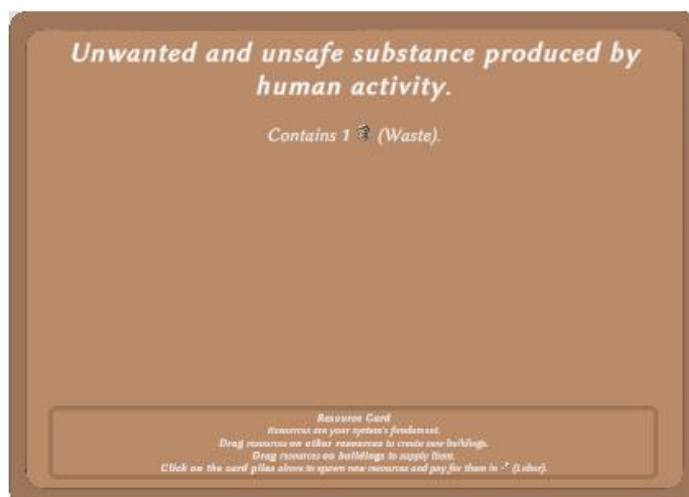
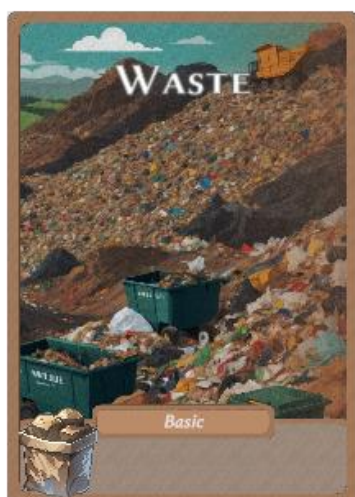


Figure 58: Waste details



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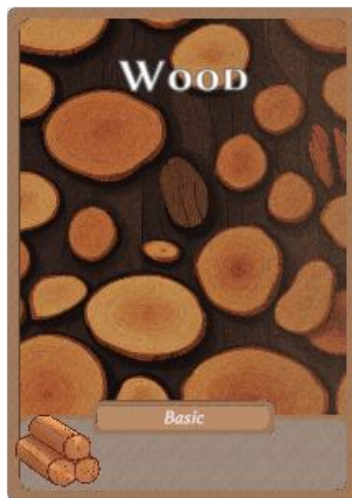


Figure 59: Wood details

PRODUCER CARDS



Figure 60: Forest details



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Figure 61: Mountain details



Figure 62: Plains details



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BUILDINGS CARDS

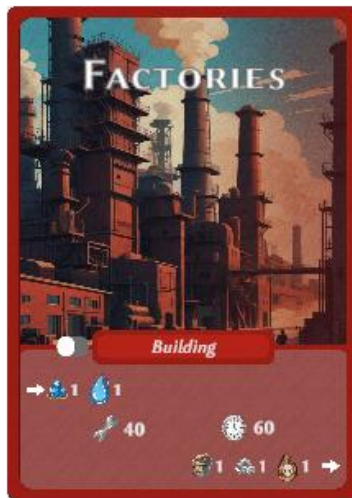


Figure 63: Factories details



Figure 64: Farms details



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Figure 65: Hospital details

ENGINEERING CARDS



Figure 66: Recycling Plant details



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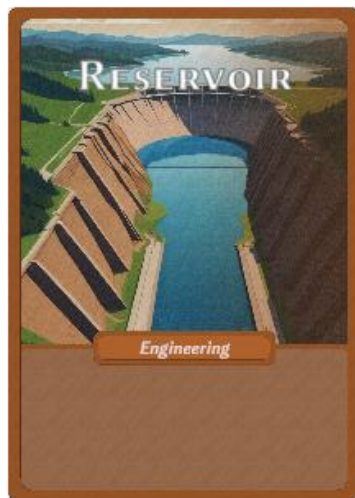


