

PORTFOLIO

Eddy Voltaire

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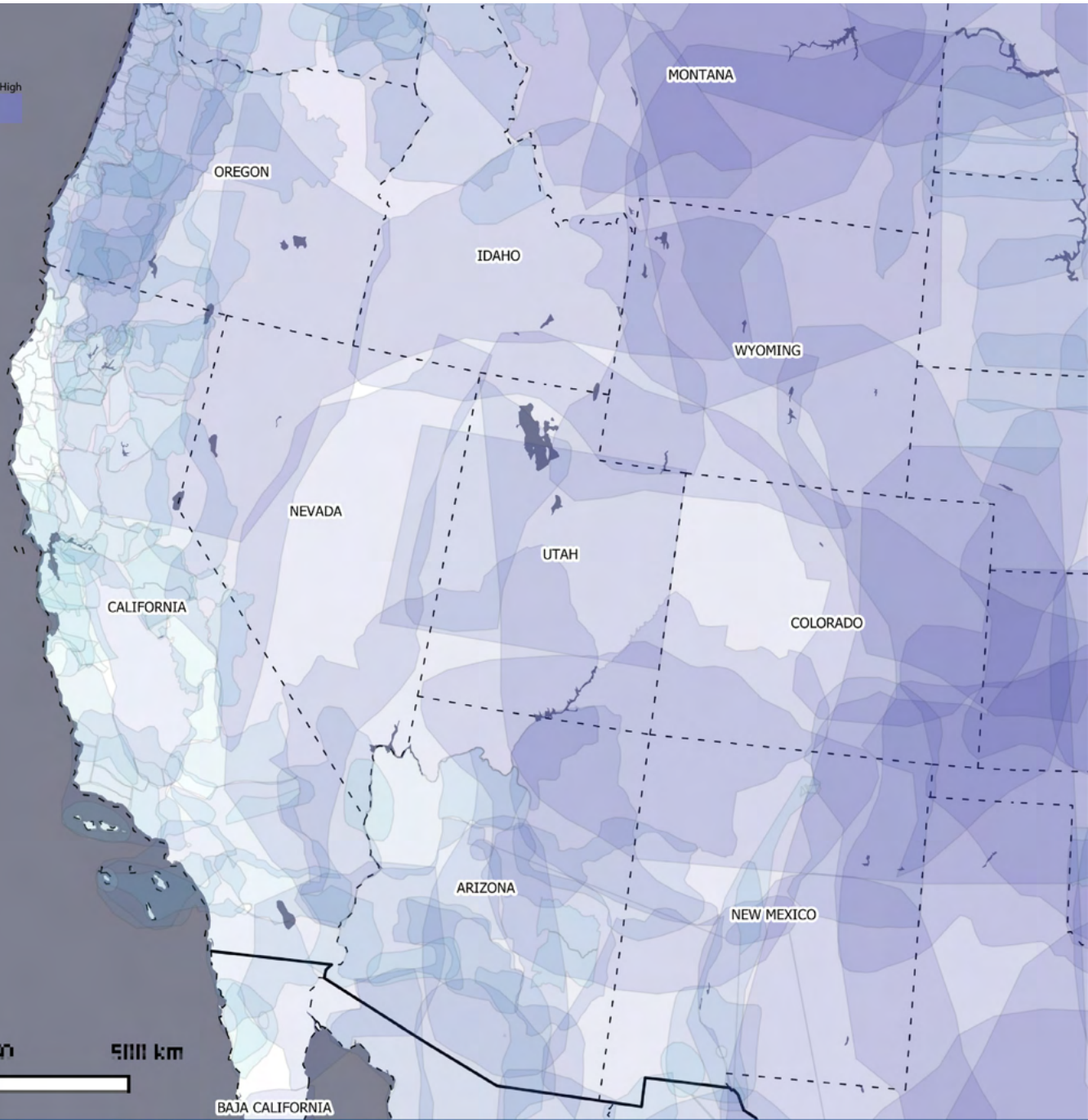
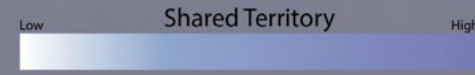
Legislating Nature

By design, the Colorado River Compact (Law of the River) of 1922 commodified the waters within the Colorado Basin to provide colonial settlers with the water needed for industrialization and agriculture. The law determined who has the right to access this finite resource, and it empowered states to weaponize infrastructure to ensure their water allocations, altering the Colorado River and its tributary rivers and streams with total disregard for Indigenous bodies, knowledge, forms of stewardship, and nature itself.

In 2022 the Ute Mountain Ute Tribe of Colorado saw its water allocation reduced to ten percent, leaving 6,000 of 7,500 acres of farmland unusable, highlighting the severe socio-economic impacts of these policies. Unprecedented drought and overuse, due in large part to the miscalculations of the river's stocks and flows (made during the wet years leading to the time the compact was drafted), has led to a loss of biodiversity, land degradation, and even further displacement and economic losses, placing the bulk of the burden on the shoulders of already disadvantaged Indigenous populations.

But nature has provided an atmospheric loophole embodied in water vapor and relative humidity: atmospheric rivers present an emerging ecological opportunity to address water scarcity, restore local ecosystems, and support the upward mobility of impacted communities. A reconceptualization of how we manage water resources is imperative to safeguard the future of both environments and the communities that rely on them.

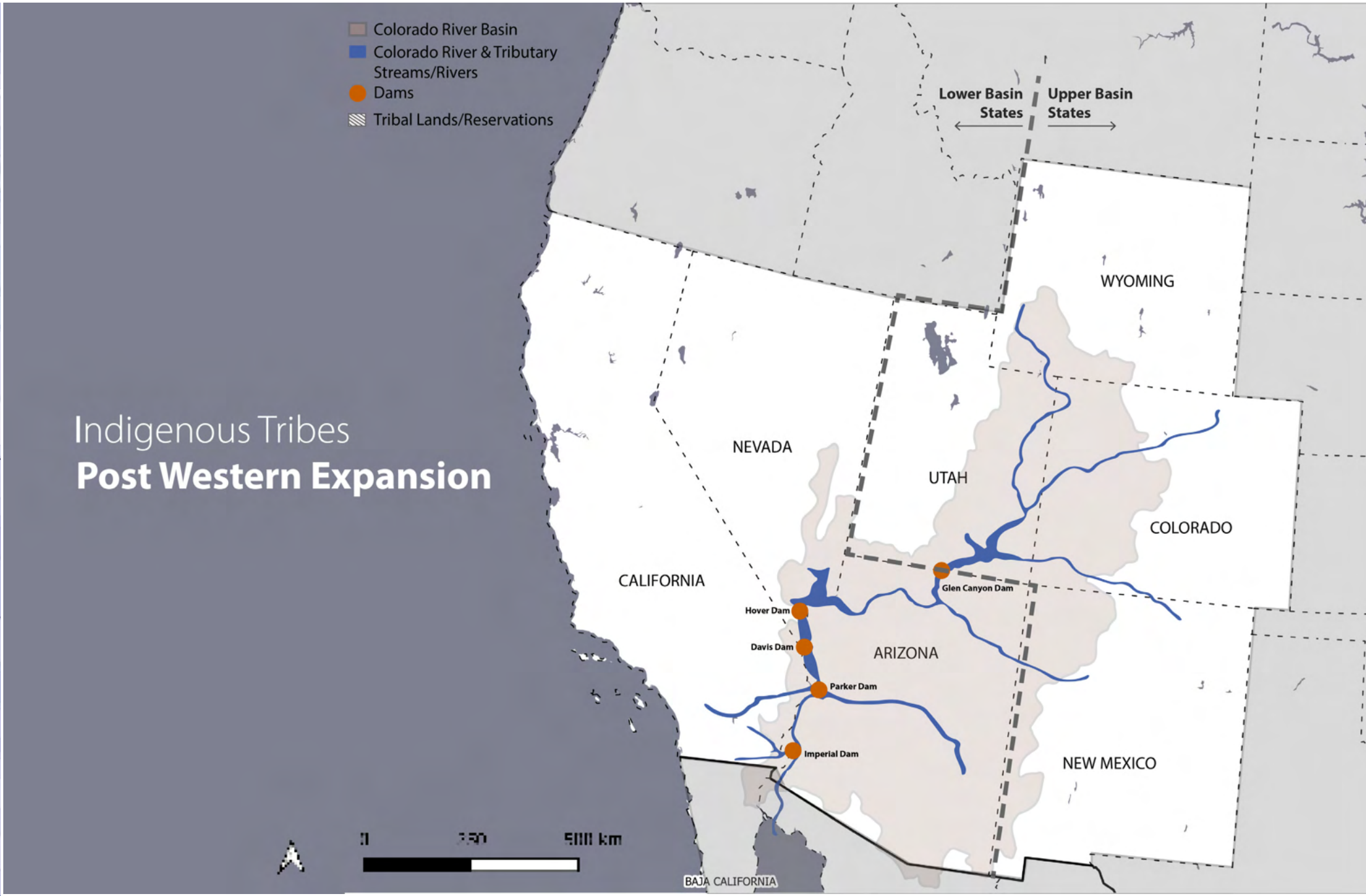
Indigenous Tribal Territories Pre-1800s



Indigenous Tribes Post Western Expansion

- Colorado River Basin
- Colorado River & Tributary Streams/Rivers
- Dams
- Tribal Lands/Reservations

Lower Basin States Upper Basin States



Ruined by Design: The Dispossession of Water and Land

Pre-1800s

Indigenous peoples across the region rely on the Colorado River and its tributaries for sustenance and irrigation.

1848

The Treaty of Guadalupe Hidalgo ends the Mexican-American War, and the U.S. acquires vast territories in the West, including the Colorado River Basin.

Late 1800s-early 1900s

Hydrological surveys of the Colorado River Basin begin, setting the stage for future water allocation discussions.

1850 - 1900

Western expansion and settlement increase demands for water for agriculture, industry, and growing cities. Multiple water rights doctrines evolve, causing confusion and disputes.

1902

The U.S. Reclamation Service (now the Bureau of Reclamation) is established, marking the entry into water management in the West.

1905 - 1907

The Colorado River floods and forms the Salton Sea in California, highlighting the need for river control.

1918

Completion of the Elephant Butte Dam on the Rio Grande prompts concerns about downstream water rights, underscoring the need for an agreement about the Colorado River's waters.

1921

U.S. Congress authorizes the states to negotiate an agreement about the Colorado River's water. Delph E. Carpenter, a Colorado attorney known as the "Father of Interstate River Compacts," proposed a compact to equitably divide the water and avoid lawsuits.

1922

January, 1922
The representatives from seven basin states (Colorado, Wyoming, Utah, New Mexico, Nevada, Arizona, and California) begin negotiating the Colorado River Compact.

November 24, 1922
The Colorado River Compact is signed in Santa Fe, New Mexico, by representatives of the seven states. The compact divides the Colorado River Basin into an Upper Basin and a Lower Basin, with each basin allocated the use of 7.5 million acre-feet of water annually. The document is often referred to as the "Law of the River."

1944

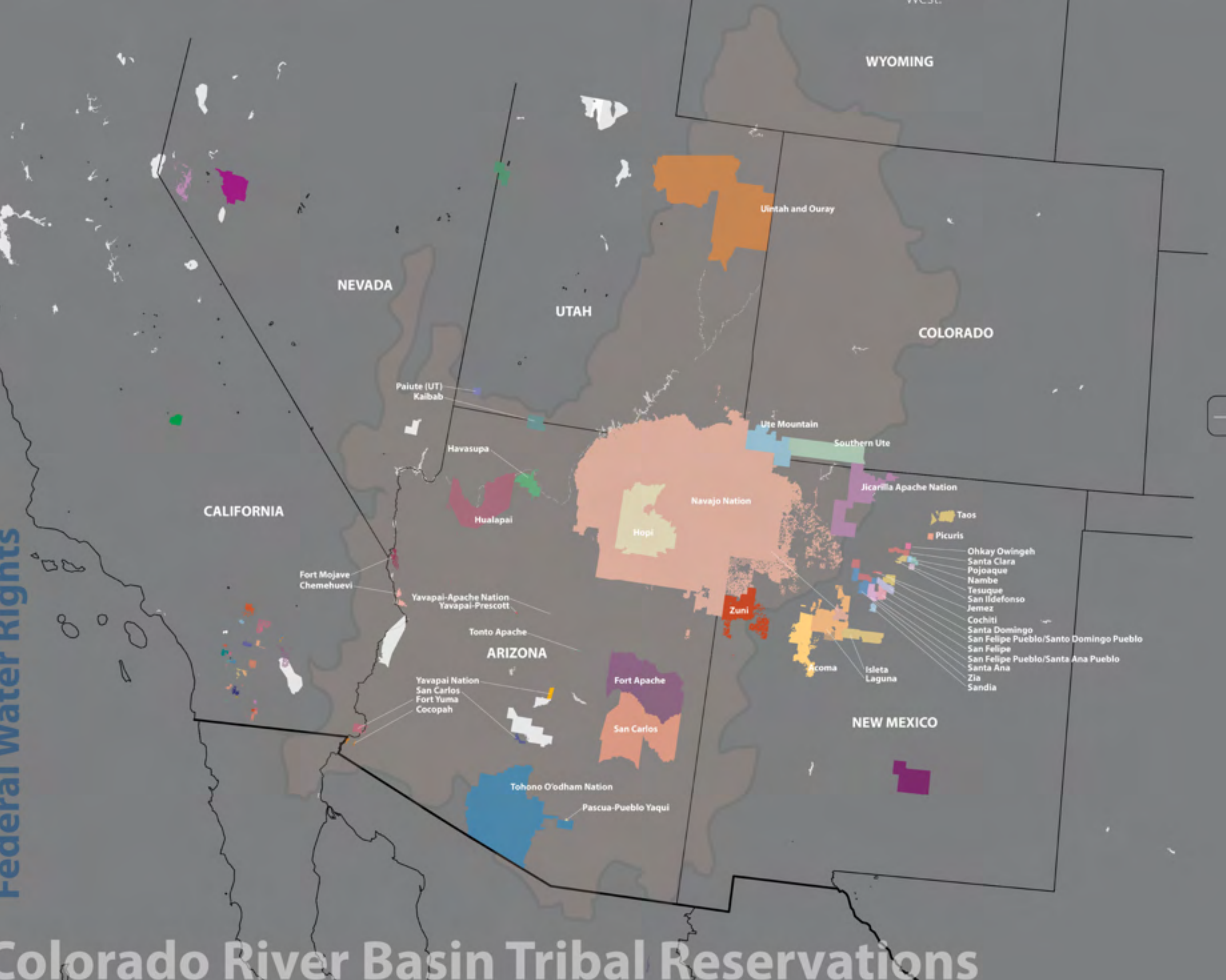
The Mexican Water Treaty of 1944 - Committed 1.5 maf of the river's annual flow to Mexico.

