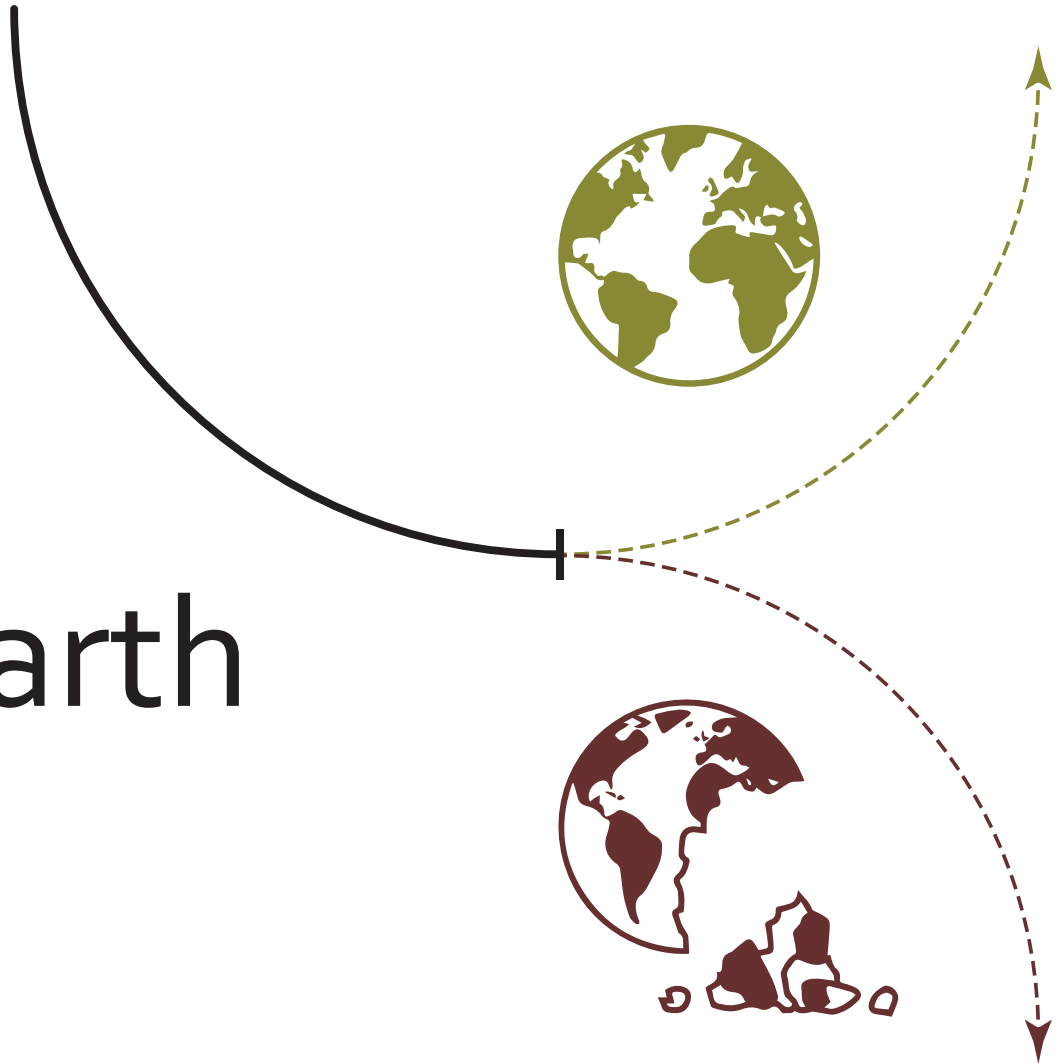


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Emmaleigh LeBedz

FA 2020





Degree Project  
Fall 2020

Partners:  
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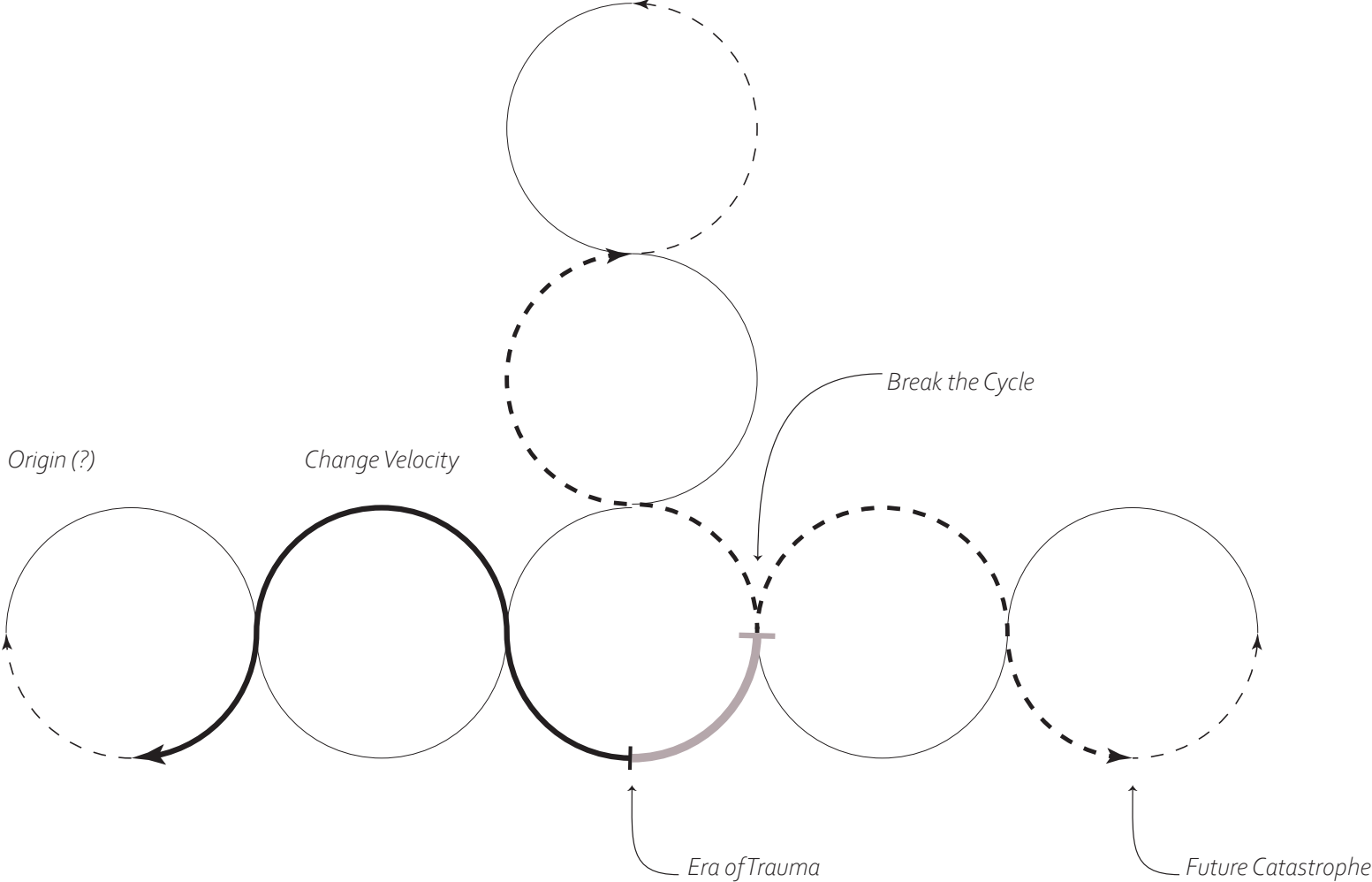
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# proposal

