Why is
the
World
Green?

Game Rules

SETUP

GAME MASTER: This game does not require a Game Master (GM), but a player can take on the role of Facilitator if desired.

CHARACTER SELECTION: Each player chooses a biome to play as. More than one person can choose the same biome if so desired and can be different areas or facets of it.

RESOURCE POINTS: The Resource Points (RP) are your "currency", which you can earn and spend. Each player starts with 4 RP, which they will use at their own discretion during gameplay in Phase 1. *You can use the suggested stat blocks or assign your own to the 4 stats.*

	Resilience	Adaptability	Biodiversity	Regeneration
Aquatic	-1	1	1	0
Grassland	0	-1	1	1
Forest	1	0	1	-1
Desert	1	-1	0	1
Tundra	1	1	0	-1

KEEPING TRACK OF RESOURCE POINTS AND EVENTS IN THE GAME: each player, based on their chosen character, gets a "Player Character sheet". This can be used to keep track of a player's RP during Phase 1 and 2 and to note down the challenges faced, creating a "history" of how the game's world has developed.

STATS: Your statistics or 'stats' are your biome's innate abilities which you can use to respond to and overcome the problems you may face.
Note: these stats are based on scientific concepts and may have specific meanings for everyone. It is advisable to spend a minute discussing how you understand these concepts and deciding what type of problems each stat may help overcome.

| RESILIENCE	ADAPTABILITY	REGENERATION	BIODIVERSITY
Used when a biome attempts to hold off a challenge to prevent biome damage	If a change occurs in the biome, this stat is used to determine how well the biome adapts	When a biome has been deteriorated by taking 'damage', this capability is used to rebuild	Describes how varied life is within the biome

Gameplay

Gameplay takes place in 2 phases, each of which can take over one hour.

Phase 1: "Building the world"

"In nature, nothing is perfect, and everything is perfect." — Alice Walker

In this phase, you will play how your world develops. Each biome evolves by responding to challenges, where the challenges come from a selected sphere. Biomes have evolved and developed over millions of years on this earth, who knows how they will change in yours?

The Biomes

FOREST   GRASSLAND   DESERT

TUNDRA   AQUATIC
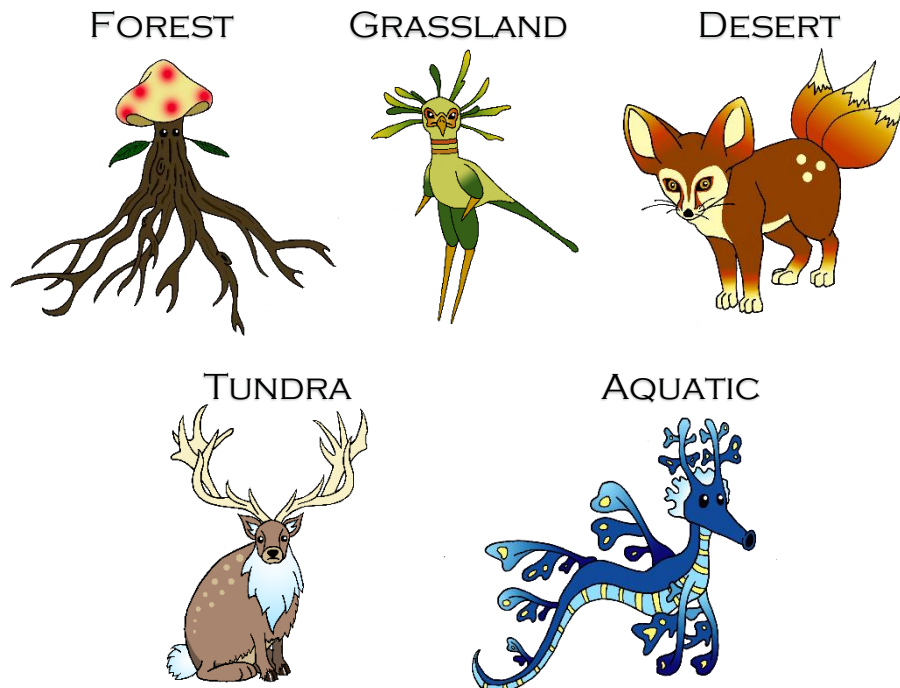
Taking turns

The players take turns to roll for and overcome a *Challenge* for the biome they play. Using the table below, roll a d6 to decide which sphere which will issue your challenge. On a 6, you get to pick which sphere presents your challenge.