Figure 67: Reservoir details

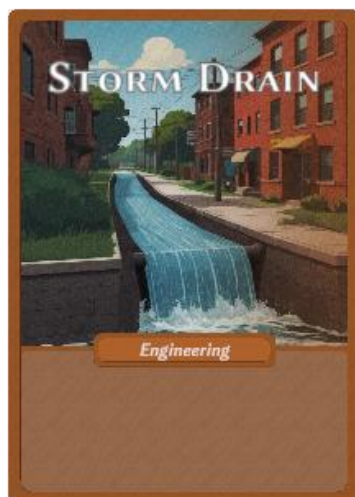


Figure 68: Storm Drain details



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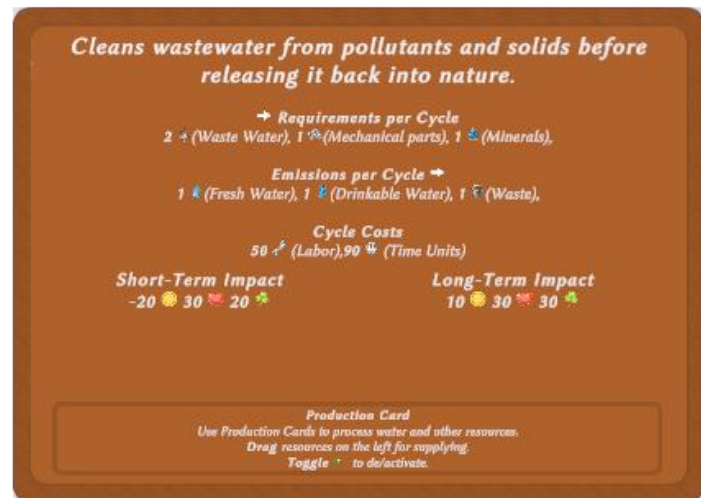
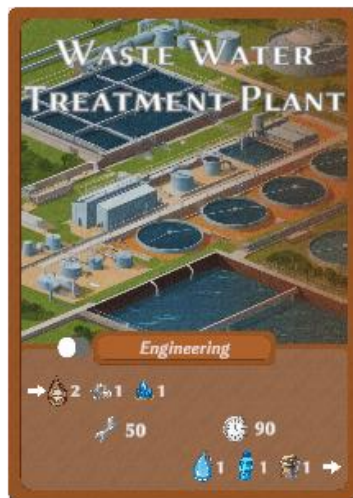


Figure 69: Wastewater Treatment Plant details

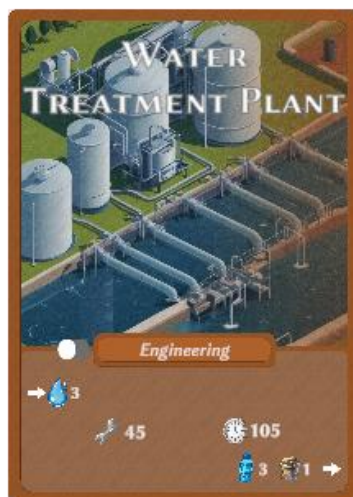


Figure 70: Water Treatment Plant details



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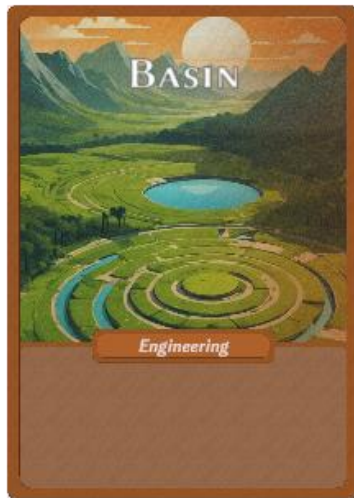


Figure 71: Basin details

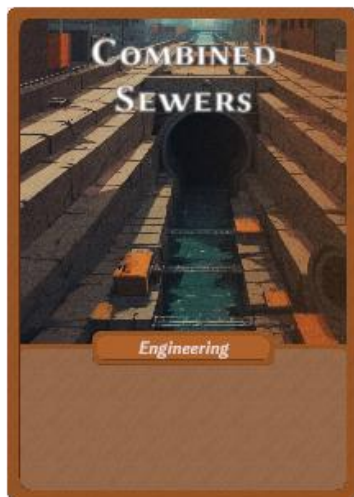


Figure 72: Combined Sewers details



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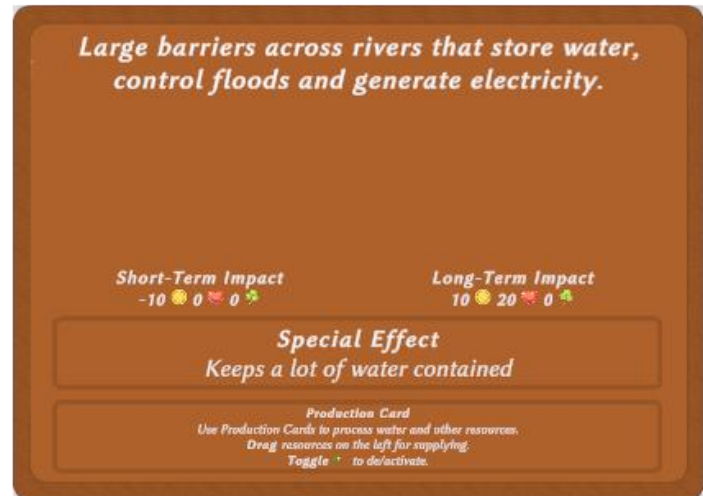
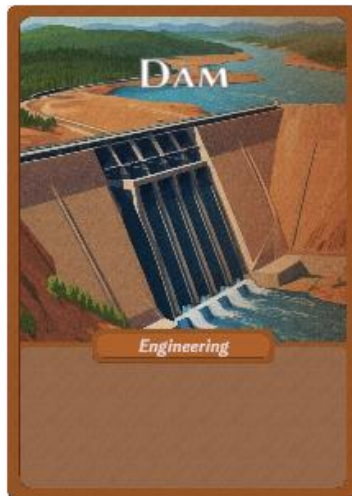