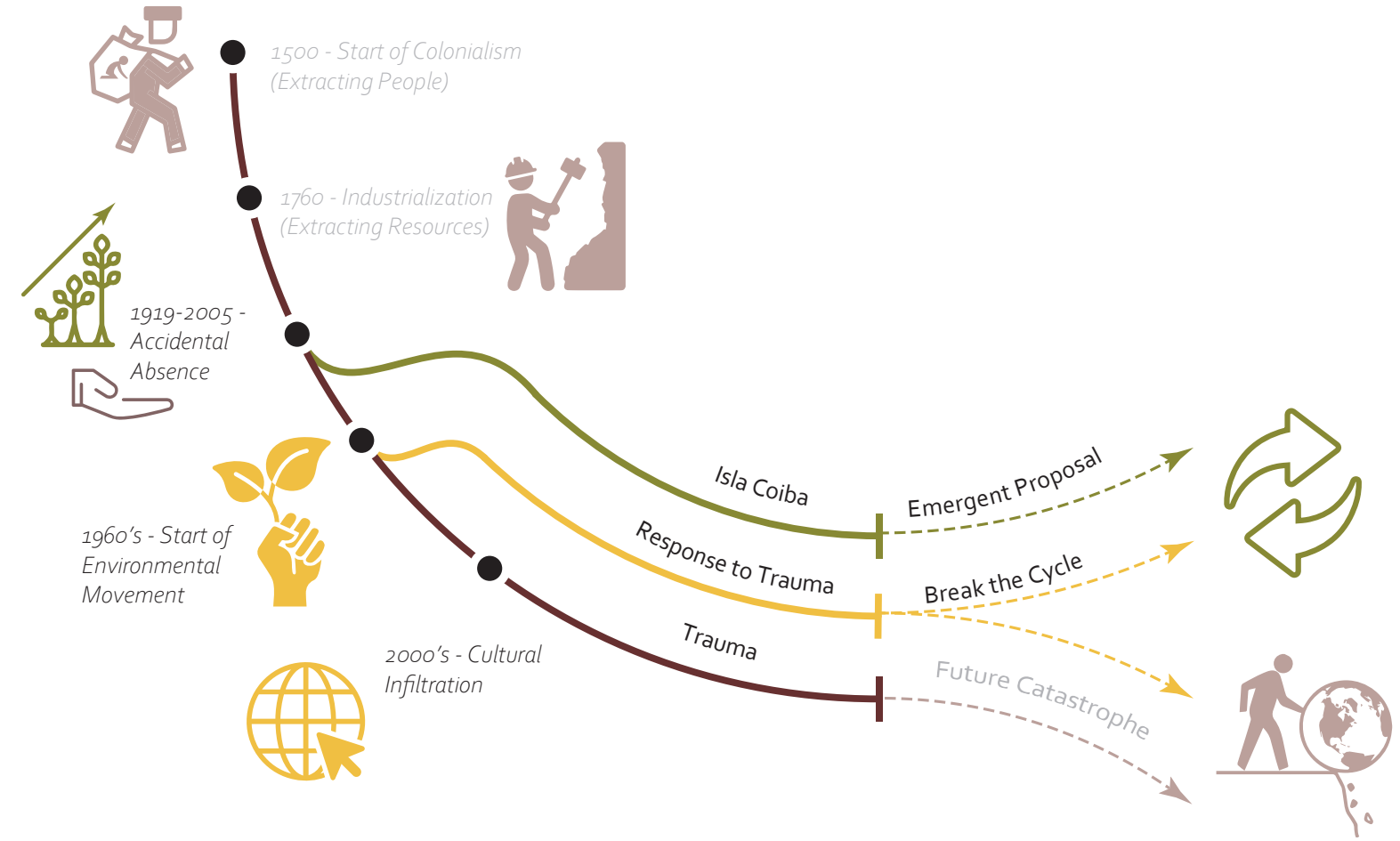
# Project Brief

## Violence

Human-induced trauma, manifested over time, has depleted the Earth's natural resources and has caused irreversible damage. These traumas are understood to be examples of "slow violence" (Rob Nixon), where the perpetrators have used manipulation across spans of time to ensure their consequences fall at the hands of the most vulnerable across the spectrum of animacy. The slowness of these violences makes them invisible, but they are exposed in the studies of altered Earth anomalies, manufactured landscapes, and abandoned infrastructure; all consequences of human waste. This constant stress is toxic, and has strained the systems and cycles of the Earth nearly to a point of destruction.

We are actively visualizing slow violence by putting together evidence of environmental trauma that has been separated by time. We propose to proactively identify and design for protection from the consequences of climate change by creating spaces for restoration.

Within environmental psychology, the term "restoration" refers to the experience of psychological and/or physiological recovery stimulated by particular environments and environmental configurations. Although often discussed in studies of the health benefits of nature (i.e. biophilia studies), it is the criticism of the Western-focused views at the core of restorative environments research that led to the development of new theories that acknowledge context, access, and cognition. (Steg, pg #).