The player to your right decides what the challenge is, based on the sphere from which it comes:

1	BIOSPHERE
2	ATMOSPHERE
3	CRYOSPHERE
4	LITHOSPHERE
5	HYDROSPHERE

Duration of the phase

This phase continues until all RP are consumed.

A challenge is presented

A challenge is presented, and the player offers a solution. The group together agree which stat this solution falls under (e.g., Resilience, Adaptability etc.). After, the player begins to roll their dice. This is determined as follows:

The player should firstly decide how many RPs that they want to use up to overcome this challenge. The player starts with **two dice**. They are then given a number of additional dice equal to the **Resource Points they are investing +/- their stat**, to which they have now assigned these resources.

Note: Only real-world examples of challenges are presented within these game rules (see Appendix 1). If the players want to invent more fantastic examples, they are welcome to do so!

Number of rolls:

Before rolling, the player needs to assign a number of their Resource Points to this turn. The number of rolls is determined by the following sum:

Number of rolls = 2 + Assigned Resource Points + Stat

Counting passes:

For each of the rolls (based on above), **a pass is granted if the player rolls a 5 or 6**.

Outcome of the challenge:

0 Passes: Failure.
The strategy fails, the Resource Points are lost, and the stat that was used takes -1 to ongoing rolls.

1 Pass: Mixed success.
The strategy succeeds but the biome is affected. The player must choose between losing the Resource Points put forward or taking -1 to the stat used.

2 or 3 Passes: Success.
The strategy succeeds. The Resource Points that were assigned to overcome this challenge are now added to the current stat. All rolls with that stat going forward take that number of RP as a plus.

4 or more Passes: Strong success.
The strategy succeeds. The Resource Points that were assigned to overcome this challenge are now added to the current stat. In addition, the player gains a new resource point to be used as they wish.

Examples:

Sally is playing as the Aquatic Biome. The Challenge presented is ocean acidification. Sally assigns 2 of her RP under 'biodiversity', describing an acidotrophic algae that returns the ocean pH to the previous level. Sally's Biodiversity stat is +1. She rolls 2 base dice, +1 for her Biodiversity stat, and +2 for her RP she has assigned, for a total of 5 dice. She rolls 4, 5, 6, 1 and 2. This is a Success as there are 2 passes, and so she marks the Resource Points as assigned to Biodiversity, and the Challenge is overcome.

Robin is playing as the Forest Biome. Their Challenge is a volcanic eruption that shoots ash into the air, blocking sunlight for an extended period of time and preventing effective photosynthesis. Robin's proposed solution is tree dormancy, using Resilience. If successful, the trees will hibernate until sunlight returns to optimal levels for photosynthesis. Robin's Resilience is 0, and they assign 1 RP to this, so they roll 3 dice. They roll 2, 1, and 4 – zero passes. This is a failure, and so Robin loses the RP and takes -1 to Resilience rolls going forward.

Phase 2: "Flourishing or collapsing societies"

"We don't inherit the earth from our ancestors, we borrow it from our children." – Chief Seattle, Native American leader.

You have developed into a strong set of biomes able to adapt to and survive the whims of the climate system. Now you must attempt to reach this stable state of equilibrium, to let the world "flourish", and prevent ecosystem collapse.

Taking turns

You are no longer playing as the biomes themselves. Now, in this phase of the game, you are playing as societies living within your biome. Here, you are attempting to survive and thrive in a complex climate system, while both using and conserving the ecosystem's resources.

Duration of the phase

This round will either end in a flourishing set of ecosystems in equilibrium, or ecosystem collapse.

A challenge is presented

The cycle of rolling for *Challenges* now begins again. This time, instead of assigning RP from their own pool, players describe how their civilisations use their own or other biome's resources to overcome a *Challenge*. The challenge is created by the player to their right.

Number of rolls:

Number of rolls = 2 + Assigned Resource Points + Stat

Stat from own or other biome.
This time, the *Stat* can come either from the player's own biome, or from another player. In the latter case, this represents an interaction between biomes (and the resilience of the full ecosystem of your world).

Assigning RPs.

A player can use multiple RP from their own biome if they are assigned to the same Resource.

A player can use RP from a maximum of 1 Resource from another biome.

If a player is using another player's Resource, then their roll will determine whether they gain access to that Resource for use in future turns.

The Player from whom the resource originates will also roll to determine if their resource is degraded or comes out stronger following its interaction with another biome.

COUNTING PASSES:

For each of the rolls (see above), *you get a pass if you roll a 5 or a 6.*

OUTCOME OF THE CHALLENGE:

If using only your own RP:

0 Passes: Failure.
The strategy fails, the Resource Points are lost, and the stat that was used takes -1 to ongoing rolls.