Figure 73: Dam details

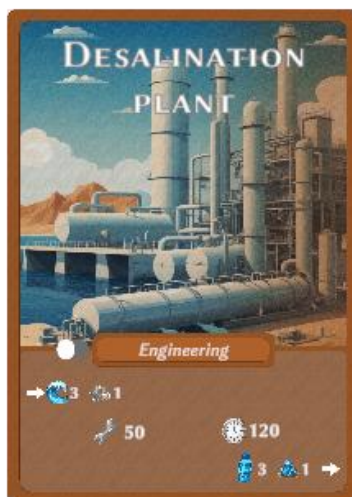


Figure 74: Desalination Plant details



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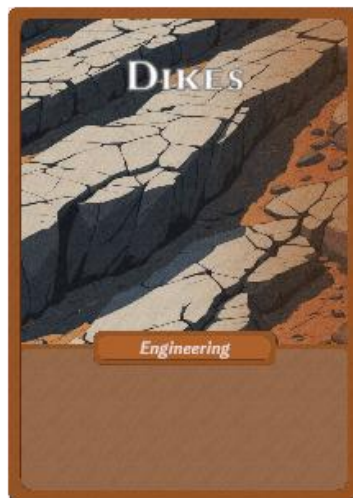


Figure 75: Dikes details

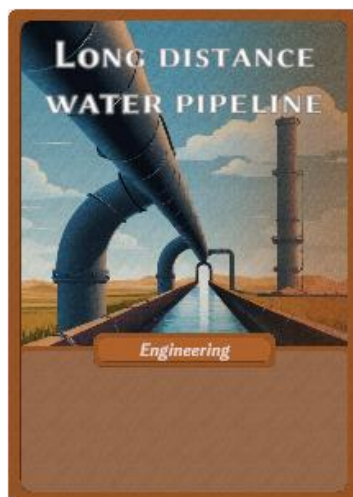


Figure 76: Long Distance Water Pipeline details



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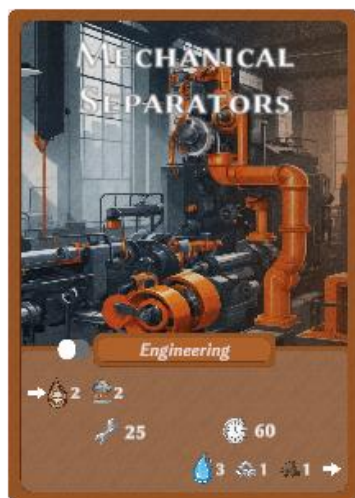


Figure 77: Mechanical Separators details

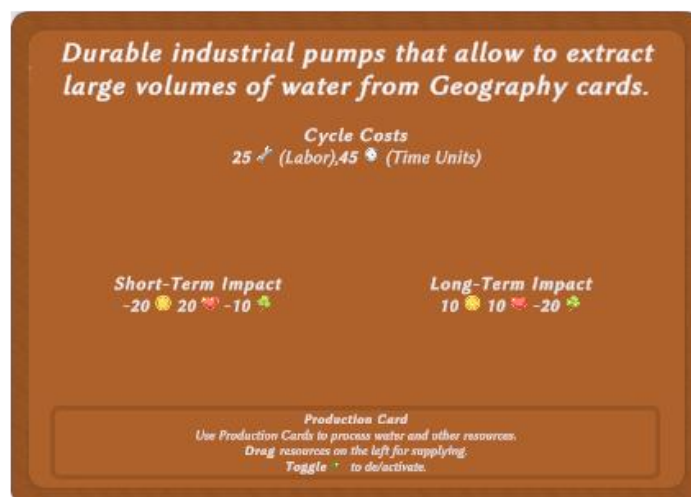
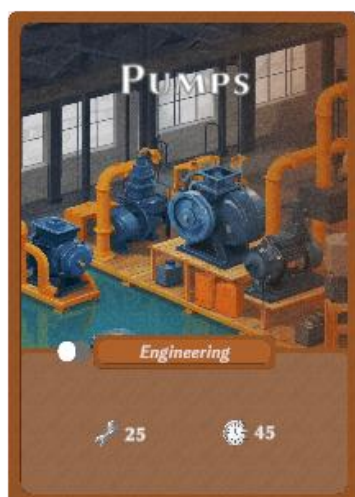