# Project Brief

## Restore

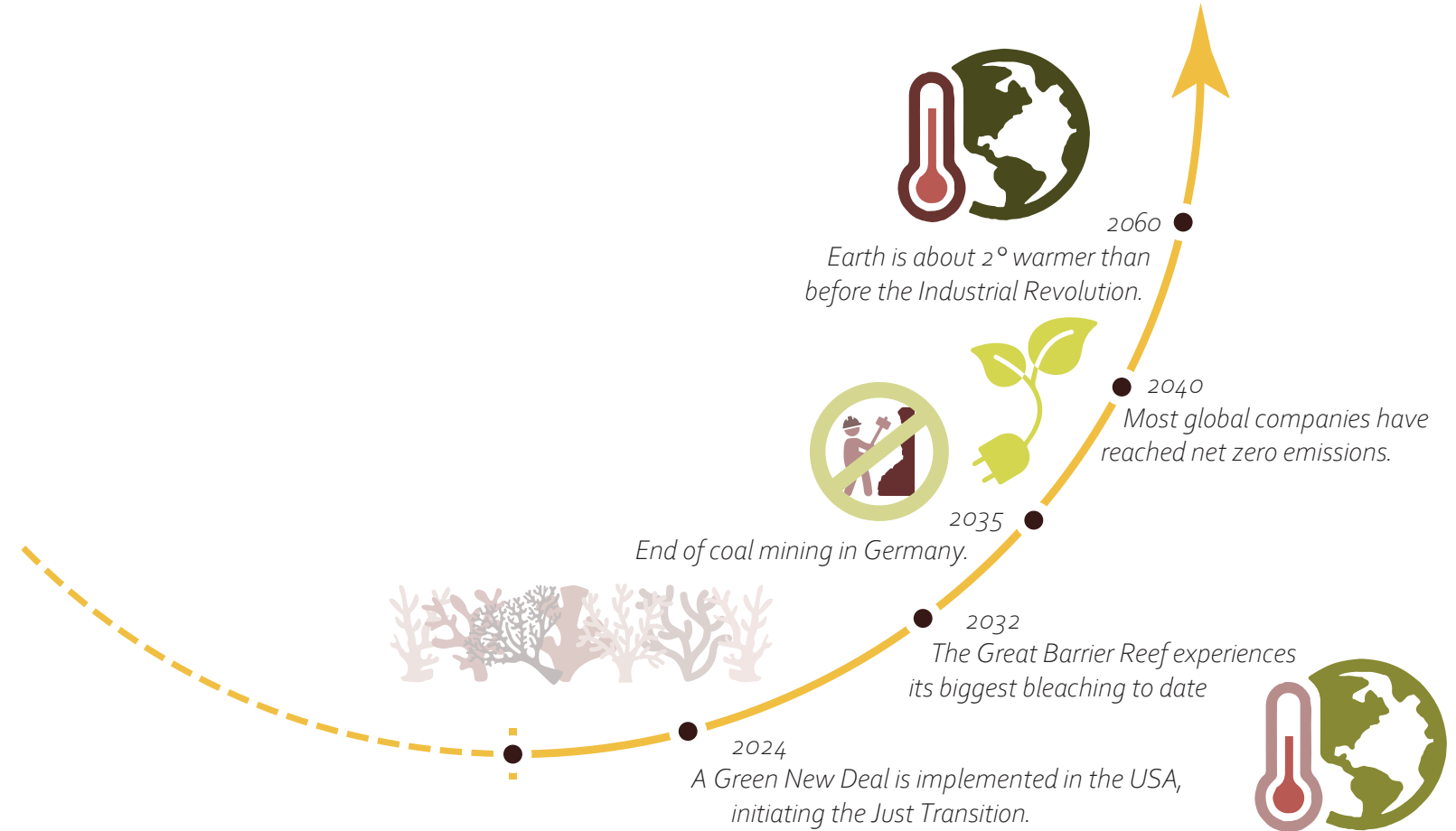
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We propose that restorative environments can be used to heal ecological trauma, aiding in environmental recovery. Avoiding the extreme potential consequences of the climate crisis requires a Just Transition, where society moves away from extractive systems and develops regenerative cycles for healing and growth. Through the restructuring of our relationships with resources, governance, worldview, and purpose, the built environment could support the regenerative practices of a “living economy” and help divert the impending doom of the current climate trajectory. If there is any hope of reversing past damage and preventing future devastation, these practices must become the standard. The “Just Transition” has a clear methodology outlined to be able to move away from the ways of life that are killing our planet and many of its inhabitants (Cite). Within this framework, architecture can provide a compound sanctuary to provide protection across scales of animacy through the built environment.

As discussed in Alaimo’s *Shell on Acid*, the Anthropocentric view of Earth recognizes that humanity has become a geological agent rather than simply a biological one. Although humanity is a biological entity like many other animate beings we interact with, our impact on the earth has consequences that seem irreversible, even as of today. We will need a new form of sanctuary; a method of containment as protection from the symptoms of slow violence. Factors like extreme heat, decreased air quality, and destroyed ecosystems will require increased need for refuge, enclosure, and self-supported living. A sanctuary can serve to combine these needs to systematically support healing.

We have the opportunity to completely rethink the way humanity interacts with the Earth. By designing restorative environments, humanity can start to understand the Earth as not simply a bank of resources, but as an animate being. Nature communicates with itself<sup>1</sup>; trees gossip, flowers wink, bees sing. Designing spaces in which Nature can exist to both aid humanity and grow naturally creates a healthier planet.

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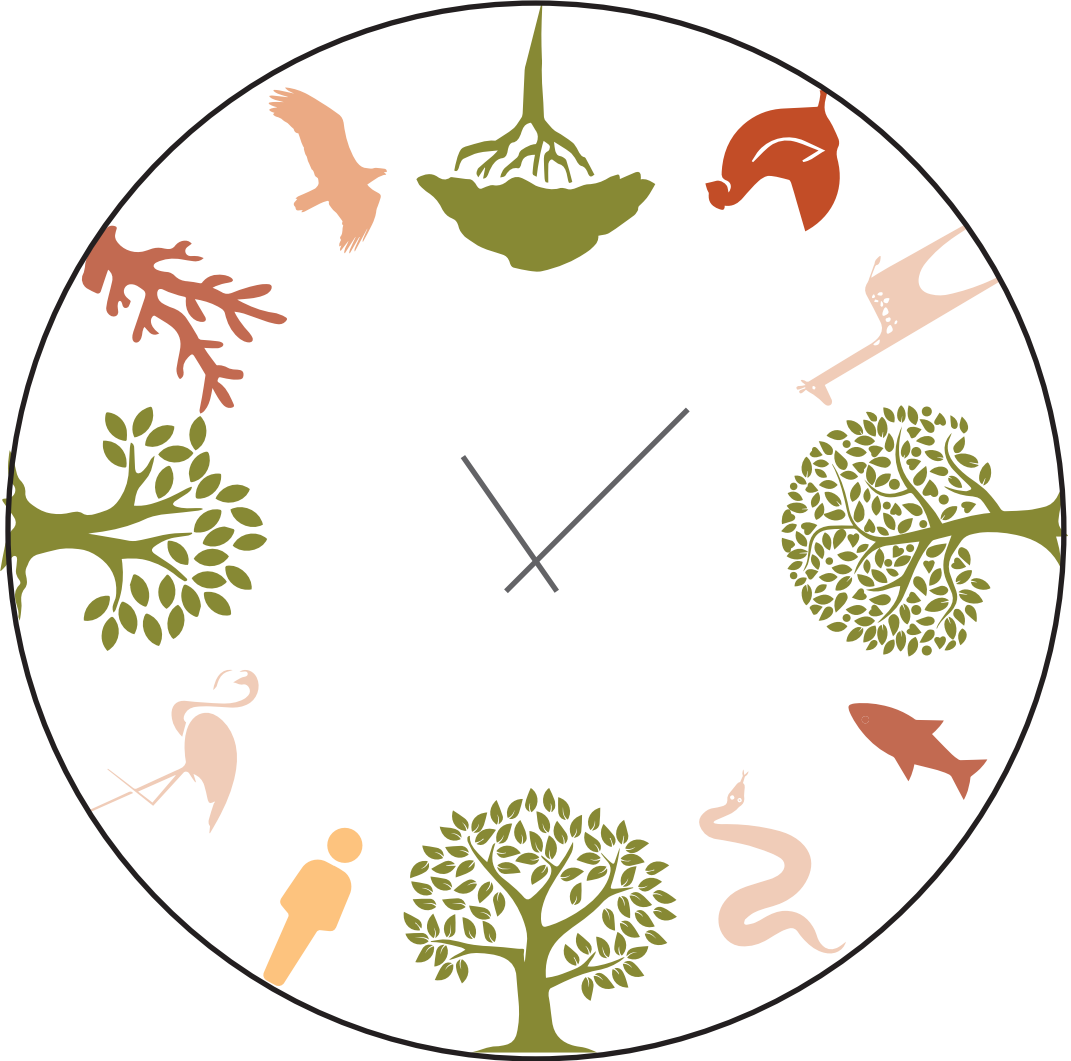