Delph E. Carpenter: As a water law attorney, Carpenter was deeply involved with agriculture indirectly. Many of his clients were farmers or agricultural companies, and his work on water rights issues would have had a significant impact on the agricultural sector.

Herbert Hoover: During his tenure as Secretary of Commerce, Hoover was involved in numerous activities related to water management, infrastructure, and policy, all of which have implications for agriculture and other water-dependent sectors.

Arthur P. Davis: As Director of the U.S. Reclamation Service, Davis was heavily involved in efforts to develop water resources for agriculture, including constructing dams, canals, and irrigation works to support farming in arid areas of the West.

William S. Norviel: As Arizona's State Engineer, Norviel would have been directly involved with water-dependent sectors. His push for allocations based on irrigation needs during the compact negotiations demonstrates a clear focus on agriculture.



GOVERNANCE

"Winters Doctrine 1908"
This doctrine established the creation of Indian Reservations by the federal government implicitly reserved sufficient water to fulfill the "purpose" of the reservation.

U.S. Bureau of Reclamation
Federal agency under the Department of the Interior oversees major infrastructure along the river, including dams and canals, and plays a central role in water management throughout the western U.S.

Secretary of the Interior
The Secretary serves as the "water master" of the Lower Basin of the Colorado River, with the authority to manage its water, especially in times of shortage.

Upper Colorado River Commission
This organization represents the interests of the four Upper Basin states (Colorado, New Mexico, Utah, and Wyoming) in matters related to the Colorado River.

Individual U.S. States
The seven states in the Colorado River Basin (Colorado, Wyoming, Utah, New Mexico, Nevada, Arizona, and California) each have their own agencies that manage water resources within their jurisdiction.

International Boundary and Water Commission (IBWC)
Oversees U.S.-Mexico agreements related to the Colorado River, including the 1944 Treaty and its subsequent updates.

Native American Tribes
Some tribes have legal rights to Colorado River water, but the degree of control they have can vary significantly depending on the specific tribe, its water rights, and its capacity to use and manage its water.

- California Allocation**
4.4 million acre-feet of water
- Arizona Allocation**
2.8 million acre-feet of water
- Colorado Allocation**
Does not have a specific allocation
- Nevada Allocation**
300,000 acre-feet of water
- New Mexico Allocation**
Does not have a specific allocation
- Utah Allocation**
4.4 million acre-feet of water
- Wyoming Allocation**
4.4 million acre-feet of water

Mexico Allocation
1.5 million acre-feet of water

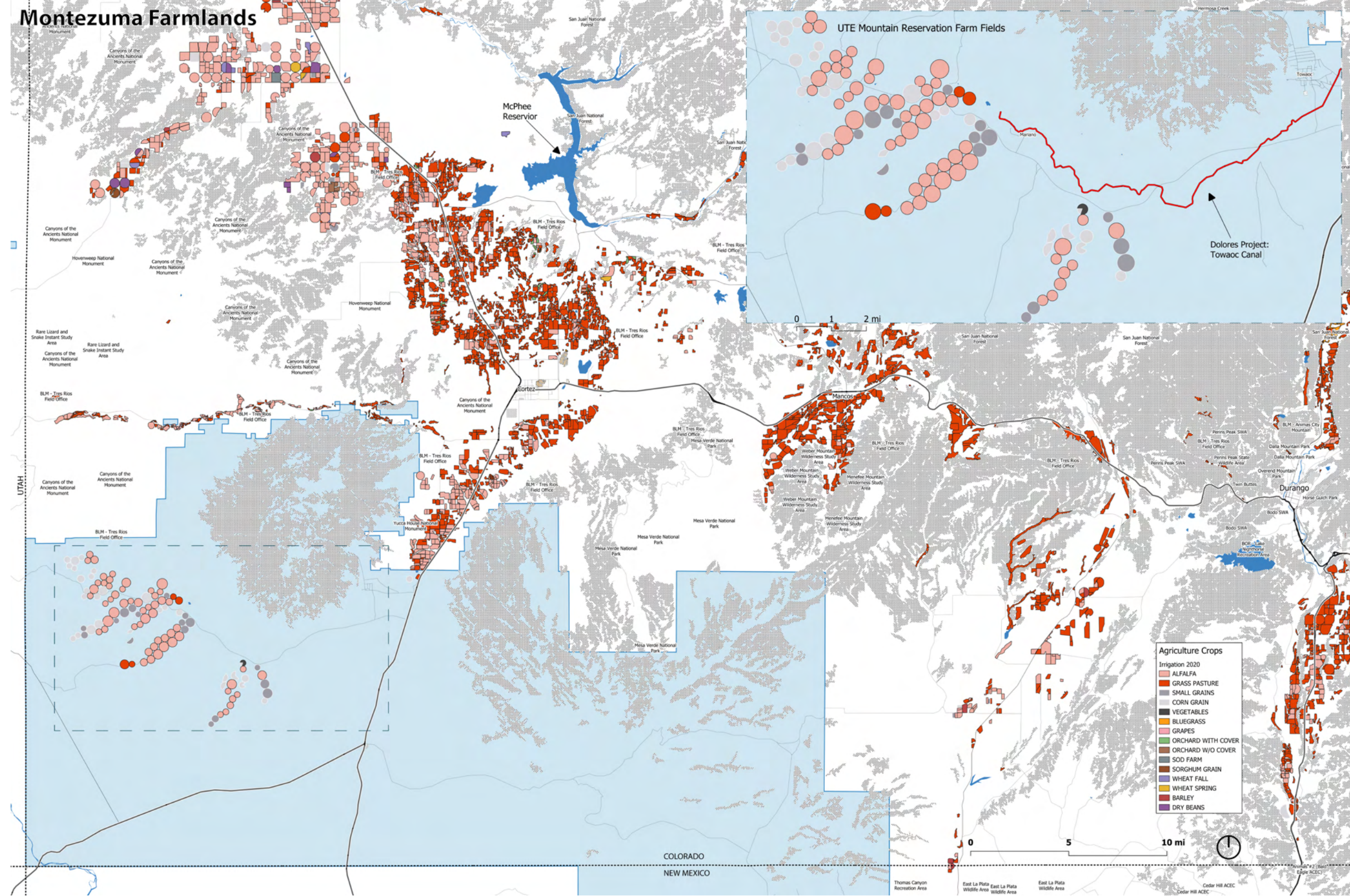
Length x Width x Average Depth = 1 Acre-Feet
43,560 cubic feet = 325,851 gallons

Uneven Infrastructure

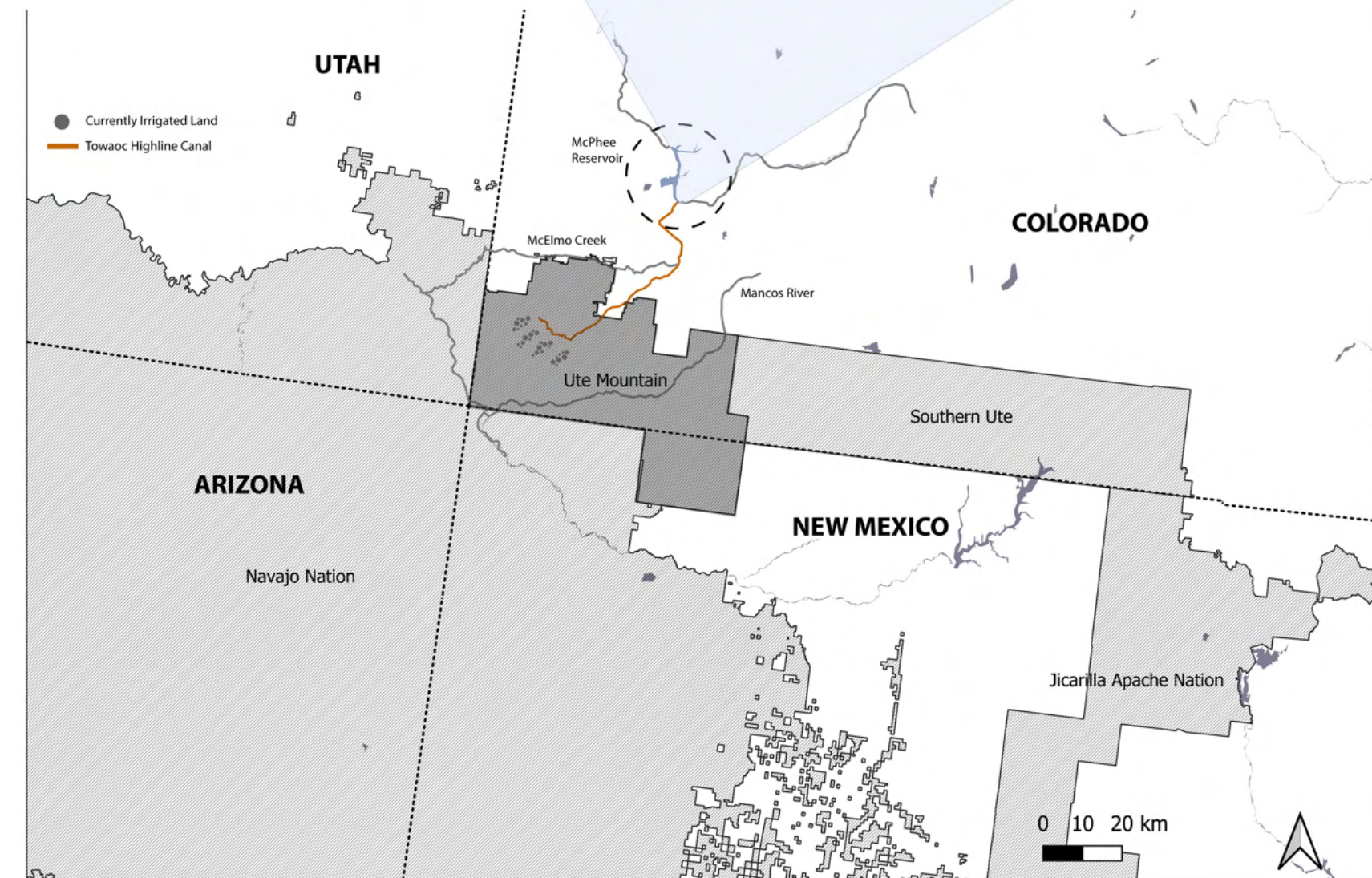
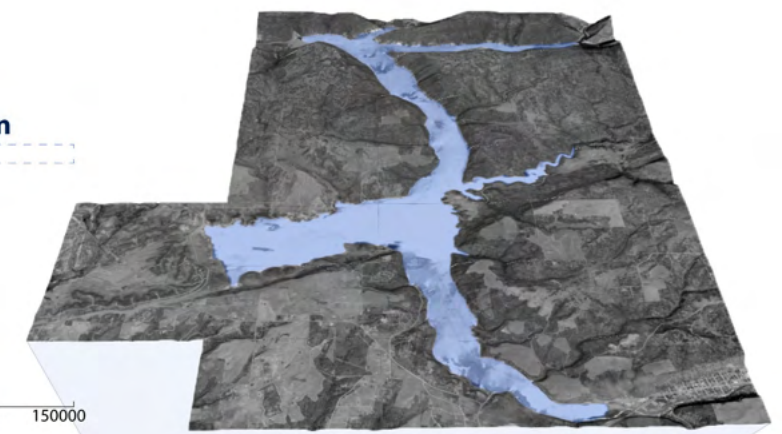
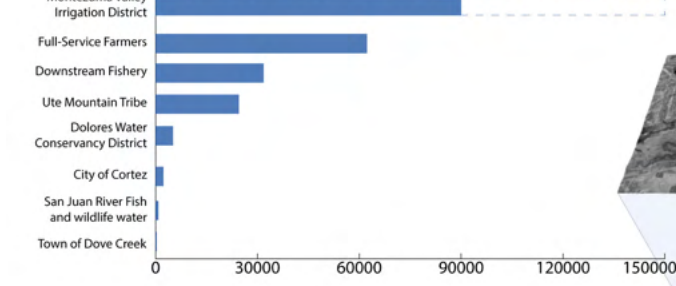


While the compact was signed in 1922, it was not ratified by all the states until 1944, due to ongoing disputes about water allocations, particularly involving Arizona. The compact also did not account for the rights of numerous Native American tribes in the river basin, leading to continued legal and political challenges.