Figure 78: Pumps details

NATURE BASED SOLUTIONS

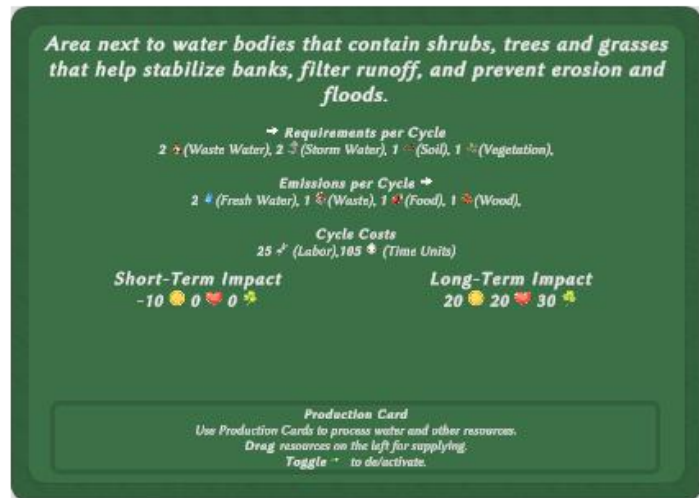
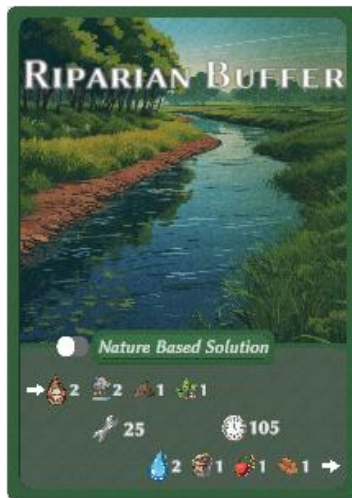


Figure 79: Riparian Buffer details

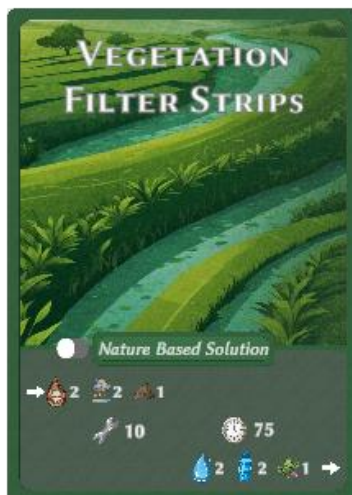


Figure 80: Vegetation Filter Strips details



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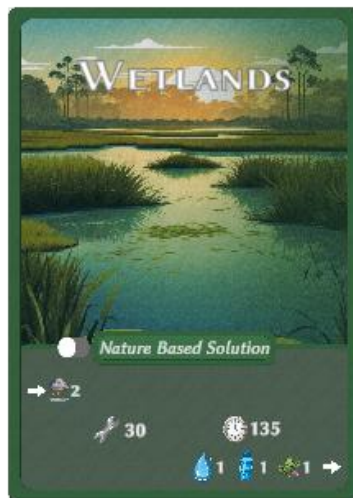


Figure 81: Wetlands details

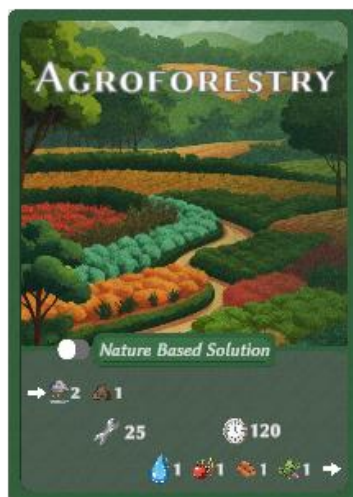


Figure 82: Agroforestry details



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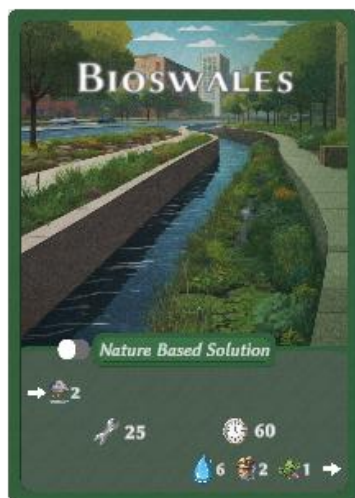