# Context Statement

## *Time and Animacy*

We argue that context isn't merely square footage or a list of measurements, as many capitalist producers would insist. Within the multitude of dimensions that can define context, we consistently overlook time; a scalar measurement far less noticeable than an x,y,z. Understanding the relationship between time and context is difficult because time and context aren't simply interchangeable, but are crucially complementary. It is because of the relationship between time and animacy that a context can be not only understood but genuinely embodied when it is occupied with high awareness, mutual respect, and a sense of belonging. Our contexts do not belong to us, we belong to our contexts.

By understanding ourselves as animate beings within a larger context of equally animate beings, we can see that we are a part of a network of cycles of life at infinite scales and quantities across the dimension of time. Our connections are so critical to maintain for the health and safety of ourselves and, as an extension, our context. We are connected through animacy, and through time, and in our project, we argue that we can also be connected through healing.





## case study: isla coiba

# History

## *Occupancy*

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While we have not picked a physical site for our project yet, we have examined a case study for trauma and animacy in relation to time. Isla Coiba, an island off the coast of Panama, has been frozen in time for the past fifteen years and proves that flora and fauna are capable of flourishing quickly when left undisturbed. The study of this accidental paradise over time helps us understand the value of human absence in environmental recovery. The island was once inhabited by the indigenous peoples of Panama, most likely the Bokata or the Ngöbe-Buglé peoples (IWGIA). But when the island was invaded by European explorers in the mid-1500s, they ended up captured as slaves by the Spanish conquistadors. In 1919, a prison colony was established on Isla Coiba during the rule of cruel Panamanian dictators. Prisoners sent here were known as "Los Desaparecidos," or "the disappeared," because many prisoners were buried in unmarked graves or dismembered and fed to the wildlife. The prison closed in 2004 and a year later it became a UNESCO World Heritage Site due to the expansive presence of endangered species (Gibbins).

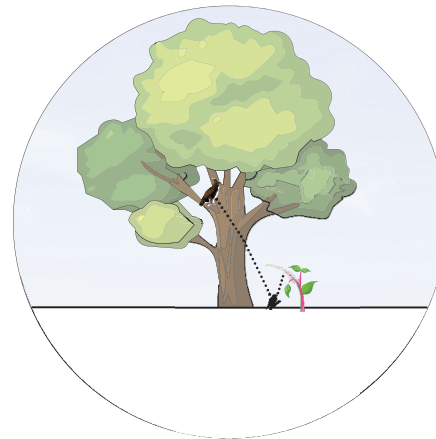


# Animacy

## Occupancy

Before colonial inhabitation, the natural cycle of "wild life" existed in isolation from humanity and was a complete cycle. For example, Venezuelan Pokeweed (*Phytolacca Rivinoides*) provided food for small birds and mammals, which were eaten by the Crested Eagle (*Morphnus Guianensis*), who spread seeds for the plant to reproduce. But when the island was built into a penal colony, that cycle was interrupted. Not only was the prison cruel and toxic to society and to the occupants, it was physically toxic to the island and its original inhabitants. Parts of the original habitats were destroyed, and the eagles began to be hunted by the humans. However, when the prison closed, life was once able to thrive in new habitats created by remnants of the human hand and the cycles returned to their original relationships.

The overabundance of life thriving on Isla Coiba today provides evidence that human absence enables hidden animacy to flourish when given the right conditions. It is important to prioritize understanding why an entire ecosystem can thrive in this environment by understanding relationships within it. Incorporating the value of human absence while designing for environmental recovery begins to bridge the ever-increasing gap between the Earth and people while simultaneously exposing how thoroughly humans have disrupted and disrespected the natural world.