1 Pass: Mixed success.
The strategy succeeds and the Civilisation survives the Challenge, but the player loses the RP.

2-3 Passes: Success.
The strategy succeeds.

4+ Passes: Strong success.
The strategy succeeds. The player's resource gains an additional RP.

If using borrowed RP:

0 Passes: Failure.
The strategy fails, the Resource Points are not retained and the stat that was used takes -1 to ongoing rolls

1 Pass: Mixed success.
The strategy succeeds and the Civilisation survives the Challenge, but the player loses 1 RP from an appropriate stat as agreed upon by the table.

2-3 Passes: Success.
The strategy succeeds.

4+ Passes: Strong success.
The strategy succeeds. The player gains 1RP in the form of the Resource used, assigned to the stat used.

If your RP is being borrowed:

0 Passes: Failure.
The player permanently loses 1RP from the Resource.

1-3 Passes: Success.
The player retains the RP.

4+ passes: Strong success.
The player gains +1 RP to their Resource going forward in the game, and this is assigned to the same stat as the Resource.

EXAMPLES:

A quick guide to a typical turn in phase 2 is given in Appendix 2

Robin's Forest biome is faced with a depleted wildlife population due to disease outbreak after rolling a Biosphere Challenge. They do not have a suitable Resource with which to counter this Challenge, and so decide to use Duncan's buffalo Resource. They describe their civilisation coming from the Forest to the Grasslands to take herds of buffalo and breed them to become a more manageable size for their Biome, while remaining a plentiful source of food. Because this Resource originally belonged to Duncan, they both must roll. Robin rolls 2d6 + 1d6, 1 being their Biodiversity score, and gets 6, 5, 3 – 2 successes. The strategy succeeds and they now have a new RP under Biodiversity, in the form of the Forest Buffalo. Duncan also rolls to see if his Buffalo Resource is depleted. He rolls 2d6 + 1d6, for his Biodiversity score, + another d6 for his other Biodiversity RP. He rolls 3, 2, 4, 3 – 0 successes. He loses one of the two RP assigned to his buffalo.

Sally's Aquatic Biome receives the Challenge of sea level rise threatening her civilisation's island homes. She decides to use a Resource she had put under Adaptability, where she had created mangrove swamps. Now she describes her civilisation propagating and cultivating these mangroves to shore up the islands and combat floods. She had +1 to Adaptability and 1RP from the mangroves, so rolls 4d6. The results are 6, 3, 3, 2 – 1 success. Because this is a Mixed Success her civilisation succeeds against the Challenge, but not without losses. Sally can choose either between losing the Resource or taking –1 to Adaptability going forward. She chooses to take –1 to Adaptability, and the mangrove swamps survive.
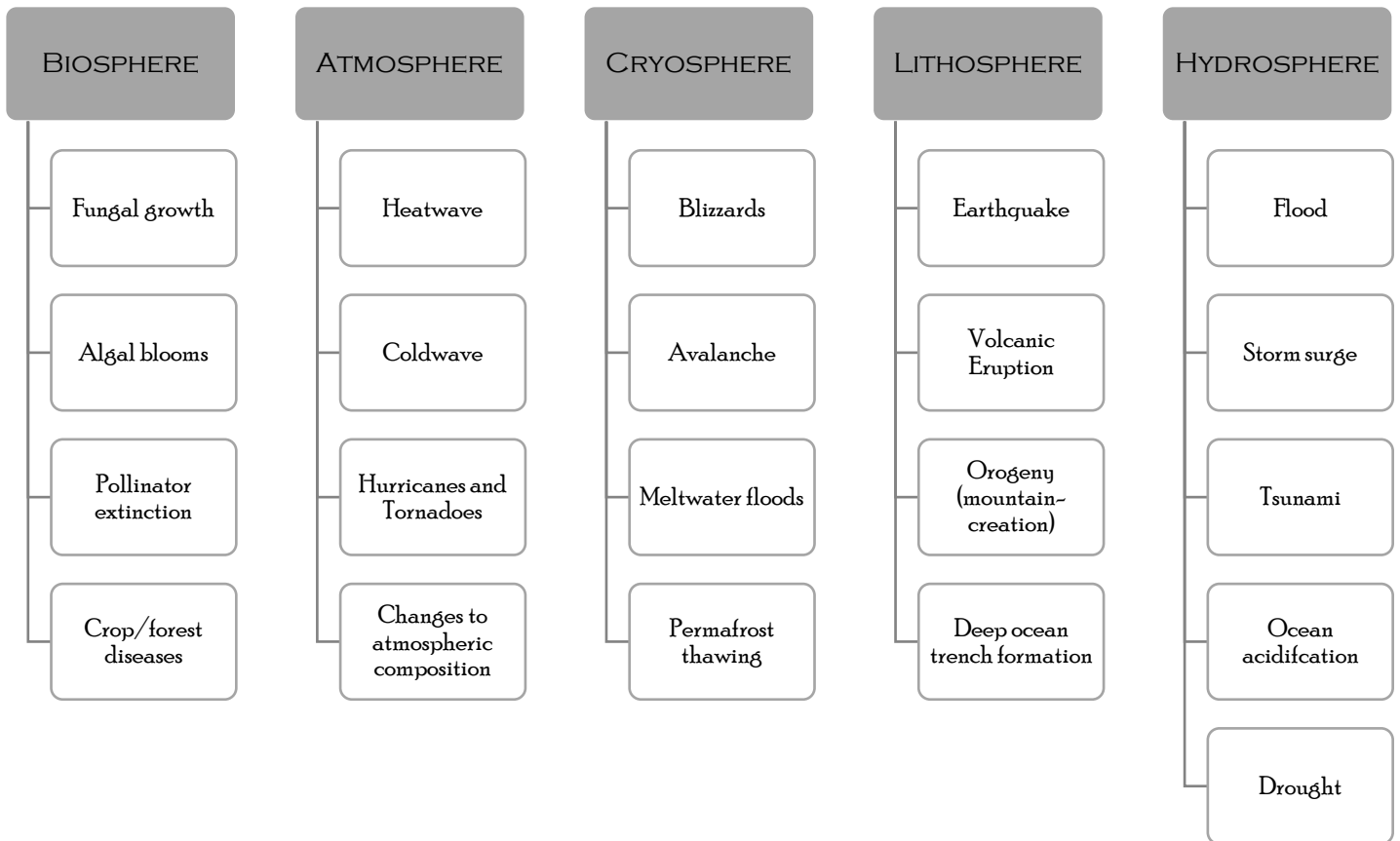
END OF GAME