Figure 83: Bioswales details

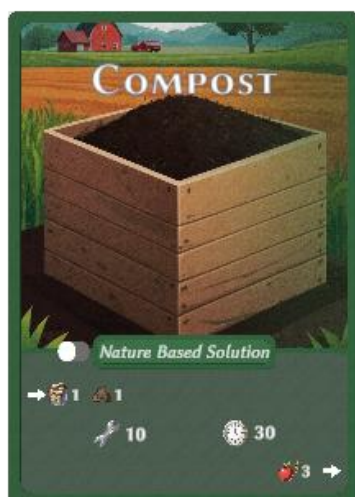


Figure 84: Compost

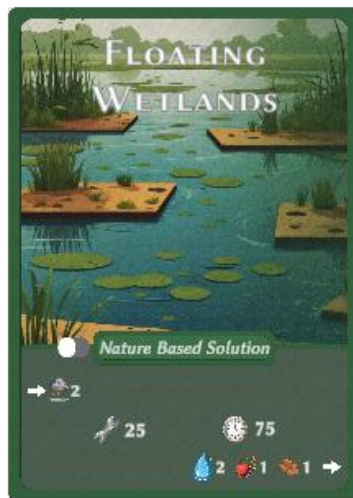


Figure 85: Floating Wetlands details

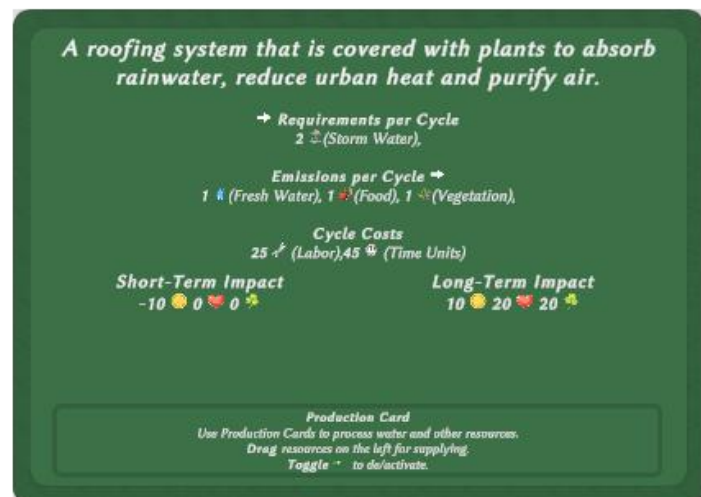
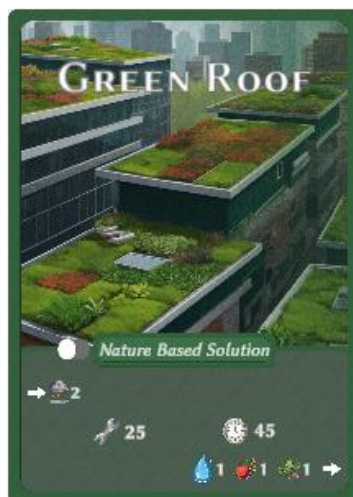


Figure 86: Green Roof details



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Figure 87: Grey Water Garden details

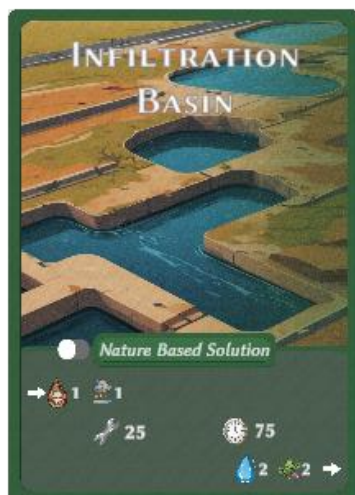


Figure 88: Infiltration Basin details



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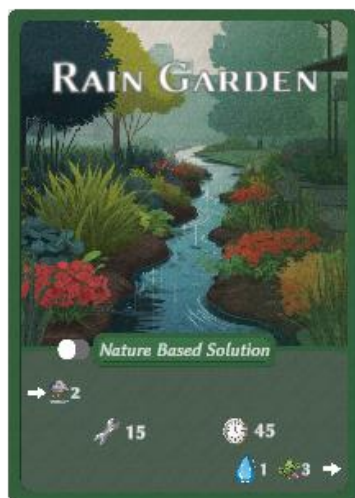


Figure 89: Rain Garden details



Figure 90: Rainwater Harvesting details

WATER CARDS

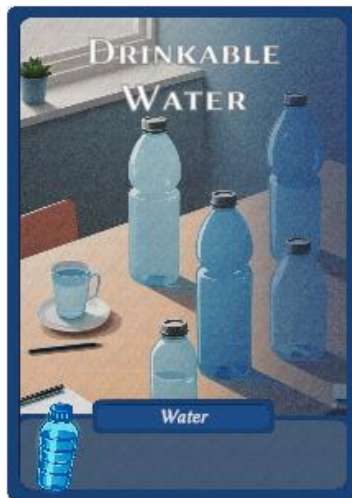


Figure91: Drinkable Water details

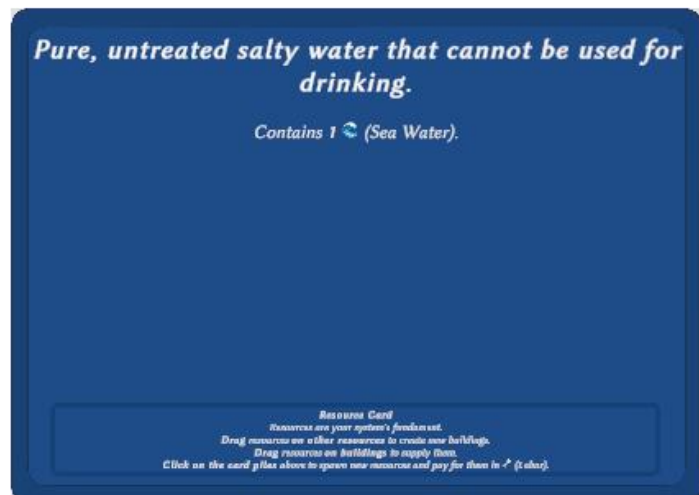
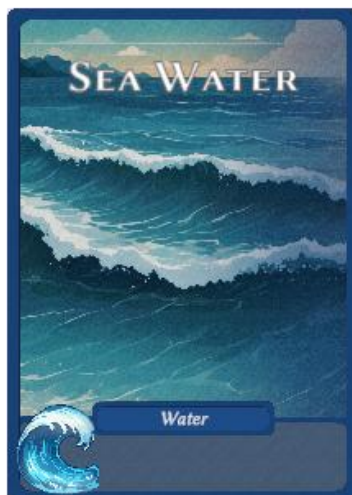