**Pre-Human Toxicity**  
*Unknown*



**Human Intervention**  
*Cruelty*

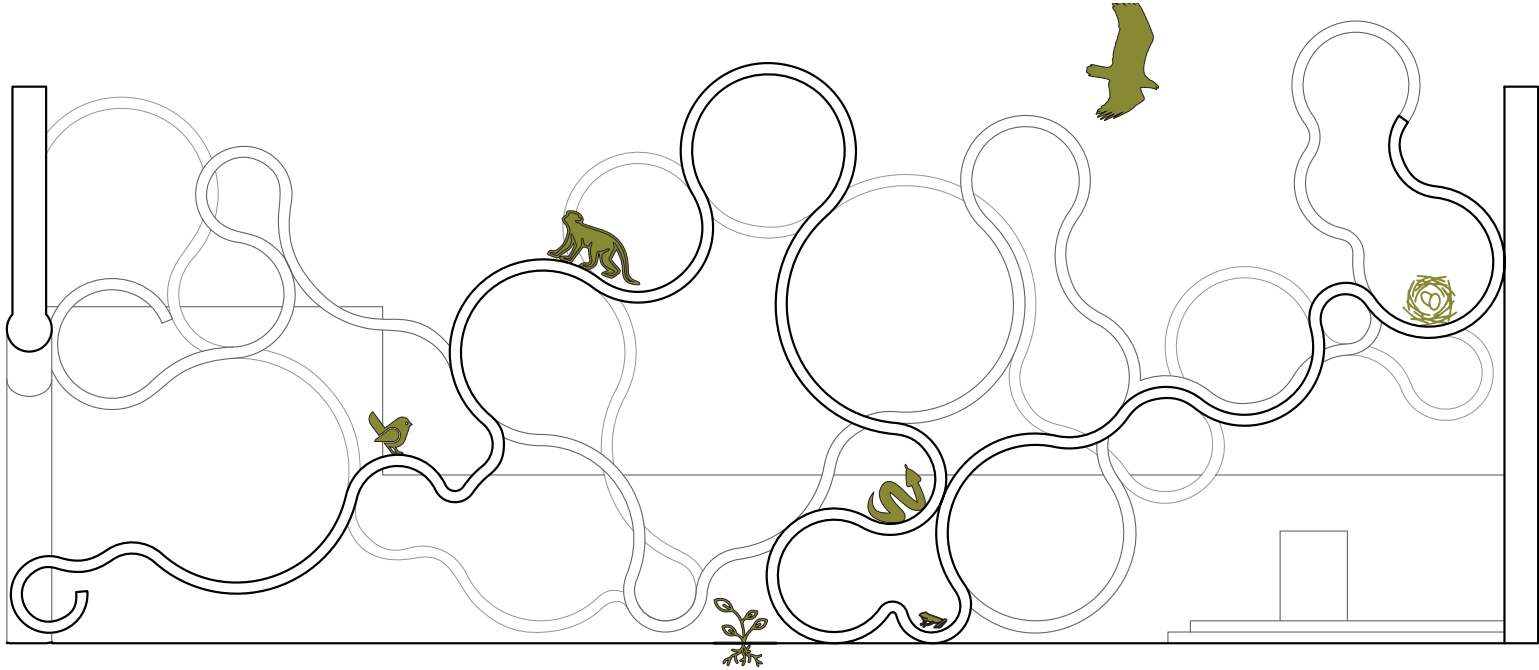


**Post-Human Remains**  
*Hope*

# Sanctuary

*Coiba, Panama*

By studying the needs of the animacy overflowing on Isla Coiba, we explore these relationships to experiment with shifts in habitation. An architecture of healing is an environment of accomodation for cohabitation. A structure can provide the spatial needs for both the eagle and the pokeweed while creating porosity to help divert their predators' presence. Overlapping the needs of different scales of life drives the creation of a sanctuary that caters to all.



*"A bay is a noun only if water is dead... But the verb wiikwegamaa— to be a bay— releases the water from bondage and lets it live."*

The beauty of animacy has been slowly forgotten, or in some cases has never existed at all. In Potawatomi, a nearly forgotten Native American language, translates the inherent language of the Earth (animacy) into a language that can be spoken and understood. The erasure of this language and culture is yet another casualty of colonialism.

## intro to animacy

# What is Animacy?

## Definitions

Robin Wall Kimmerer speaks to the theme of animacy and colonialism in "Grammar of Animacy" from Braiding Sweetgrass, with an emphasis on how animacy can be repressed through language via colonialism (Kimmerer, 48). Potawatomi, one of the languages of animacy, is so much more descriptive of the world than the masculine/feminine divisions of the romance languages. It separates elements (and the words that describe them) into animate and inanimate; but that division of animacy is not necessarily one that someone who speaks a romance language would assume. "A bay is a noun only if water is dead... But the verb wiikwegamaa—to be a bay— releases the water from bondage and lets it live" (Kimmerer, 55). Everything that breathes, moves, grows, swells has the possibility for animacy. We need only learn how to look for it.

Animate beings, referred to as "actants" by Jane Bennett in Vibrant Matter, are anything that have sentience or are able to do actions; anything which holds vibrancy, vitality (Bennett, viii). Often, these sources of vibrant animacy are overlooked and seen as inanimate because they are too small to observe or because their vitality looks radically different than what people are accustomed to. For instance, mushroom growth, known as Puhpowee in Potawatomi, contains a force of energy "which causes mushrooms to push up from the earth overnight" (Kimmerer, 49). While the English language cannot easily comprehend it, this action encompasses the essence of what it means to be animate.

Animacy: "A grammatical and semantic feature, existing in some languages, expressing how sentient or alive the referent of a noun is" (Animacy)

Sentient: "Able to see or feel things through the senses" (?)

- Pronouns of Animacy
- Human / Non-Human
- She/Her/Hers (feminine)
- They/Them/Their(s) (plural)
- Animate / In-Animate
- Ki/Kir/Kirs (singular)
- Kin/Kihr/Kihrs (plural)

In The Hidden Life of Trees (2018), Peter Wohlleben explores animacy within forest life. He talks about how trees can communicate with each other; they send electrical signals, smell warning signs, taste insect saliva, and hear noises. Trees warn each other of impending danger by releasing a toxic chemical into their leaves which discourages the predator and releases a smell that the other trees can detect, so they too can release the protective toxin. Even if the wind does not carry the smell to every tree, they also send electrical signals through their roots as another method of warning system. A common problem with modern, monoculture farming is that the crops lose the ability to communicate with each other in these ways. When that happens, it leaves the whole entire group of plants vulnerable to attack (Wohlleben, 1-5).

Trees, as well as other plant life, have tight, supportive, family units and often develop best friends. This is specifically seen in trees of the same species. Even when under completely distinct growing conditions in a specific area, they will synchronize their growth so that every member of the community is equally successful. So, if one tree gets more sun and another gets more water, they will share the nutrients via their root systems so they each receive equal amounts of sugar and water. This distribution of resources is facilitated by a network of fungi spread throughout the root system of the entire forest. By sharing resources and protecting each other, trees preemptively solve major health issues and ensure the success of the entire forest. If one tree were to be removed, the entire ecosystem would be at risk from storms, summer heat, and many other health risks. Cooperation and co-living truly are in the best interest of every member of the forest.

Friendships, warning signals, familial support: these aspects of forest life are uncannily similar to human relationships and indicate a clear expression of sentience and therefore animacy. One might even say that trees are more intelligent than people who live in a capitalist society. Instead of fighting over resources and focusing solely on oneself, trees understand that cooperation is in everyone's best interest and work to create a society the benefits everyone.

*"By slow violence I mean a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all."*

Slow violence creeps. It can go years or even decades before becoming noticeable. There is nothing about it which catches the eye, but it is deadly nevertheless. Slow violence is a chronic environmental stress and it is more often the wealthiest countries who contribute, but the poorest countries are the hardest hit. The perpetrators are rarely the victims. With raised awareness of the consequences of slow violence, experienced constantly by the marginalized and avoided by the privileged, it becomes evident that there are forces that will continue to work to hide the consequences of their ancestors.