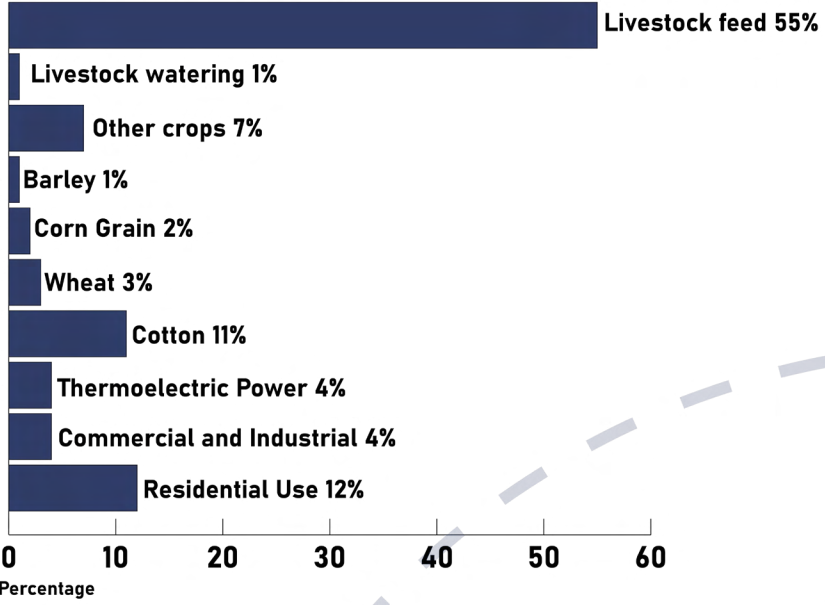
Federal Water Rights



McPhee Reservoir Water Allocation

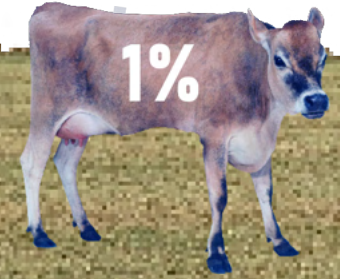


1.9 Trillion Gallons Annually.



ACTUAL AND VIRTUAL WATER TRANSFER

79% of Water Use: Agriculture



1%



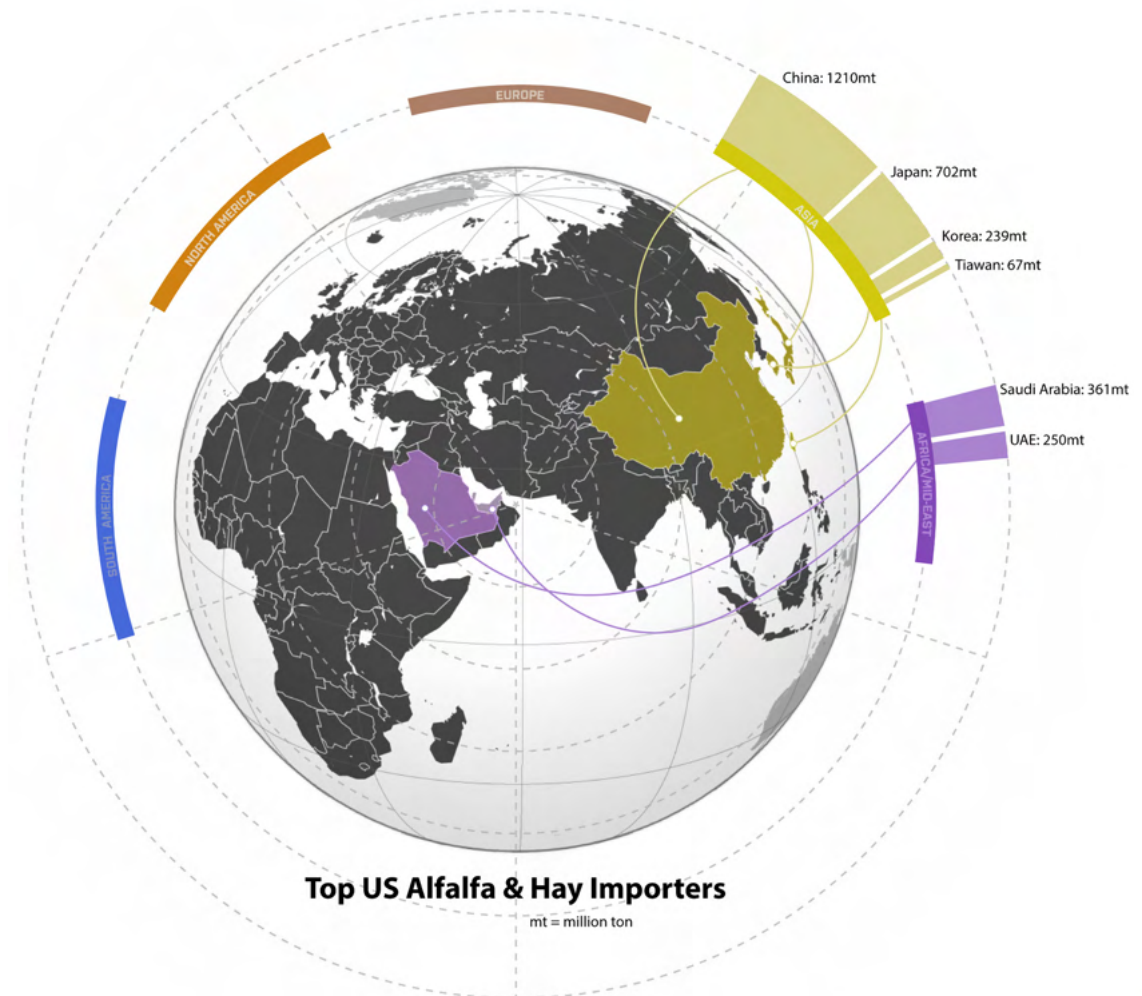
55% of Water Use

livestock feed



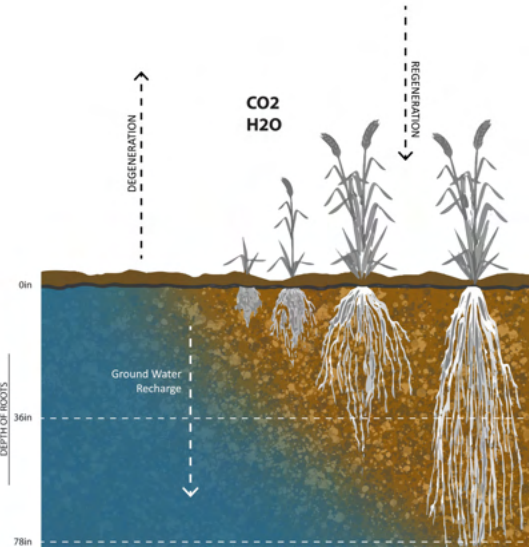
24% of Water Use
crops

12% exported

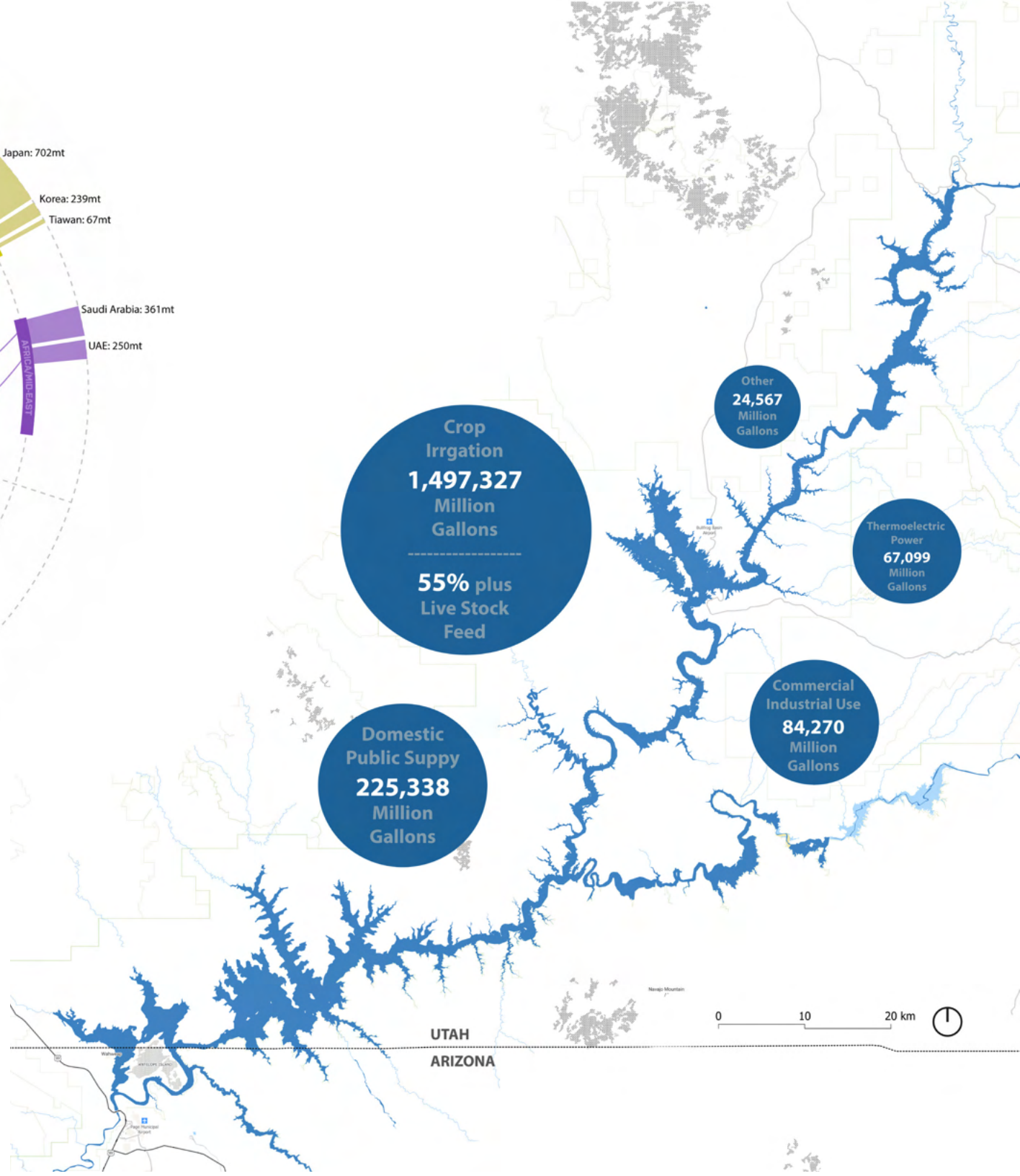


Top US Alfalfa & Hay Importers

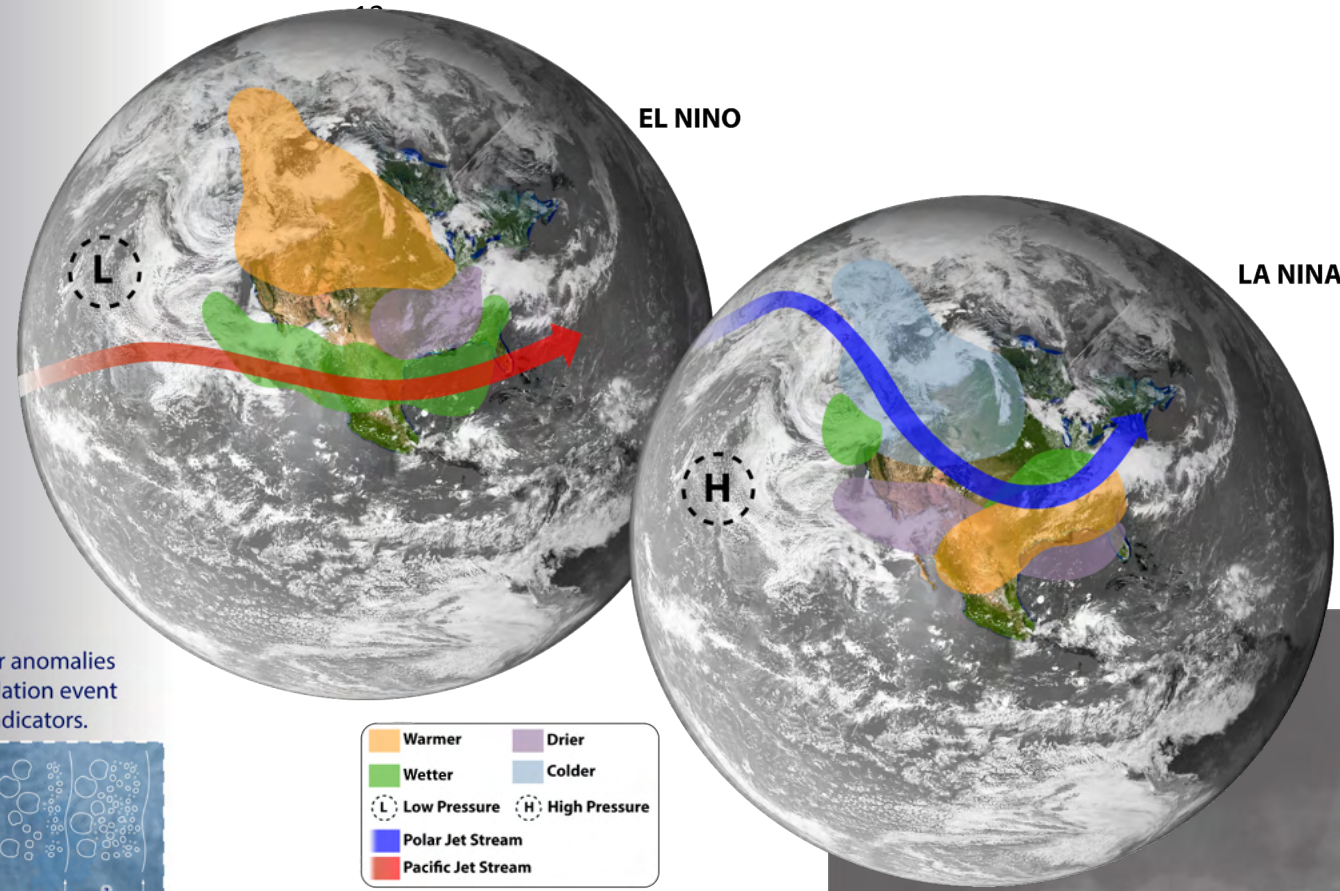
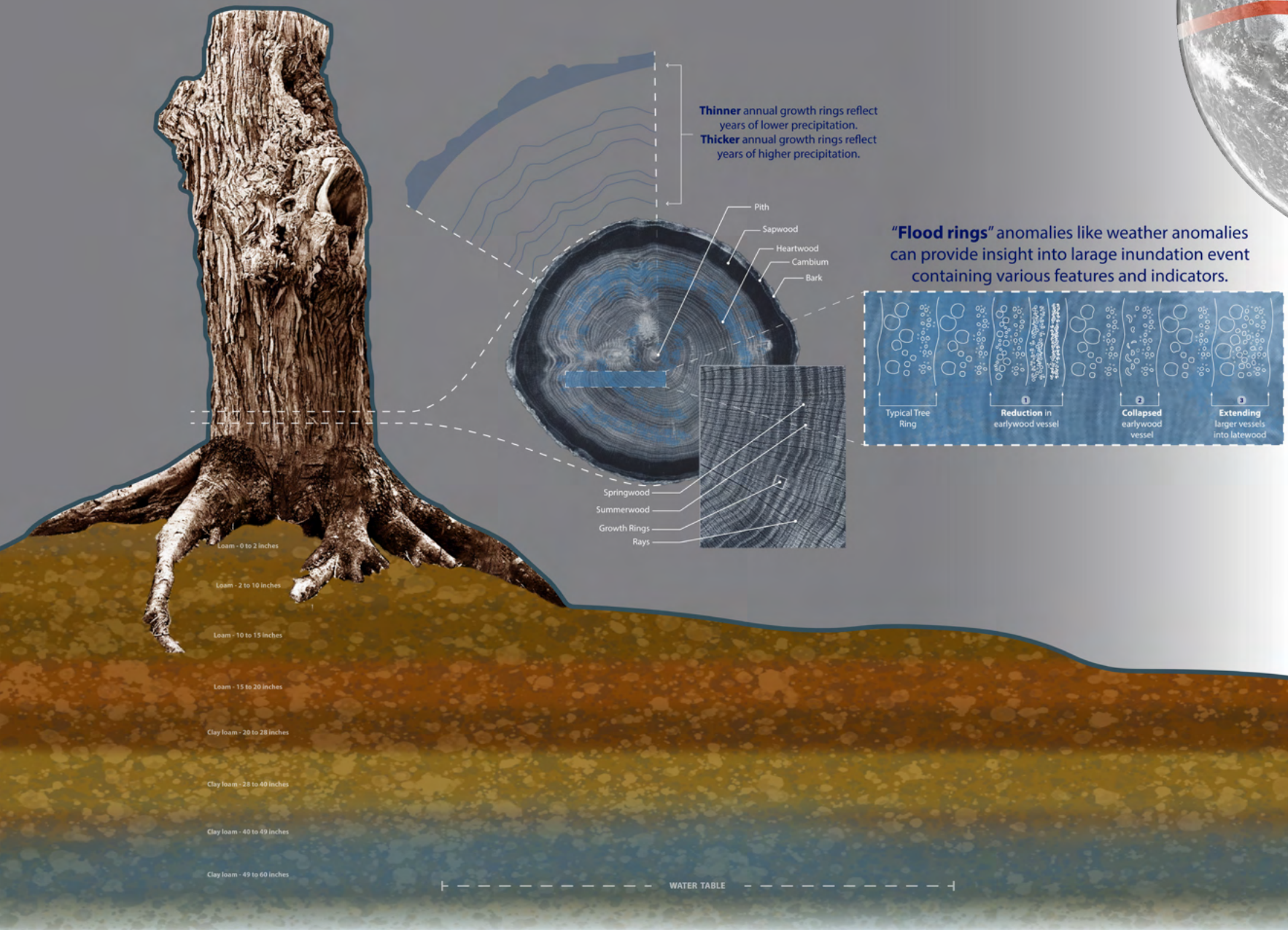
mt = million ton



Agriculture – mainly alfalfa – consumes 80% of the Colorado River's dwindling water supply.