Figure 92: Sea Water details



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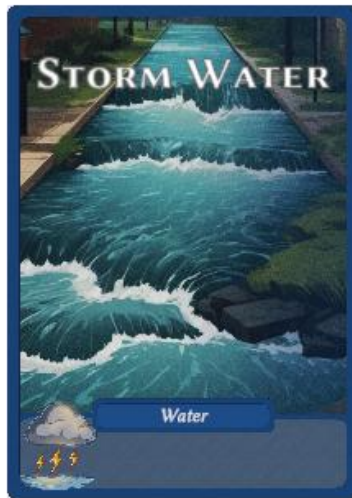
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Rainwater or melted snow that flows over surfaces like roads, roofs, and lawns instead of infiltrating into the ground.

Contains 1  (Storm Water).

Resource Card

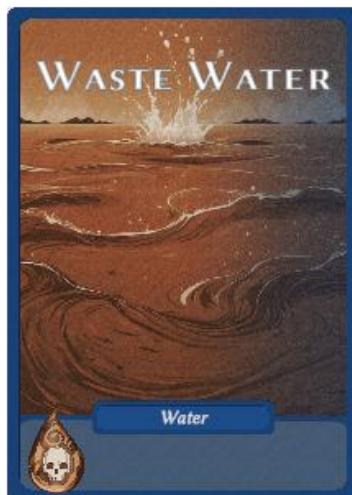
Resources are your system's foundation.

Drag resources on other resources to create new buildings.

Drag resources on buildings to supply them.

Click on the card files above to open new resources and pay for them in  (kWh).

Figure 93: Storm Water details



Sewage water from domestic use, agriculture and industries. This type of water can be treated.

Contains 1  (Waste Water).

Resource Card

Resources are your system's foundation.

Drag resources on other resources to create new buildings.

Drag resources on buildings to supply them.

Click on the card files above to open new resources and pay for them in  (kWh).

Figure 94: Wastewater details



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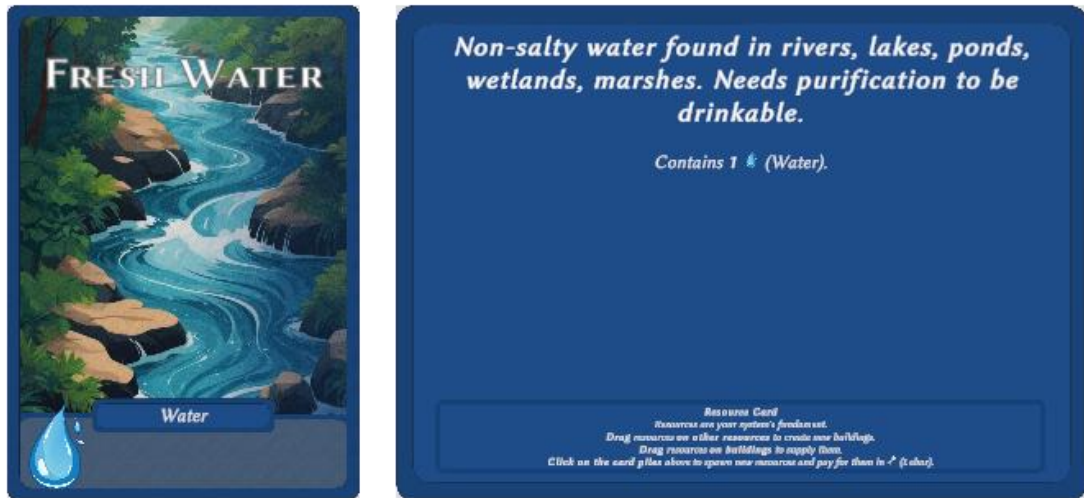


Figure 95: Fresh Water details

CARD DATA EXPLANATION

The card description always begins with a general overview of the card's purpose.

If the card includes a **Requirements per Cycle** section, it means the card has a storage area. The listed values indicate how many resources the card requires each cycle to become active.

If the card includes an **Emissions per Cycle** section, it means that once the card completes a work cycle, the indicated cards will be spawned on the board.

The **Cycle Cost** shows how much Labor must be allocated to the card for it to become active, as well as how many seconds are required to complete a work cycle.

Short-Term Impact shows the immediate effect the card has on the meta variables when it is placed on the board.

Long-Term Impact shows the effect the card has on the meta variables over a period of five in-game years. This effect is applied for a given year only if the card has successfully completed at least one work cycle during that year.

Some cards also include a **Special Effect** section, which describes their unique properties or abilities.

The final part of the description identifies the category to which the card belongs.