# era of trauma

# The Anthropocene

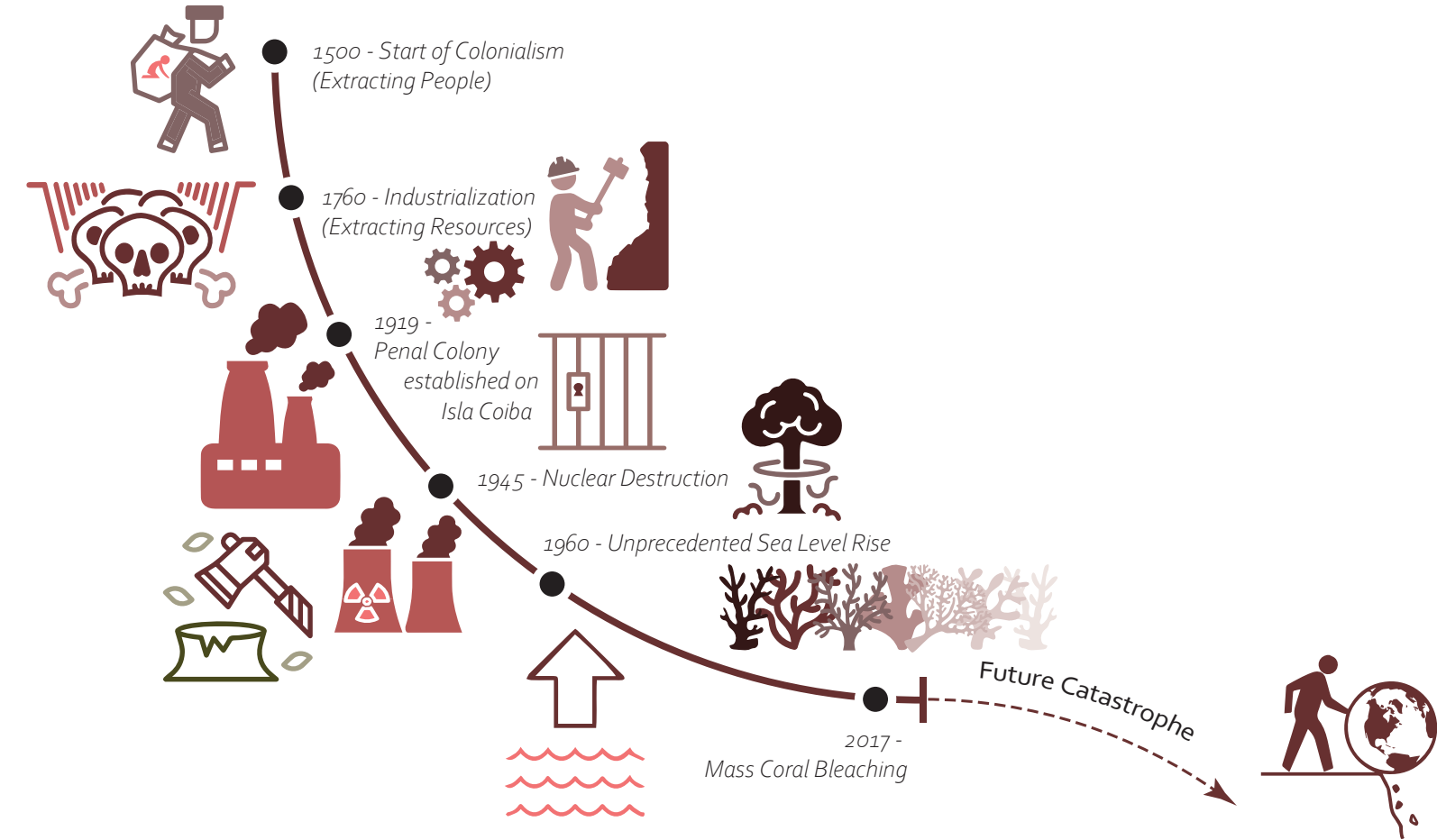
## How It Started

In *The Climate of History: Four Theses*, Dipesh Chakrabarty speculates on what is now known as the Anthropocene, or the Age of Man (Chakrabarty, 2009). This geological era began in the late 1700s, when scientists discovered growing concentrations of carbon dioxide and methane in analyses of air trapped in the polar ice caps. The beginning of this new era also coincided with James Watt's design of the steam engine in 1784, which marked the start of industrialization. (Chakrabarty, 2009). Both of these elements represent the lackadaisical approach most of humanity has had towards the environment throughout history, but are also products of an anthropocentric way of thinking.

Another theory for the Anthropocene that Chakrabarty hints at but does not fully delve into is that it began at the onset of colonialism, approximately 200 hundred years earlier (Chakrabarty, 2009). With rising populations and increased access to global travel, Western Europeans began to spread out across the globe in search of "new lands". When they stumbled upon the already inhabited Americas, they almost immediately decided that these peoples who looked and behaved so differently than themselves must be inferior. Jane Bennett discusses the idea of biological superiority in her book *Vibrant Matter* and deliberates on many elements of life to expose the vitality of matter that is so often overlooked (Bennett, 2010). "The ontological divide between persons and things must remain lest one have no moral grounds for privileging man over germ or for condemning pernicious forms of human-on-human instrumentalization" (Bennett, 12). The only way for European invaders to justify stealing the land of and killing the native peoples already occupying the Americas was to consider them as simply objects, but not as people, not as living beings deserving of life and liberty. By not acknowledging the animacy of beings other than themselves, they were morally able to conquer and subdue the land and the creatures in it.

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# Cultural Division

## *Indigenous vs. Religious*

### **Skywoman**

Saved from certain death by the generosity of the creatures of this strange new ocean, Sky Woman landed among the animals of Earth when she through a hole in the sky. Geese caught her in the air, and Turtle supported her when she had nowhere to go. These animals of Earth understood that she could not live on only the water; she needed land. So, each of the animals in turn dove into the depths of the sea to fetch mud, but none succeeded until the last. Muskrat was able to succeed where others had tried and failed, but at a great cost. He gave his life so that this new creature could have somewhere safe to live. Sky Woman gave thanks together with the animals in Muskrat's and others' sacrifices, and spread the mud across the back of the turtle to make land. She brought with her gifts of seeds from the other world, and grew food for all to eat. She tended the plants and cared for the animals, and from her sprang the descendants of Turtle Island.

### **Eve**

Gifted a garden, a partner, and subjects without ever lifting a finger, Eve came into this world with everything made for her. Together with her partner, she was instructed to rule the creatures of the Earth and subdue the land. All that existed was available was given to her for her own use, except one tree. But it still wasn't enough; a serpent tricked Eve into believing that she also needed that one tree. This one mistake cost her a perfect eternity in a garden of paradise, and she was cast forever into a temporary home. For it was made clear to her at the time of exile that this new land outside the garden was not meant to be her home, it was a waystation on her way to earning back her place in Heaven. Eve and her partner may have been created from the dust of this world, but they do not belong to or in it.