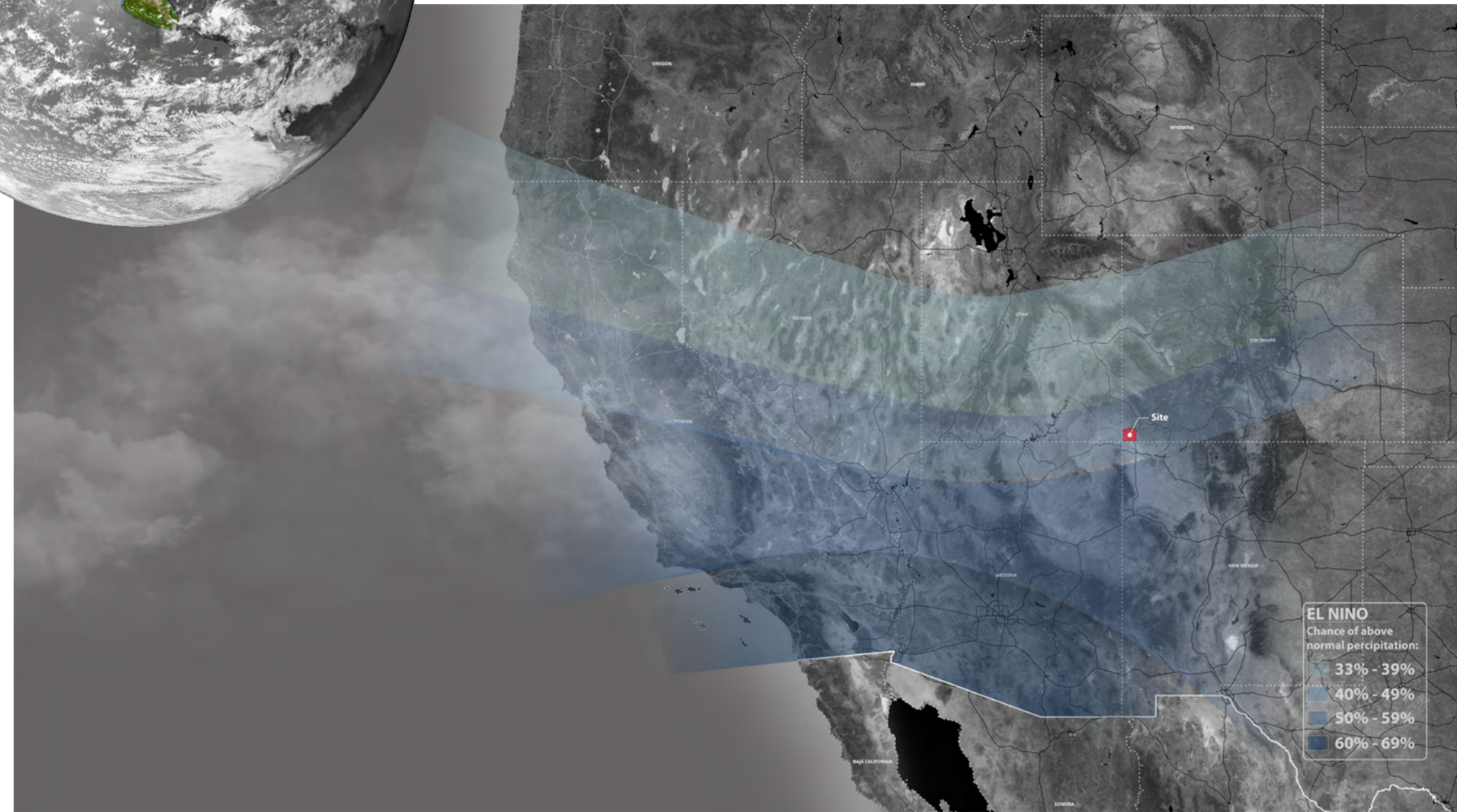


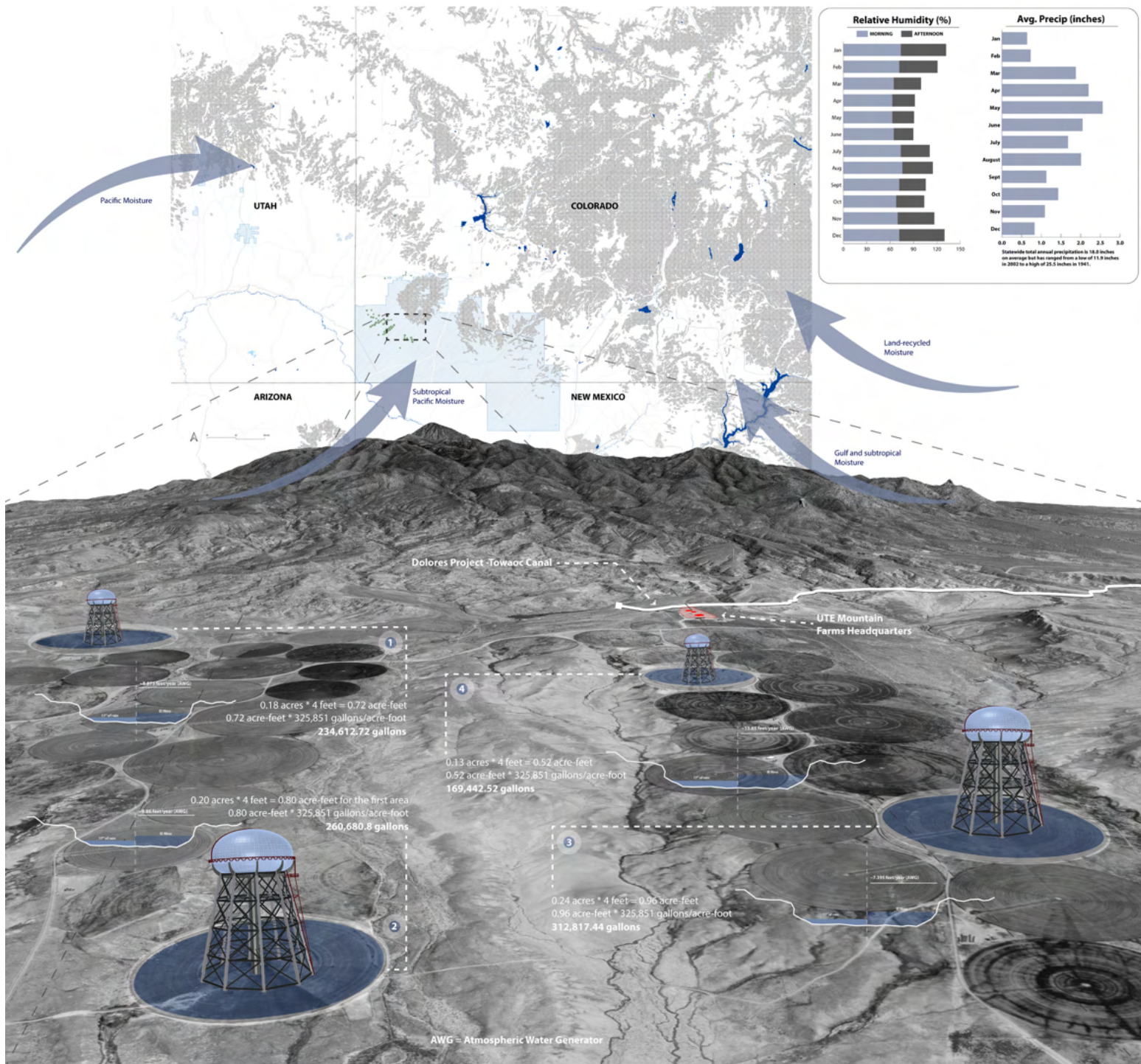
DENDROHYDROLOGY STREAM FLOW RECONSTRUCTION



El Niño and La Niña, components of the El Niño-Southern Oscillation (ENSO) climate phenomenon, significantly affect global weather patterns, presenting unique opportunities for harvesting atmospheric water. During El Niño events, warmer ocean temperatures in the Pacific can increase evaporation, leading to higher humidity and more frequent rainfall in certain regions. This excess moisture in the air can be captured using technologies like atmospheric water generators, which condense humidity back into water. Conversely, La Niña typically cools ocean temperatures and shifts rainfall patterns, which can also be anticipated and strategically utilized for water capture, especially in areas that experience increased rainfall. Both phenomena highlight the importance of understanding and adapting to climatic cycles to enhance water sustainability, particularly in water-scarce regions.

Indigenous peoples have long held deep connections with nature, often incorporating a holistic approach to environmental stewardship in their practices. Their understanding and usage of water, in particular, were deeply integrated with their knowledge of trees and the surrounding ecosystems. Later, this knowledge would be recognized through science.

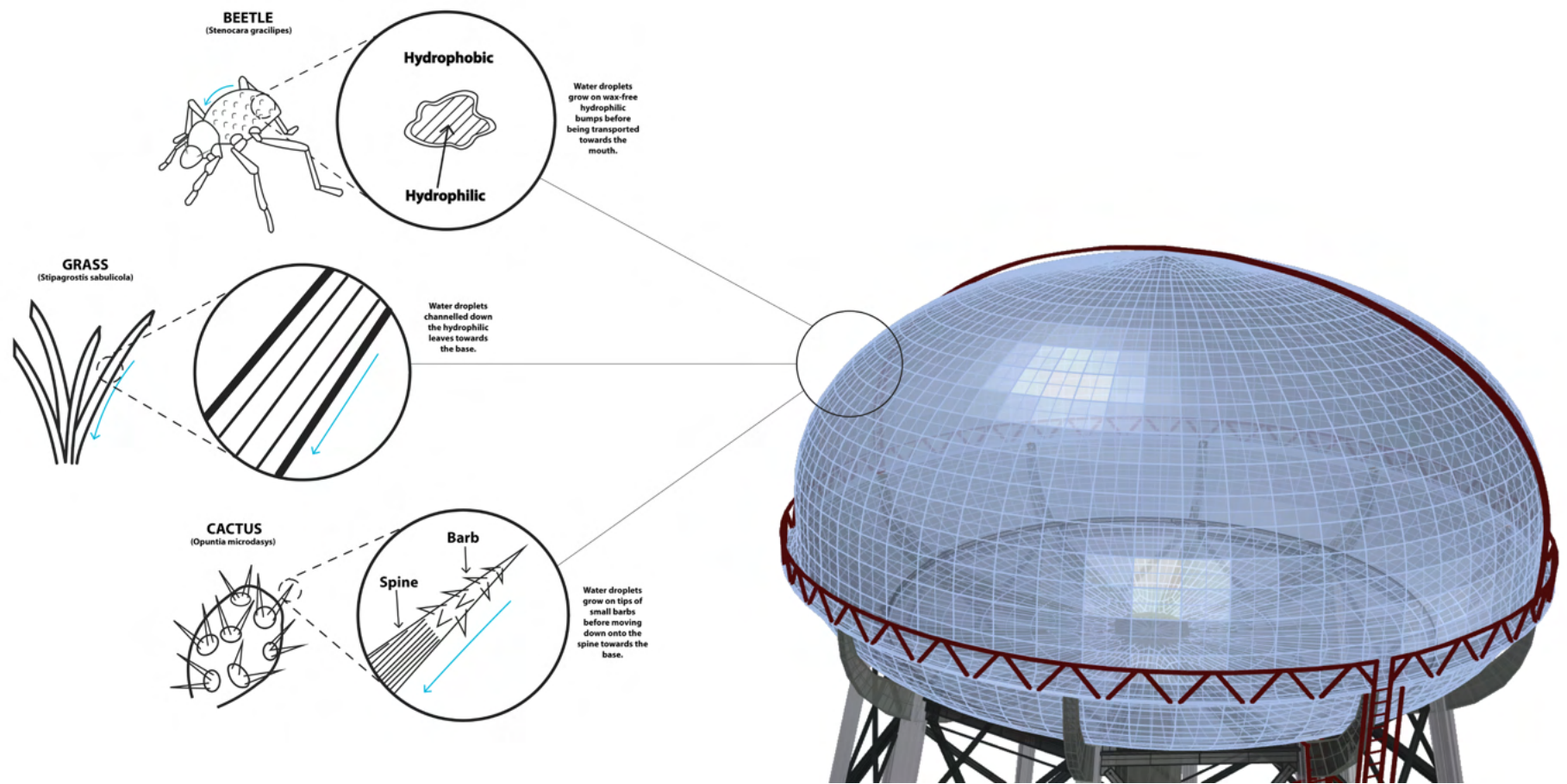




Biophilic designs can create buildings that not only reduce their impact on the local environment but also actively contribute to water sustainability by harvesting atmospheric moisture, mimicking the resilience and efficiency seen in nature.