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THE WATER CYCLE

Water is the central theme of Build as Nature, and it moves around the board every year following a simplified **water cycle**:

1. **Rain and evaporation** — the **Sky** card causes rain and stores water evaporated during the year.
2. **Storage** — the **Sea, River, Lake and Ground** Geography cards store water.
3. **Return and transfer** — at the end of each turn, water is returned to the Geography cards and transferred between them. Water carries its **clean / polluted ratio** with it as it moves.
4. **Extraction** — **Pumps**, placed on top of the Storage Geography Cards, extract large volumes of stored water for use in the town.
5. **Drainage and Sewage** — Cards like **Storm Drains** and **Combined Sewers** drain excess and wastewater, helping to handle disasters and pollution.

Effectively managing the water cycle by extracting, storing, purifying, and draining water is essential for surviving disasters such as floods and droughts.

DISASTERS

Disasters are scheduled by the scenario author and occur at the beginning of their designated turn. They remain active for a set duration and may repeat. While active, each disaster affects the board's behavior and reduces the meta-stats every turn. The values below show the per-turn effects

FLOOD

Each turn, **6 Storm Water cards** are added to the board. Each **Storm Drain** card on the board reduces the number of Storm Water cards spawned by **10%**. While the flood lasts, all **Factory** and **Engineering** cards are disabled; each **Dike** card reduces the number of disabled cards by **10%**.

Per turn: **Economy –50, Health and Happiness –20, Resilience and Biodiversity –20.**

DROUGHT

Each turn, **Geography cards lose 30%** of their stored water. All **Farm** and **Pump** cards are deactivated. Water prices in the import market are five times higher.

Per turn: **Economy –30, Health and Happiness –15, Resilience and Biodiversity –15.**



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CHEMICAL SPILL

Each turn, **5 Wastewater cards** are spawned. All **Engineering** cards are disabled.

Per turn: **Economy –20, Health and Happiness –10, Resilience and Biodiversity –30.**

PANDEMIC

While the pandemic is active, the total available **Labor** is reduced, and all market prices rise by a factor of three.

Per turn: **Economy –20, Health and Happiness –40, Resilience and Biodiversity –10.**

CARD BREAKDOWN

During a Breakdown event, certain cards are **deactivated**: they stop their work cycles and produce nothing new. Deactivated cards are marked with a dedicated icon on top of them, as shown in the figure below. A Breakdown has **no direct stat penalty** — its cost is the lost production.



Figure 96: Card breakdown example

POLICIES

As mentioned previously, you can enforce several policies that have different gameplay effects:

- **Polluting Fines** — Enforces monetary penalties for environmental violations (Per turn: **Economy +20, Health and Happiness –50**).



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- **Water Quotas** — Enforces regulations aimed at limiting water use (**Reduced water card requirements for buildings by 1, Per turn: Economy -50**).
- **Cloud Seeding** — Releases chemicals into the sky to produce clouds and rain; increases precipitation but can be toxic (**20% more rain** next year, Per turn: **Resilience and Biodiversity -50**).
- **Chlorination** — Adds chlorine to water to kill bacteria but can be toxic. (Per turn: **Transforms 2 Fresh Water Cards into Drinkable Water Cards, Transforms one Fresh Water Card into Wastewater Card**).
- **UV Sterilization** — Uses ultraviolet light to disinfect water and kill bacteria without chemicals (Per turn: **Economy -50, Transforms two Fresh Water Card into one Drinkable Water Card**).
- **Bioremediation** — Uses microorganisms, plants or fungi to break down pollutants in soil and water (Per turn: **Economy -50, Transforms two Water Cards into cleaner versions of them**).
- **Floodplain Restoration** — Connects rivers to floodplains to absorb excess water and reduce flooding. (Per turn: **Resilience and Biodiversity +50, During Floods 5% less Storm Water**).
- **Permeable Pavement** — A more expensive but more sustainable way to build roads; lets rainwater pass through, reducing runoff and recharging groundwater (Per turn: **Economy -50, Transforms two Storm Water Cards into one Fresh Water Card**).
- **Sealed Surfaces** — Concrete or asphalt surfaces that don't absorb water but are cheaper than some other options (Per turn: **Economy +50, 20% more Storm Water Cards during Floods**).
- **Soil Moisture Conservation** — Uses strategies such as mulching and terracing to retain more moisture in the soil (**Reduced water card requirements for buildings by 1, Per turn: Economy -50**).



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TUTORIAL

There is also an in-game tutorial that can be accessed in the Main Menu by pressing the **Tutorial** button.

During the tutorial, you will be introduced to the game's mechanics step by step, and you will complete a series of tasks to progress.