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"One story leads to the generous embrace of the living world, the other to banishment." (Kimmerer, 7)



"One woman is our ancestral gardener, a cocreator of the good green world that would be the home of her descendants." (Kimmerer, 7)



"[One woman] was an exile, just passing through an alien world on a rough road to her real home in heaven." (Kimmerer, 7)

# Cultural Division

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## *Indigenous vs. Religious*

The “Age of Man” may have begun at the onset of colonialism, but the cultural differences that made colonialism possible began at the dawn of time. Comparing Skywoman, the ancestor of the Original Peoples of the Great Lakes, and Eve, the mother of all humans in the Christian / Jewish Bible, displays the ripping divide between many indigenous peoples, especially those of North and South America, and European colonizers. Skywoman came together with the creatures who already existed in the place she landed to create the land, the earth, and the plants. She knew from the start that she was where she belonged and taught her descendants to respect and care for the Earth because it was their home. Many indigenous peoples, especially those who descended from Skywoman, learn from birth about the natural world and how to engage with it. In contrast, Eve was created in a place of completed perfection and instructed to subdue the land and be master over the other creatures. Not content with what she was given, she took fruit from the only forbidden tree and was thrown out of the perfect garden into the wilderness with orders to do her best until she had earned her way back into her real home of Heaven. By teaching that this world is not where humans belong, Eve paved the way for mistreatment of the Earth. In Christianity, the primary religion of conquering European invaders, this Earth has never been a final resting place; never been somewhere to beautify and take care of. It was only ever a place for them to pass through, taming every being they encountered. It is no wonder that these two cultures clashed so aggressively in every possible way.

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“ And then they met— the offspring of Skywoman and the children of Eve— and the land around us bears the scars of that meeting, the echoes of our stories. They say that hell hath no fury like a woman scorned, and I can only imagine the conversation between Eve and Skywoman: ‘Sister, you got the short end of the stick . . .’” (Kimmerer, 7)

# The Anthropocene

## How It's Going

Stress can be defined in several ways. One is a psychological response to events that are threatening or challenging. When a person experiences a significantly stressful (therefore, traumatic) event, there is a chance the event will have long term effects, often in the form of flashbacks. This can either be a single instance, or a series of events. Stress can also be described as an imbalance between environmental demands and human response capabilities. Environmental stress is primarily chronic, or long term, due to limited possibilities to escape or resolve the stress (Steg).

Environmental stress is chronic because there is never a chance for reprieve from the causes of climate change. We are now aware, however, that we've reached a point of global exhaustion caused by a loss of hope in changing the systems that created this chaos. Future potential consequences are outlined in Uninhabitable Earth, overwhelming in their quantity and ability to manifest themselves. By 2060 75% of the Amazon rainforest will have undergone desertification. By 2090 2 billion people globally will be breathing air above the WHO "safe" level. By 2100, we will hit 5 degrees of warming and the lands around the equatorial band may no longer be habitable at all (Wallace-Wells).



Exponential Increase in Sealevel Rise

Abandoned Infrastructure

Electronic Waste

Mass Coral Bleaching

Burning of the Amazon Rainforest

Oceanic Pollution

# The Anthropocene

## Methods of Representation

There have been different scales and ranges of actions that humanity has engaged in to reverse the consequences of the slow violence of systemic racism, climate change, and indigenous erasure. These methods have been successful and unsuccessful in their own ways, and to contemplate how to dismantle these toxic systems we must understand the degree of the failures of these methods. Propaganda from the 19th century enforces societal ignorance and helps to hide these consequences through feeding human centricity and current media systems serve to reflect a false reality to keep toxic systems in power, and this is due to the neglect to address our traumas. Revolutionaries have adapted the languages of propaganda and media throughout time to bring light to the trauma of the marginalized and enforce their rights to life. They work to acknowledge and dismantle the false narratives of our past and fight to enact global change. The growth of internet accessibility and usage has allowed for this and more as our technological advancements have become extensions of the human existence. A global scale of change requires enforcement at a global scale, which has been attempted by the United Nations and has failed. Greta Thunberg's public demand for higher standards from world leaders shows that humanity is beginning to see that although we may never view the full scale of slow violences, we can still act to stop them. Natural history and human history have become so thoroughly intertwined that they can no longer be separated.



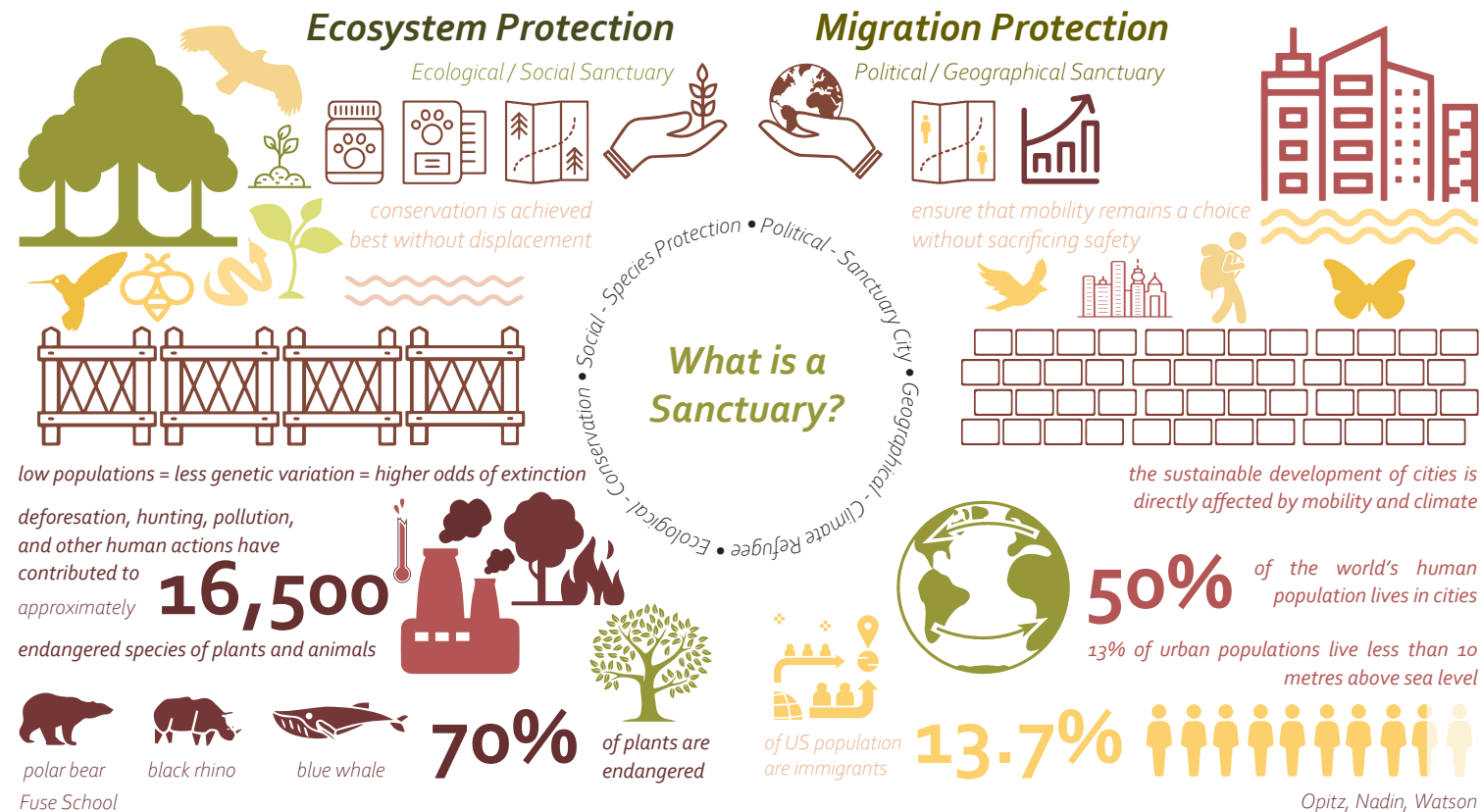
*"The slowness of climate change is a fairy tale, perhaps as pernicious as the one that says it isn't happening at all, and comes to us bundled with several others in an anthology of comforting delusions: that global warming is an Arctic saga, unfolding remotely; that it is strictly a matter of sea level and coastlines, not an enveloping crisis sparing no place and leaving no life undeformed; that it is a crisis of the "natural" world, not the human one; that those two are distinct, and that we live today somehow outside or beyond or at the very least defended against nature, not inescapably within and literally overwhelmed by it;"*