The **Namib Desert beetle** has an ingenious method of collecting water; it captures fog from the air using its bumpy back surface, where the bumps attract water droplets which then roll down into its mouth due to a gradient between hydrophilic (water-attracting) peaks and hydrophobic (water-repelling) valleys. Structures could incorporate roofing or surface materials designed similarly to capture and funnel dew or fog directly to water storage systems, maximizing atmospheric water collection especially in arid environments.

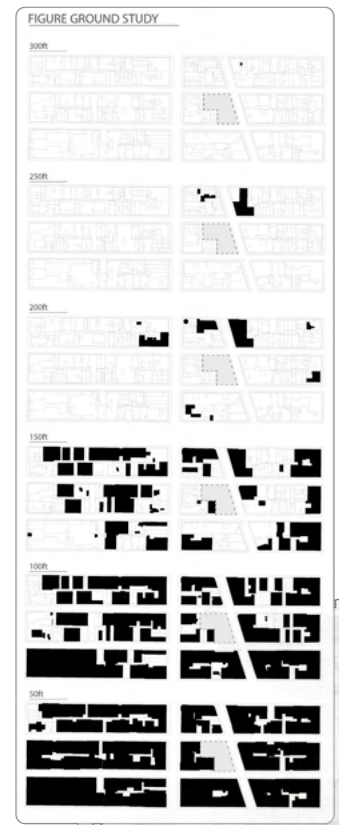
Designing with Nature



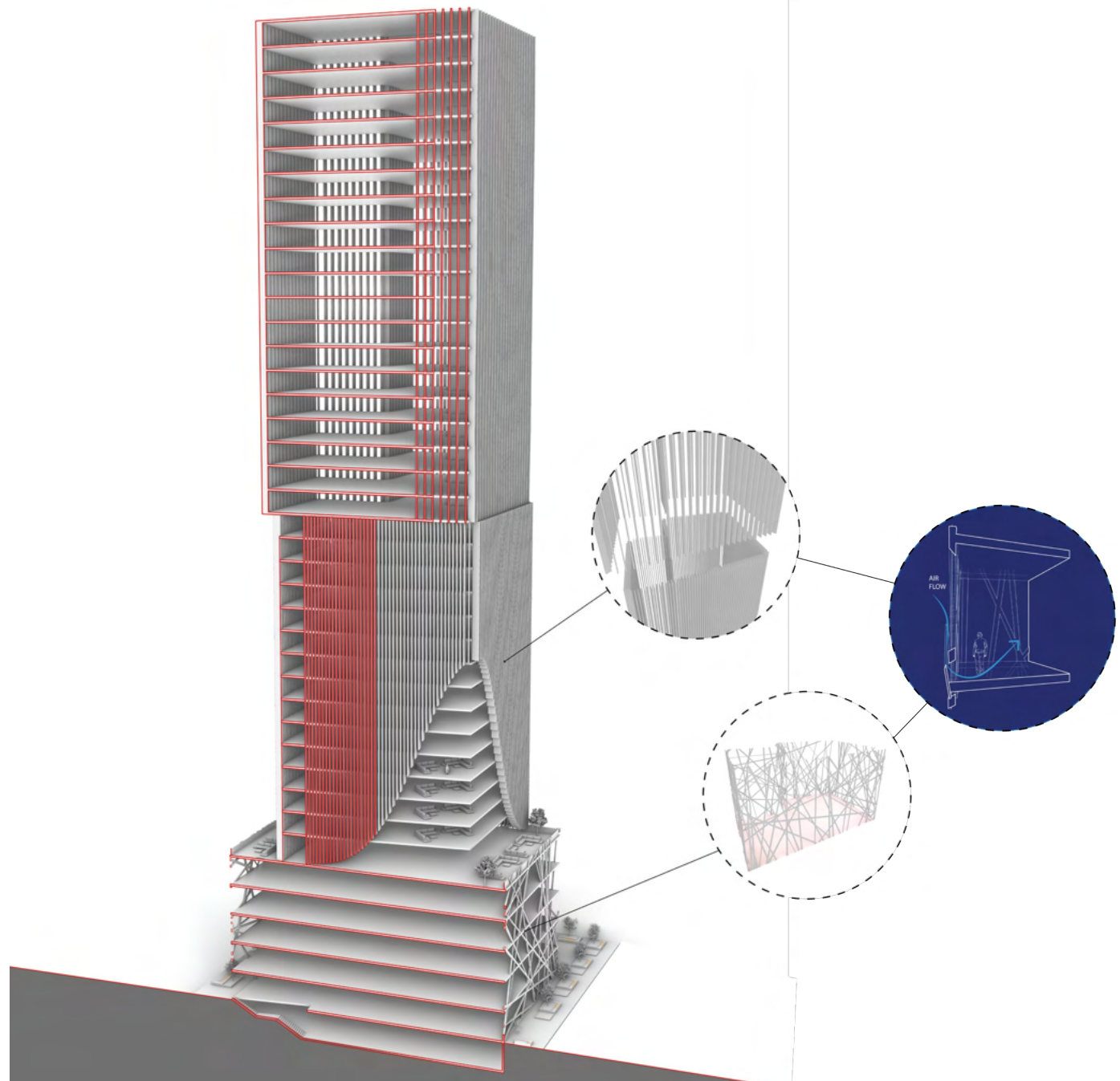
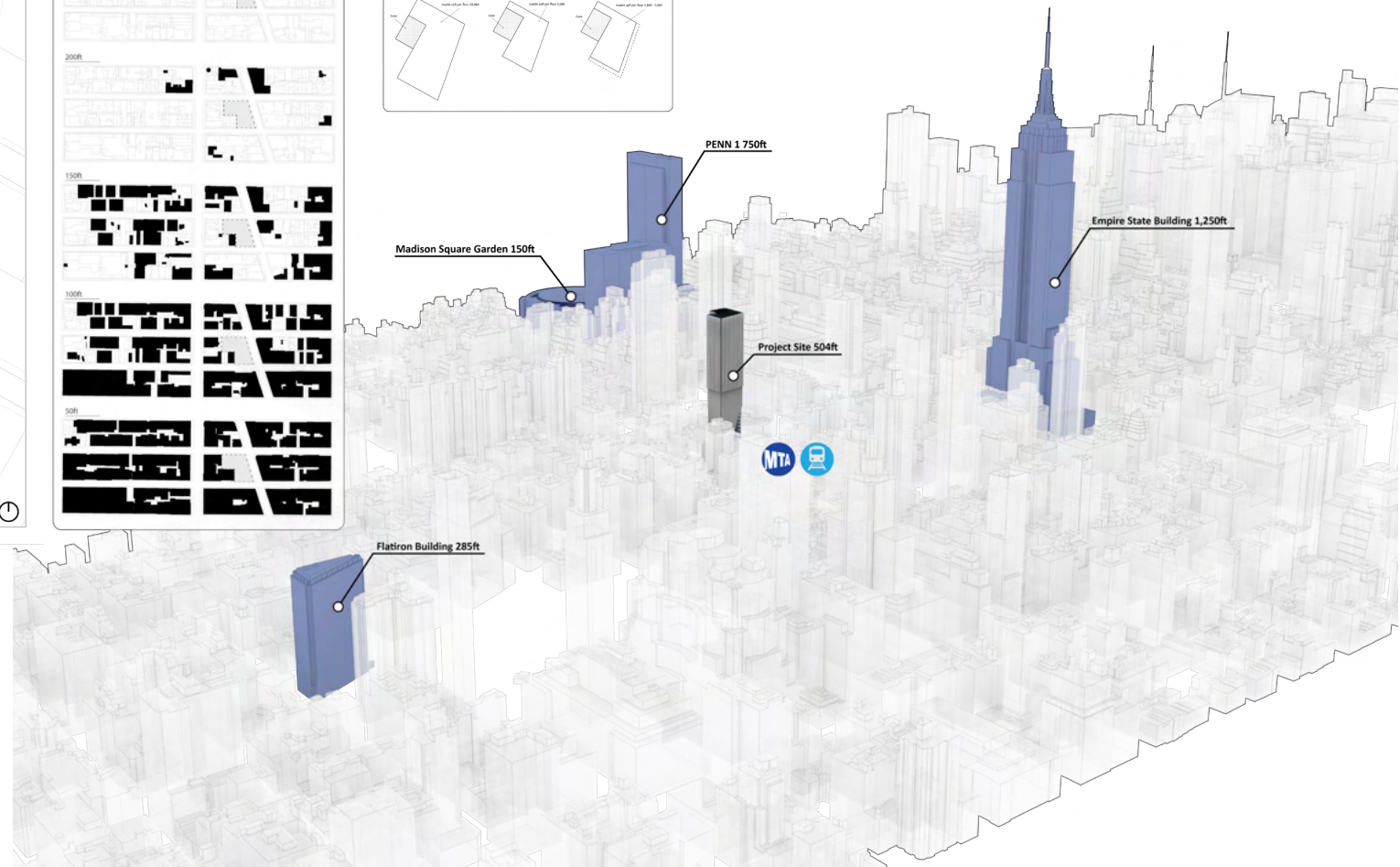
Cactus are masters of water conservation, utilizing their surface structures to reduce water loss and collect moisture. Their spines help to catch fog or dew, which then drips down into the soil around them, effectively capturing atmospheric moisture. Buildings that mimic this structure could use exterior surfaces or "skins" that have spine-like features to gather water from the air, funneling it into storage tanks for use in irrigation and other purposes.

Grass species utilize deep root systems to access underground water, and their narrow, vertical leaves minimize water loss while maximizing dew collection along the blade surfaces. Architectural designs could take inspiration from grass by developing deep, water-permeable foundation systems that enhance groundwater recharge and manage stormwater runoff. Roofs and walls could also be designed to maximize surface area for dew collection and direct water flow towards storage or filtration systems.

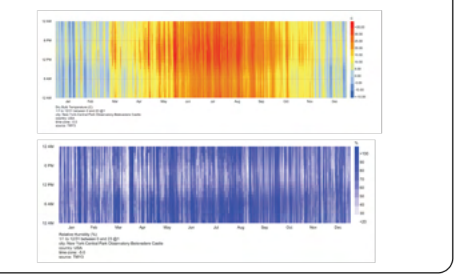
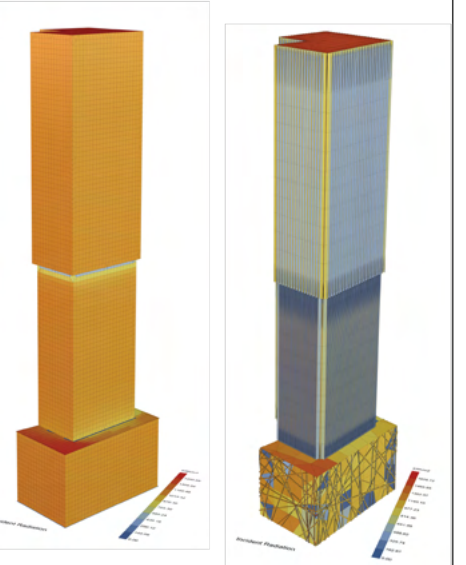
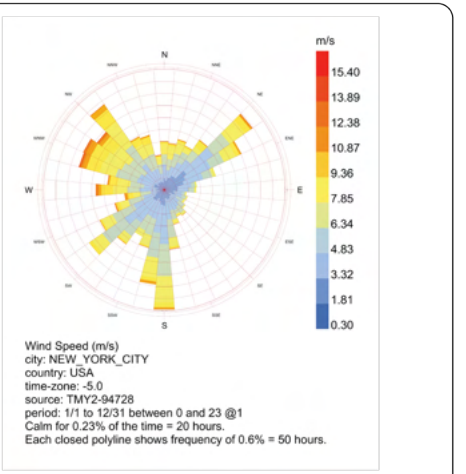
Heliotropic Skin