The game ends when one of two outcomes occurs.

Collapse. This occurs when one player ends a round with 50% or more of the existing RP. At this point their civilisation is deemed to have created widespread instability across the world.

Equilibrium. This occurs when, for 1 round, all players end the round with the same number of, or more, RP points as they began it with.

Appendix 1

List of potential sphere challenges

Biosphere	Atmosphere	Cryosphere	Lithosphere	Hydrosphere
Fungal growth	Heatwave	Blizzards	Earthquake	Flood
Algal blooms	Coldwave	Avalanche	Volcanic Eruption	Storm surge
Pollinator extinction	Hurricanes and Tornadoes	Meltwater floods	Orogeny (mountain-creation)	Tsunami
Crop/forest diseases	Changes to atmospheric composition	Permafrost thawing	Deep ocean trench formation	Ocean acidifcation
				Drought

APPENDIX 2

Quick Guide to Phase 2

Player A is faced with a Challenge

- **Player A decides to use their own Resource**
  - Player A rolls 2d6 +/- d6 equal to the stat, plus d6 equal to the RP used
    - Failure. 0 Passes. – The RP are lost and the stat takes -1 going forwards.
    - Mixed success. 1 Pass – Lose the RP
    - Success. 2-3 Passes. – The strategy succeeds.
    - Strong success. 4+ Passes – Gain a new RP to the same resource and the stat used.

- **Player A decides to use Player B's Resource**
  - Player A rolls 2d6 +/- d6 equal to the stat, plus 1d6 for the RP
    - Failure. 0 Passes. – The Resource Points are not retained and the stat that was used takes -1 to ongoing rolls
    - Mixed success. 1 Pass – The strategy succeeds but the player loses 1 RP from an appropriate stat as agreed upon by the table.
    - Success. 2-3 Passes. – The strategy succedds
    - Strong success. 4+ Passes – Gain 1RP in the form of the Resource used, assigned to the stat used.
  - Player B rolls 2d6 +/- d6 equal to the stat, plus 1d6 for any REMAINING RP from the same Resource
    - Failure. 0 Passes. – The player permanently loses 1RP from the Resource.
    - Success. 1-3 Passes. The player retains the RP.
    - Strong success. 4+ passes. The player gains +1 RP to the Resource which was used, assigned to the same stat, going forward.