sanctuary

# Sanctuary Types

## Definitions, Data

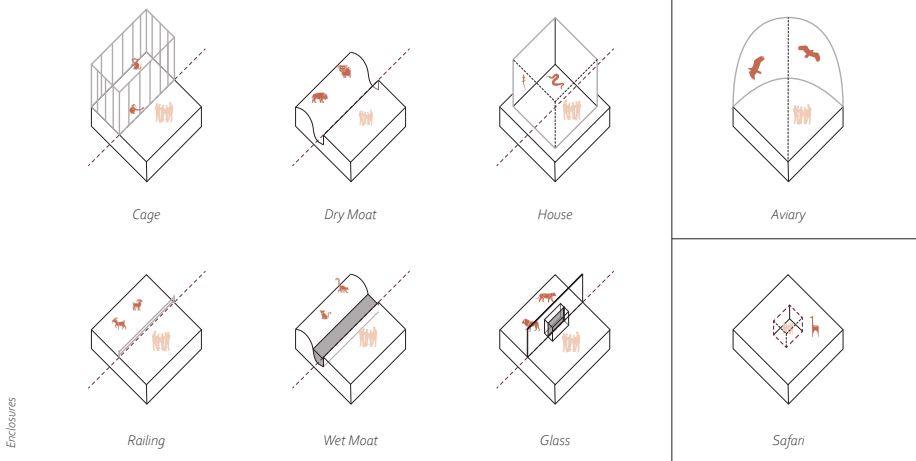
Factors like extreme heat, decreased air quality, and destroyed ecosystems are irreversible and require a new form of sanctuary; a method of containment as protection from the symptoms of our slow violences. We studied the social, ecological, political, and geographical definitions of sanctuary, identifying common contributors like displacement and exclusion. By altering our actions, we may be able to avoid many, but not all, of the extreme consequences of climate change. In a future when carbon emissions drop exponentially before we inevitably hit 1.5 degrees warming, we must still be prepared to deal with the unavoidable consequences. Millions of ecosystems will transform, challenging the ability to adapt and encouraging premature natural selection. Pretty soon, rising temperatures will completely alter the way we produce food. Once fertile land near the equator will become unusable and once useless land in the hemispheric extremes will become the primary food growing source. The rising temperatures will not only affect food production, but also the living conditions of millions of peoples. With temperatures at constant record highs, they will be forced to migrate away from the equator.



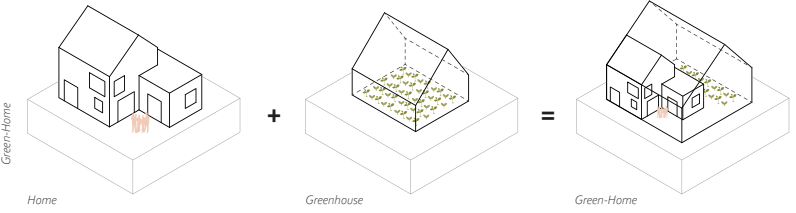
# Sanctuary Studies

## Types of Containment

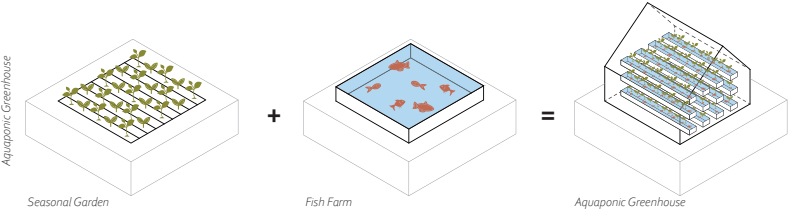
These potential future consequences point towards a need to understand containment, but not only within humanity. The Biosphere 2 plans by NASA, calling for 3,800 species of plants and animals in 7 mini biomes, was meant to mimic the Earth to study life in containment but failed due to excessive human failures. We've chosen to focus on studying the internal relationships within containment, understanding how the built environment has indicated boundaries between humans and other animacy. Improving inter-animacy relationships can solve many of the problems seen in the Biodome and other studies of containment as it is no longer a result of punishment or exhibition. It is about cohabitation and co-survival.



(re)\_earth • em • zoo typologies



Re-Gen Village by EFFEKT



(re)\_earth • em • greenhouse typologies

# Design Methods

## Future Living

Beginning next semester, I will be designing a village complex that functions as a sanctuary for a wide range of species. Because of the effects of climate change in relation to geography, the complex will need to be sited away from the equator, but not all the way to the poles. I will analyze what areas are most affected by poor air quality, rising sea levels, etc. to determine a specific site. The village will be comprised of everything that is needed for the inhabitants to not only survive, but to thrive. Whether that be human housing and food production, protection for vulnerable and endangered species, temporary shelter for nomadic / migratory species, etc. It will be porously enclosed to balance both protection and freedom. By using renewable materials, such as bamboo and mycelium (mushroom roots), I will minimize my impact on the Earth's resources.





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