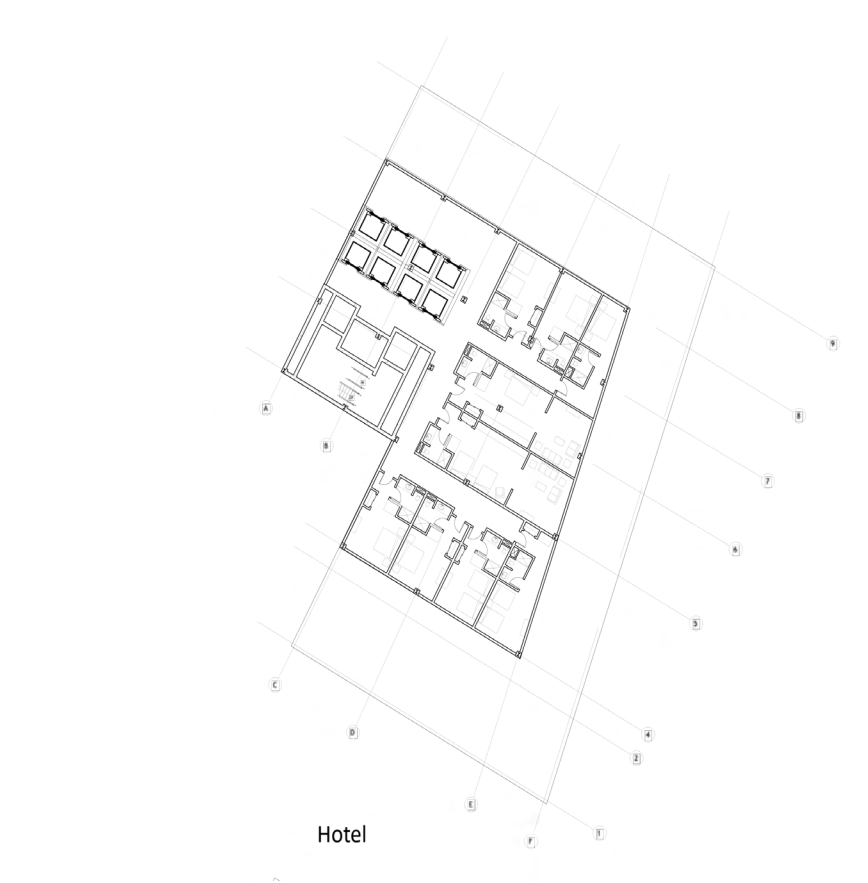
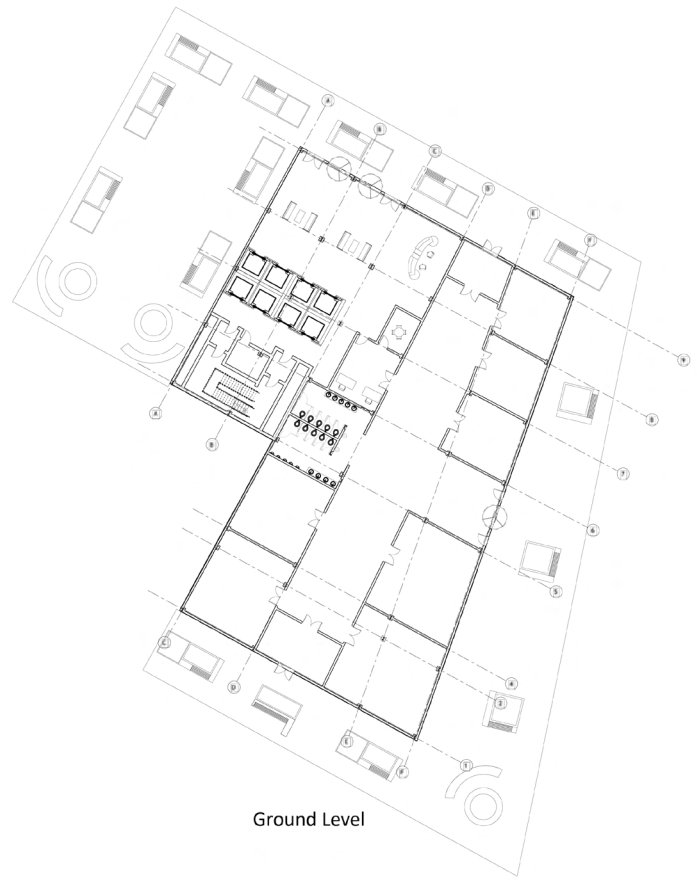
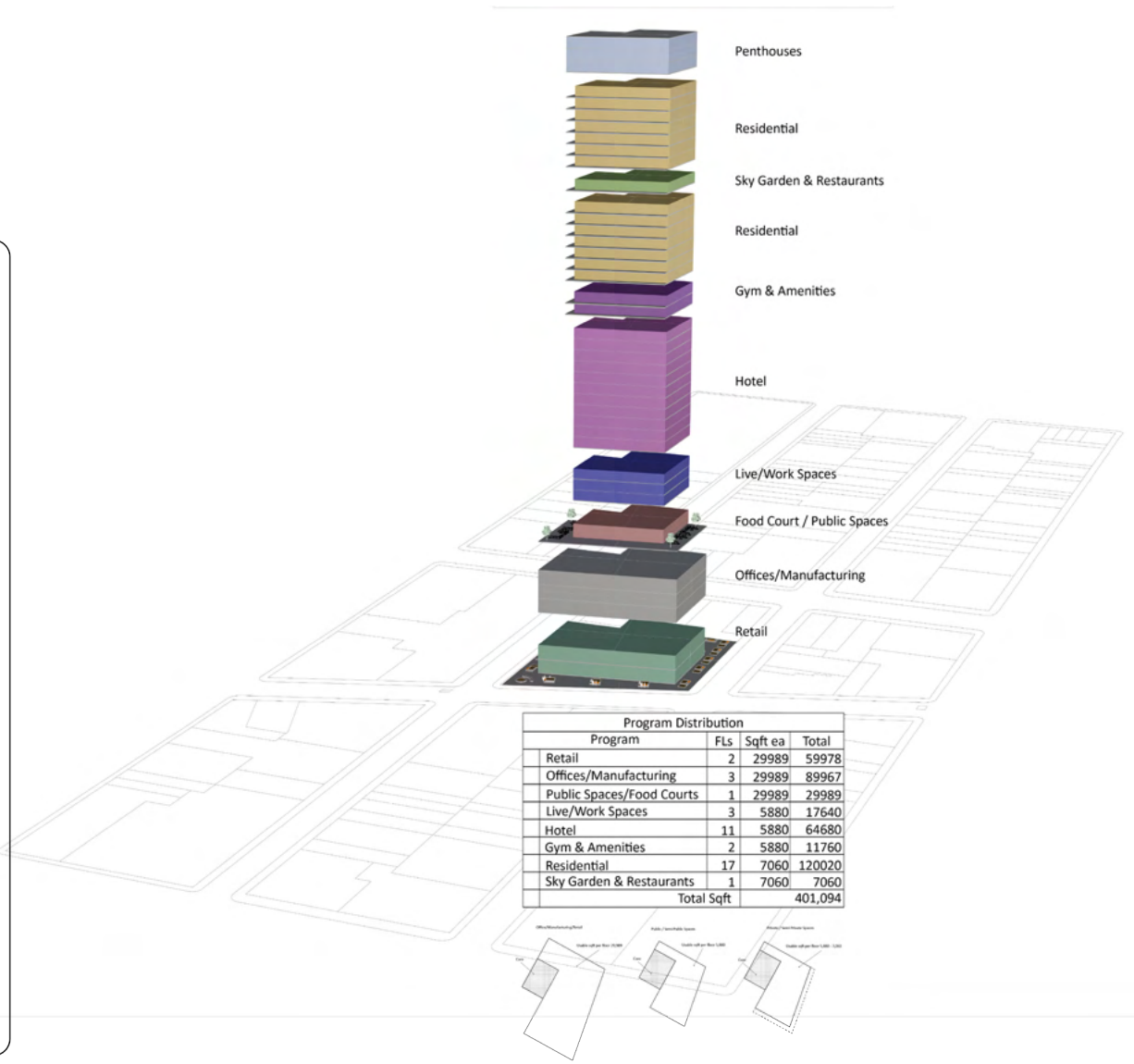
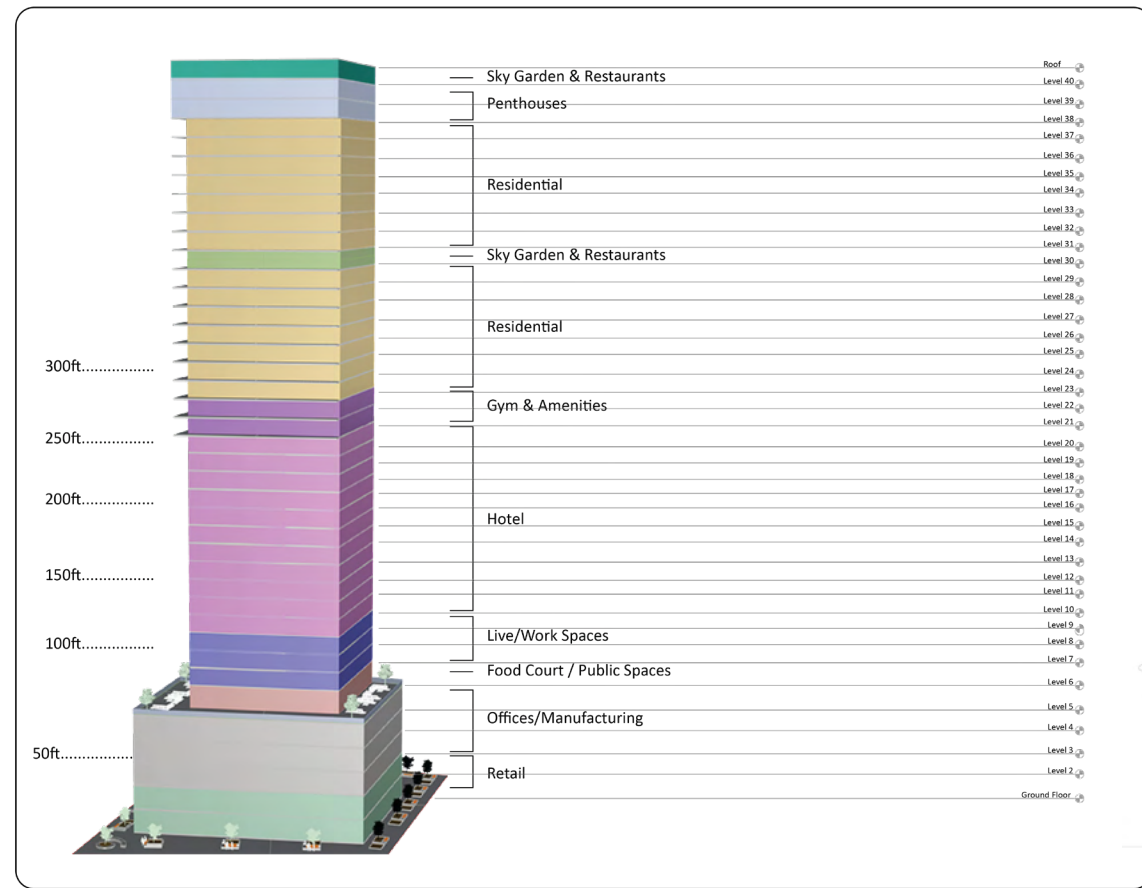


Program Distribution			
Program	Fls	Sqft ea	Total
Retail	2	29989	59978
Offices/Manufacturing	3	29989	89967
Public Spaces/Food Courts	1	29989	29989
Live/Work Spaces	3	5880	17640
Hotel	11	5880	64680
Gym & Amenities	2	5880	11760
Residential	17	7060	120020
Sky Garden & Restaurants	1	7060	7060
Total Sqft			401,094



Environmental Analysis





Demystifying Food Origins

[Visit Project Site](#)

Correcting Historical Misconceptions: Colonial narratives often distort the origins and significance of certain foods by erasing or downplaying the contributions of indigenous and local communities. By challenging these narratives, we can restore the rightful recognition of these communities as original cultivators and innovators, which is essential for historical accuracy and honoring cultural heritage.

Enhancing Nutrition and Food Security: Understanding the diverse origins of food can also diversify diets, improving nutrition. Many traditional foods that have been overshadowed by global staples might offer better nutritional benefits and adaptability to local environments, contributing to food security.

```
<!-- Navigation Menu --> <nav id="main-menu"> <ul><li class="home"><a href="index.html">HOME</a></li> <li class="red"><a href="red.html">RED</a></li> <li class="orange"><a href="orange.html">ORANGE</a></li> <li class="blue-purple"><a href="blue-purple.html">BLUE AND PURPLE</a></li> <li class="green"><a href="green.html">GREEN</a></li> <li class="white"><a href="white.html">WHITE</a></li> <li class="yellow"><a href="yellow.html">YELLOW</a></li> </ul> </nav>
```

```
HOME RED ORANGE BLUE AND PURPLE GREEN WHITE YELLOW
```

ACCESS

```
flexItems.forEach(function(item) {
  // Assign a random size class to each item
  var randomSize = sizeClasses[Math.floor(Math.random() * sizeClasses.length)];
  item.classList.add(randomSize);
});
```

```
#main-menu {
  position: fixed;
  top: 0;
  left: 0;
  width: 100%;
  z-index: 1000;
  background-color: #333;
}
```

```
// Randomize order of items on main page
document.addEventListener("DOMContentLoaded", function() {
  shuffleItems();
});
```

```
#banner img {
  max-width: 100%;
  height: auto;
  display: block; /* Removes extra space below the image */
  margin: 0 auto; /* Centers the image if it's not as wide as the container */
}
```

RESTORATIVE KNOWLEDGE

AGENCY

DECOLONIALIZE ORIGINS

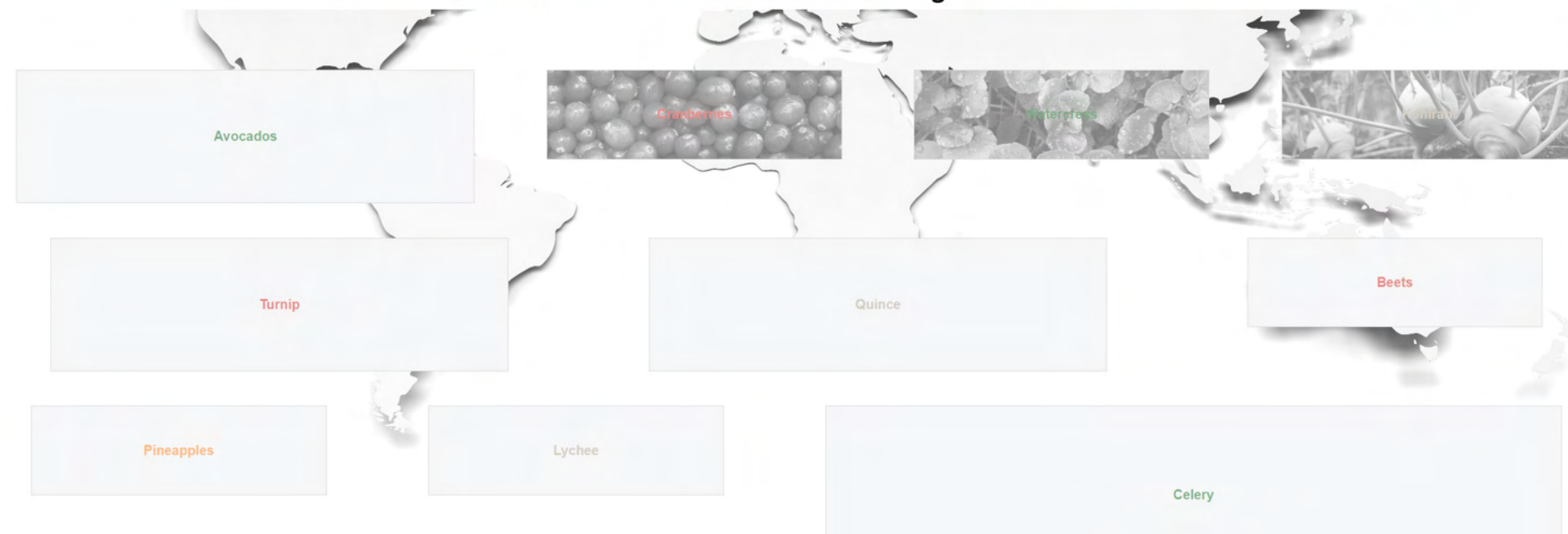
```
function shuffleItems() {
  var container = document.getElementById("flex-container");
  var items = Array.from(container.children);
  for (var i = items.length - 1; i > 0; i--) {
    var j = Math.floor(Math.random() * (i + 1));
    var temp = items[i];
    items[i] = items[j];
    items[j] = temp;
  }
  // Reappend items in random order
  container.innerHTML = "";
}
```

```
<head>
<title>Demystifying Food Origins</title>
<link rel="stylesheet" type="text/css"
href="style1.css">
</head>
```