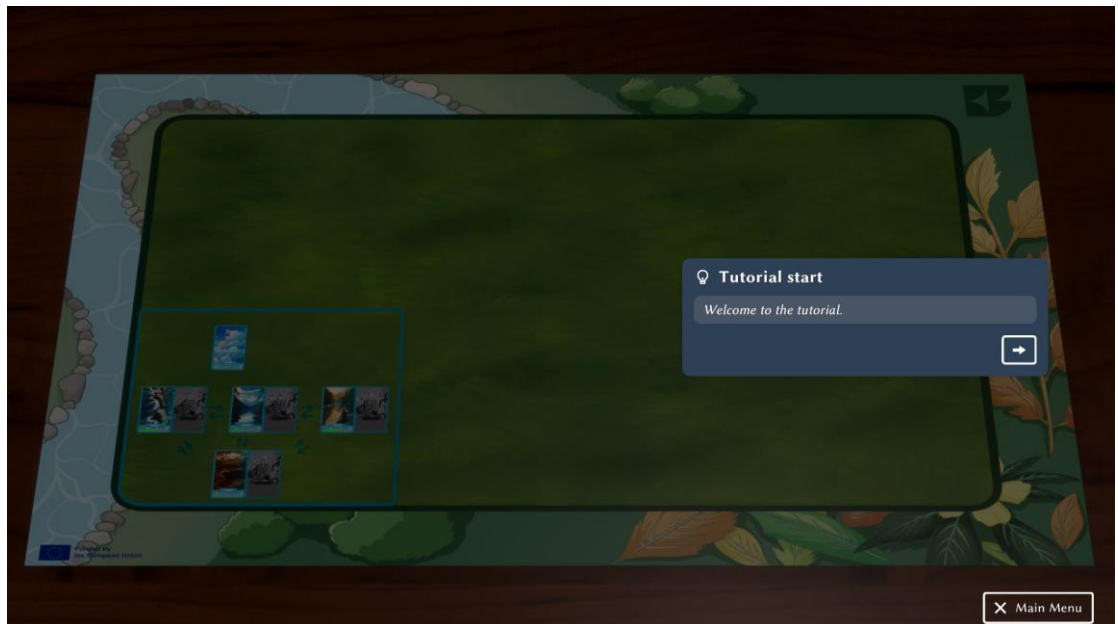


Figure 97: Tutorial start screen

As shown in the figure above, some user interface and gameplay elements are disabled when the Tutorial begins. As you progress through the tutorial, the relevant elements will become available as they are needed for each step.

To move to the next tutorial step, click the **right-arrow** button in the tutorial window. For steps that require you to perform a specific action, this button remains disabled until the current task has been completed.

If you are unsure what to do, look for the **green arrow**, shown in the figure below. It highlights the interface element or area required to complete the current tutorial task.



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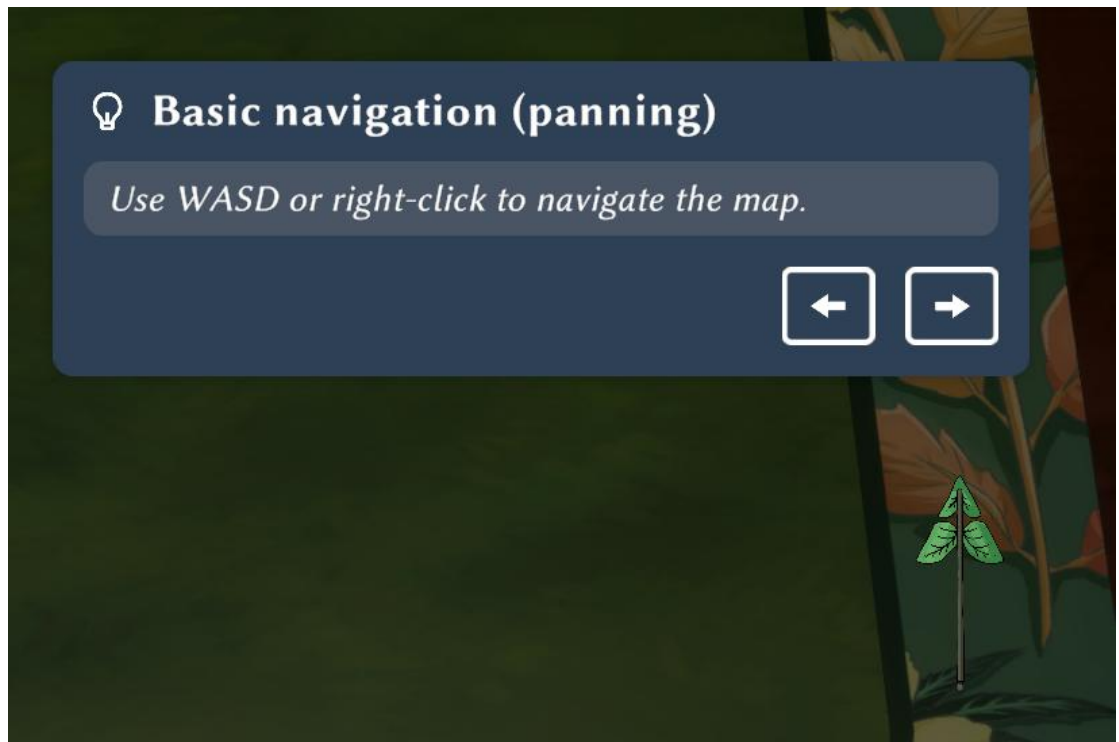


Figure 98: Tutorial arrow guide



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