Demystifying Food Origins

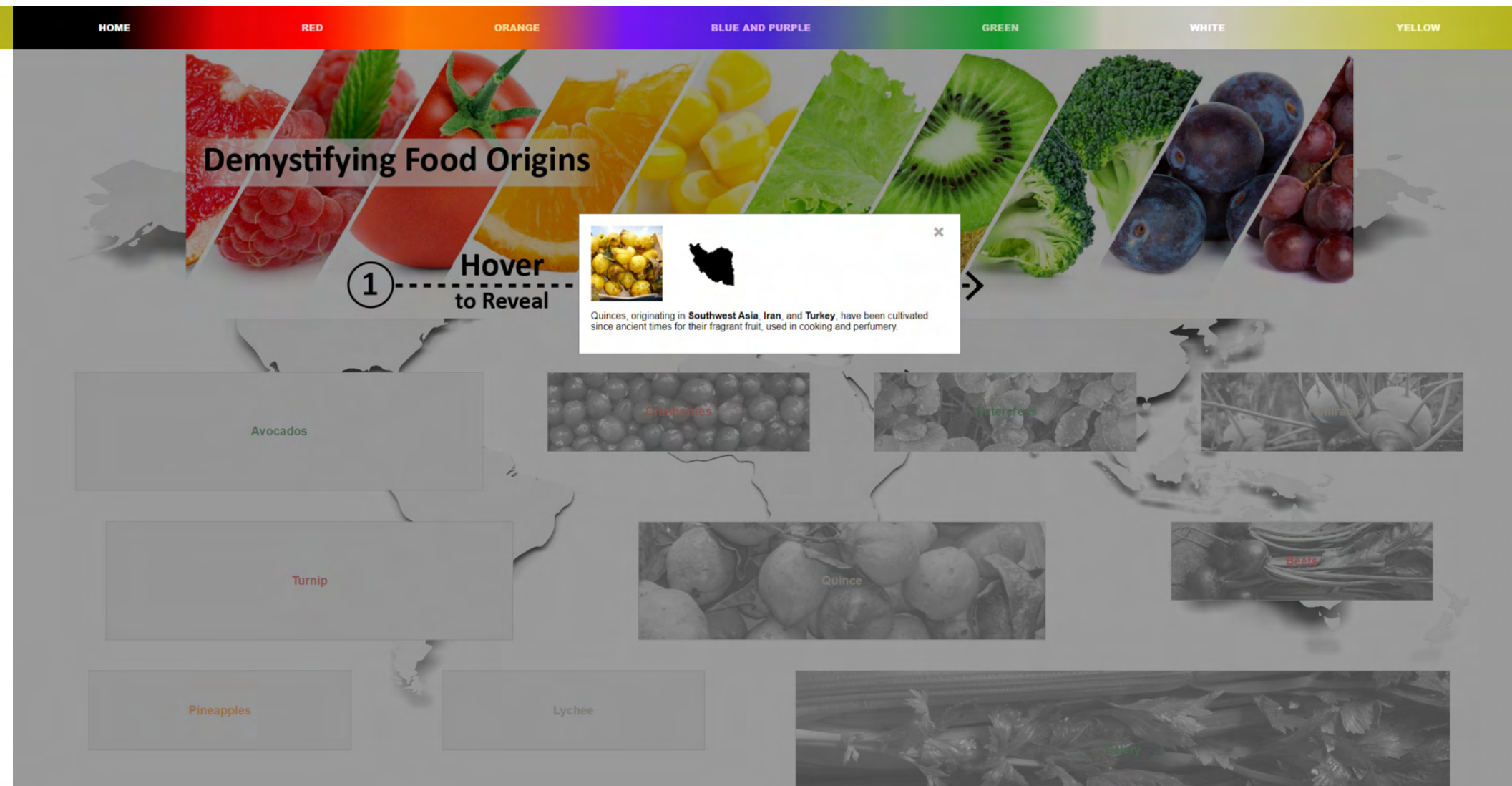
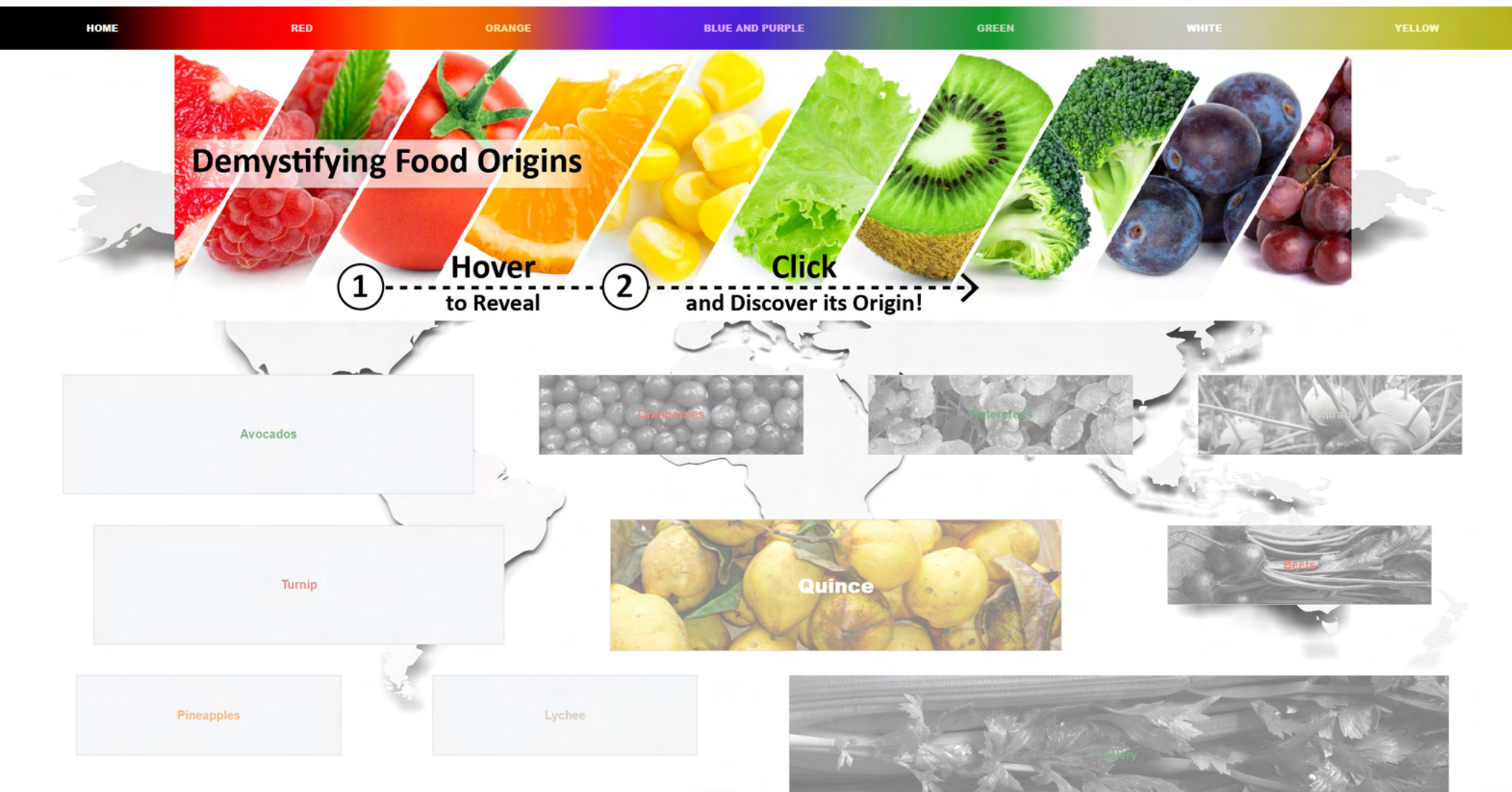


1 Hover to Reveal 2 Click and Discover its Origin!

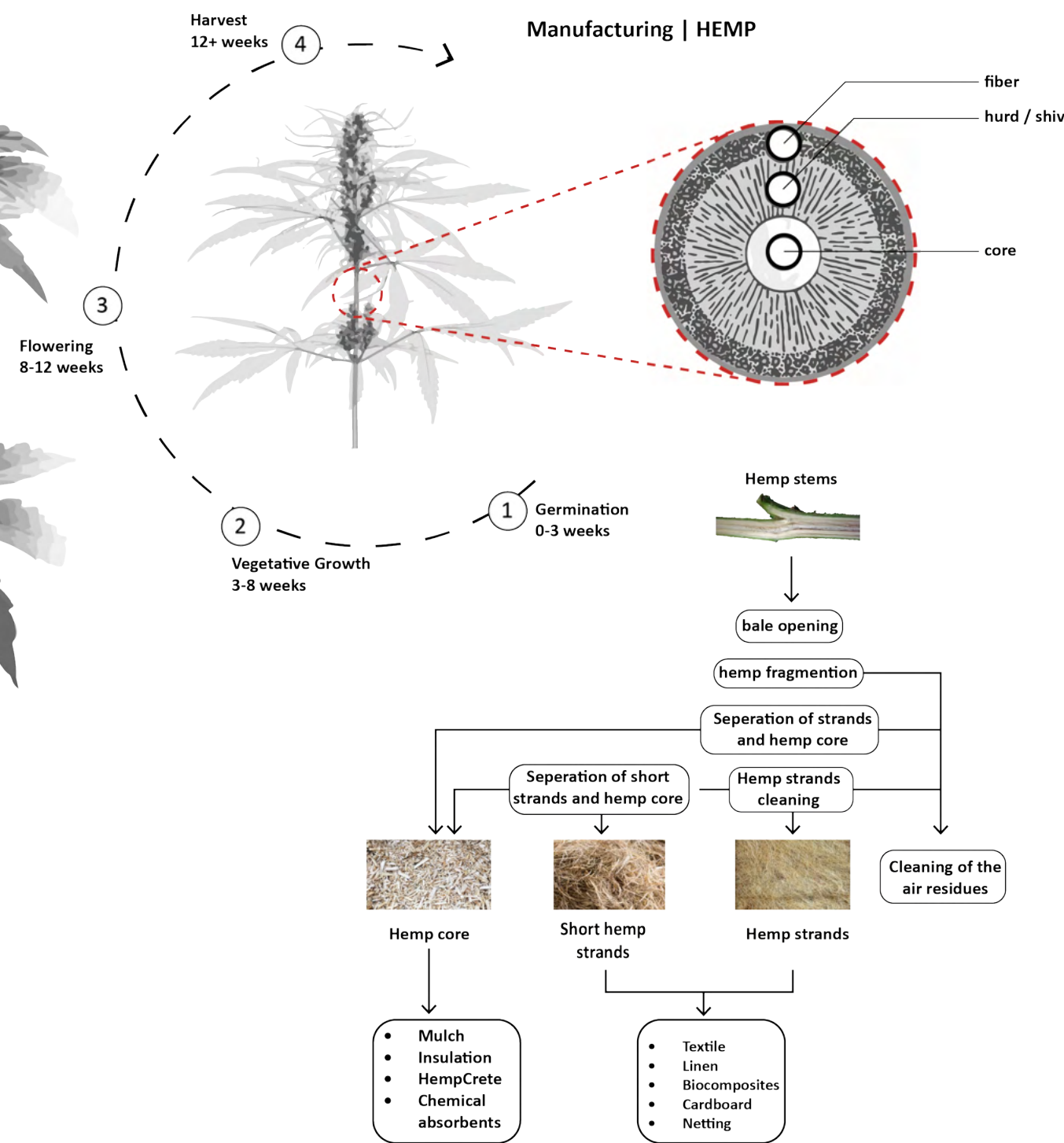
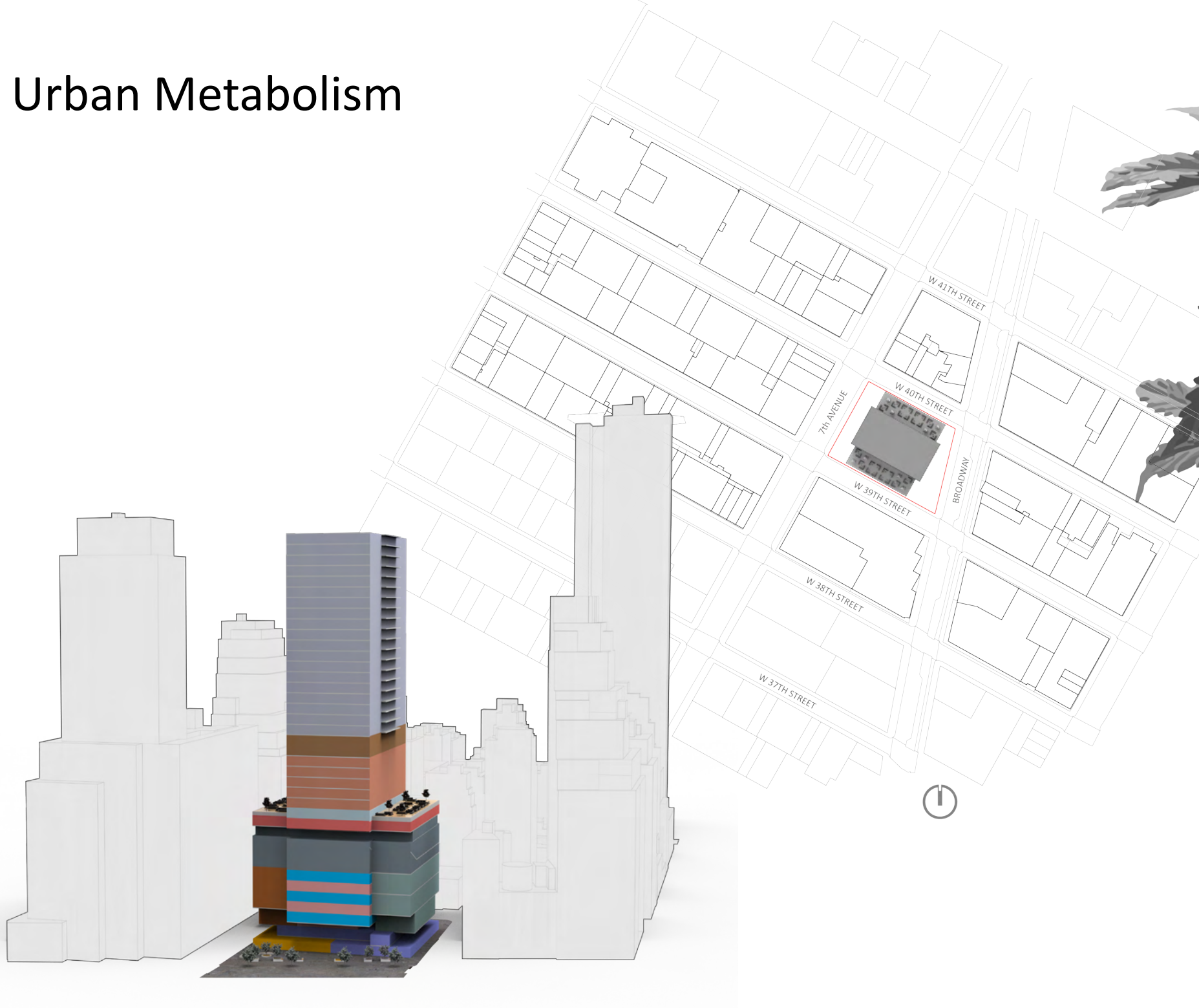


Promoting Cultural Appreciation and Diversity: Understanding the true origins of foods encourages a deeper appreciation of the cultures from which these foods originate. This can lead to greater respect and interest in preserving these cultures, along with their culinary traditions and practices, which are often intertwined with language, rituals, and community life.

Challenging Power Dynamics in Food Production: Colonial narratives often reinforce power imbalances by valuing certain foods and agricultural practices over others. Revisiting these narratives can help challenge these imbalances and promote a more equitable global food system where diverse food practices are respected and valued.

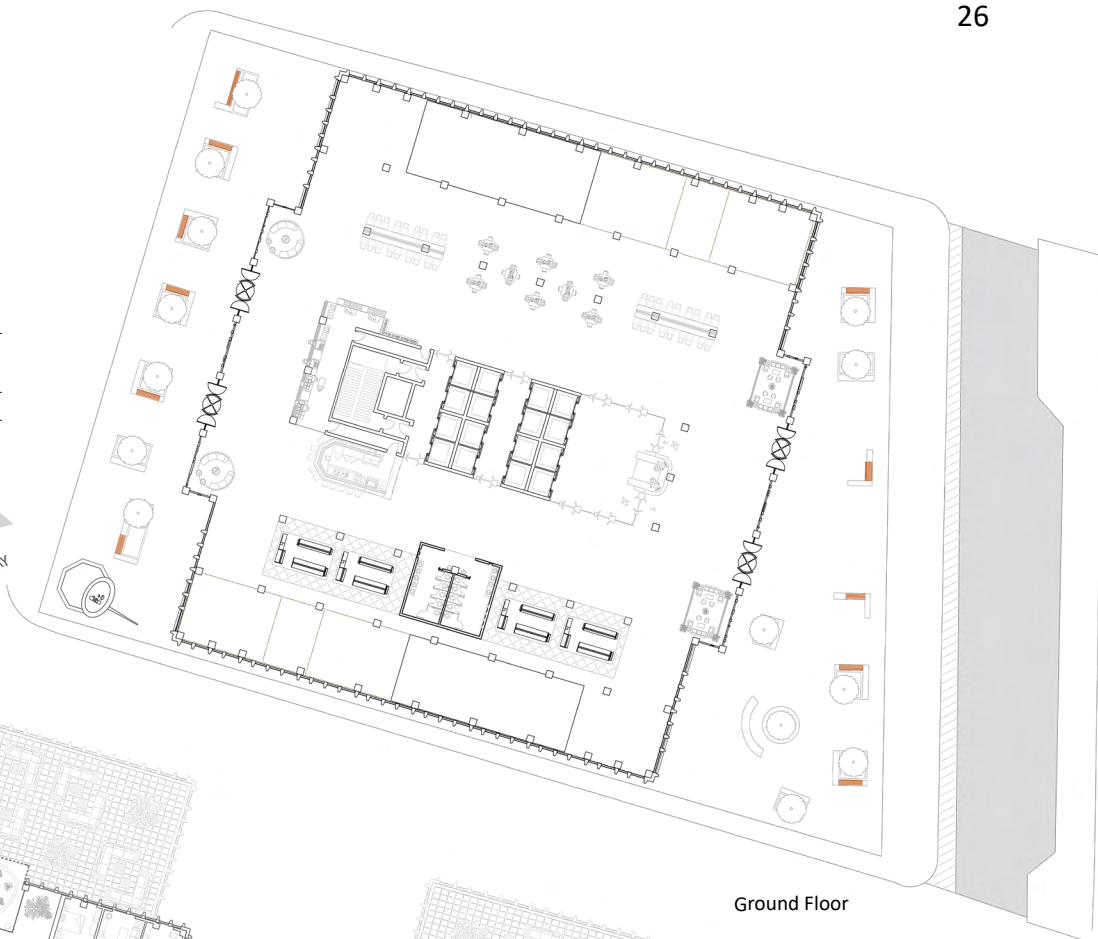
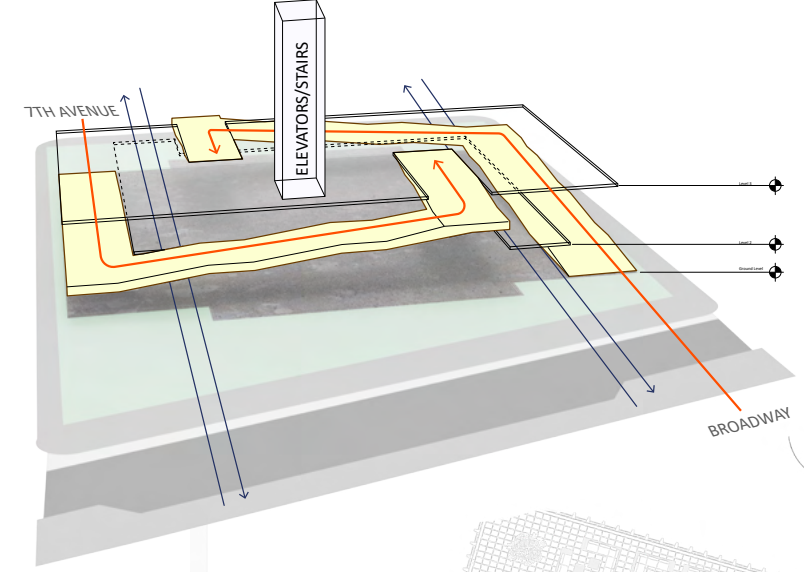


Urban Metabolism

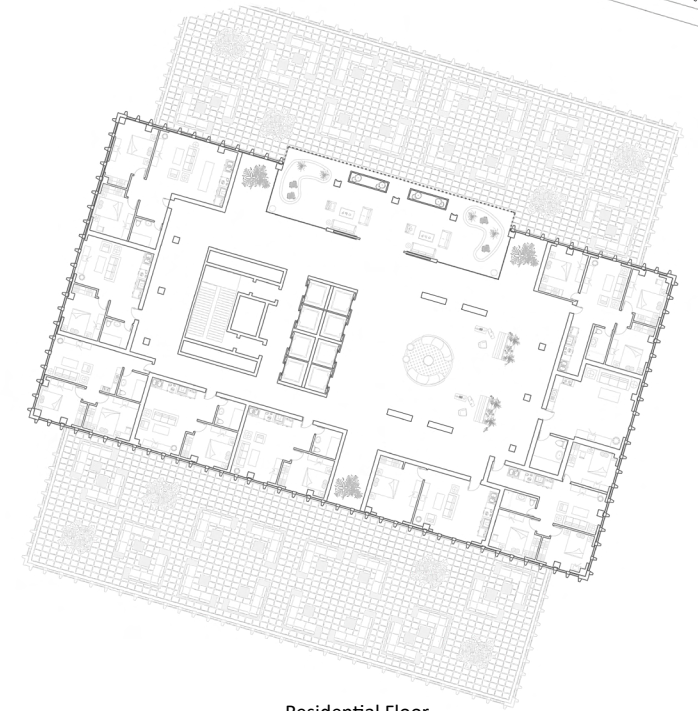


Urban metabolism is a crucial concept for designers to incorporate into architectural practices as it frames cities as living systems that consume resources, process them, and produce waste, much like a biological organism. By understanding and optimizing these flows of energy, water, and materials within urban environments, architects and urban planners can design buildings and infrastructures that minimize resource extraction, reduce carbon emissions, and enhance sustainability. This approach is particularly relevant in light of climate change, as it promotes the development of cities that are not only energy efficient but also resilient to environmental stresses and capable of supporting circular economies. By integrating principles of urban metabolism, architects can contribute to the creation of adaptive, self-sustaining urban spaces that mitigate the impacts of climate change while fostering healthier, more sustainable communities.

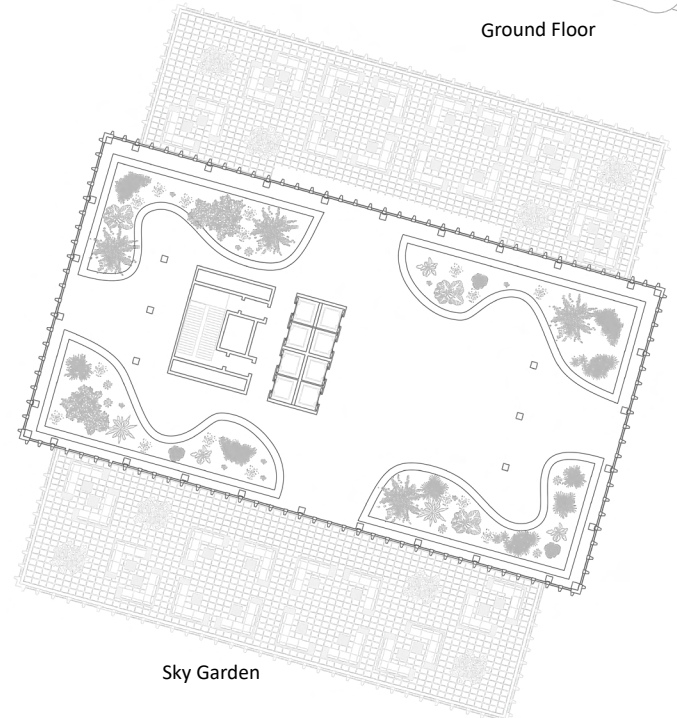
LEGEND:
 Ramp
 Site Grounds
 Sidewalk
 Bike Lane
 Pedestrian Plaza
 Circulation:
 Interior
 Exterior



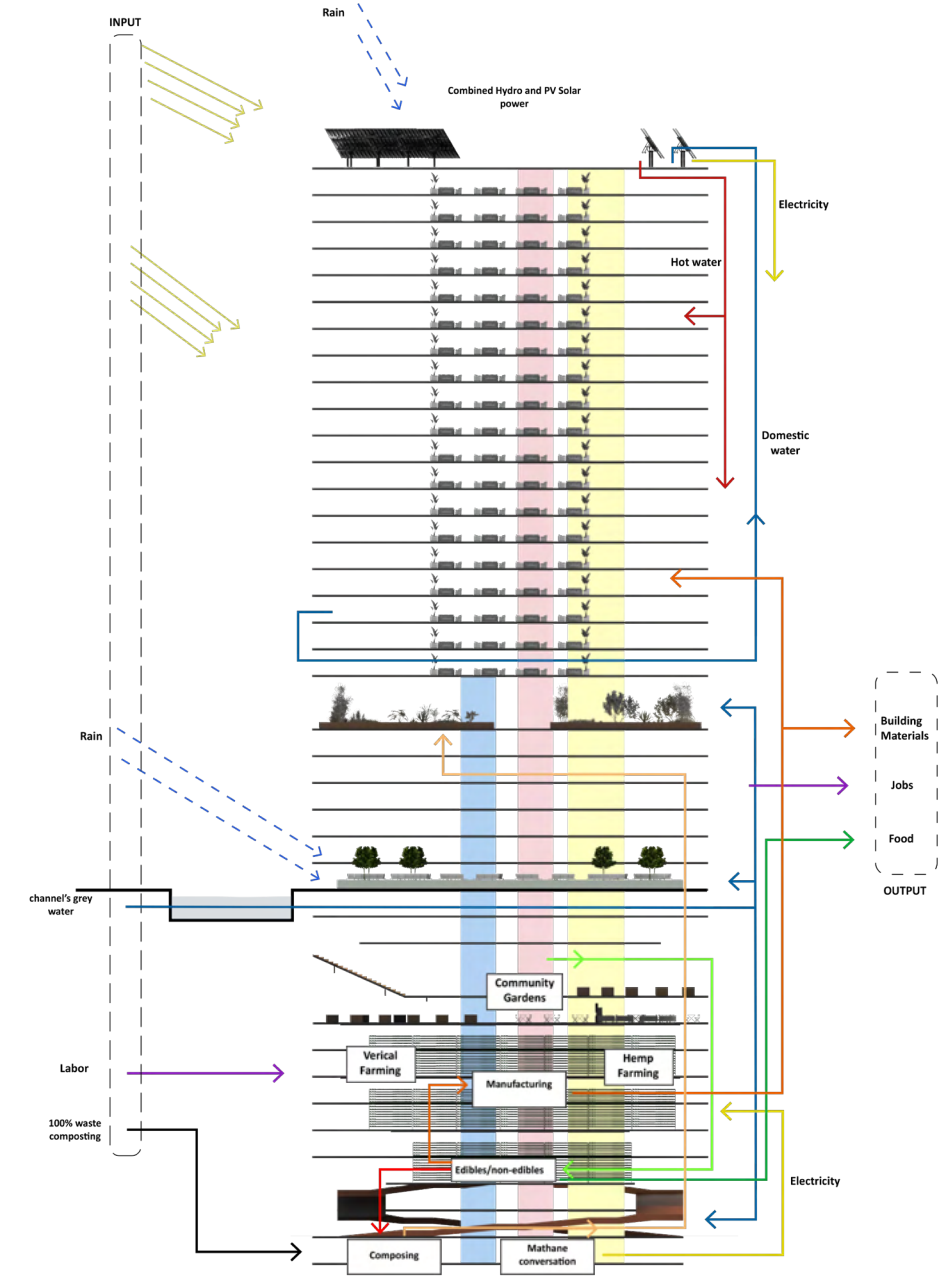
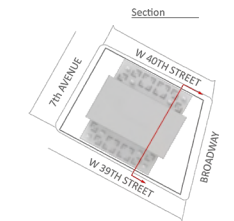
Ground Floor



Residential Floor



Sky Garden



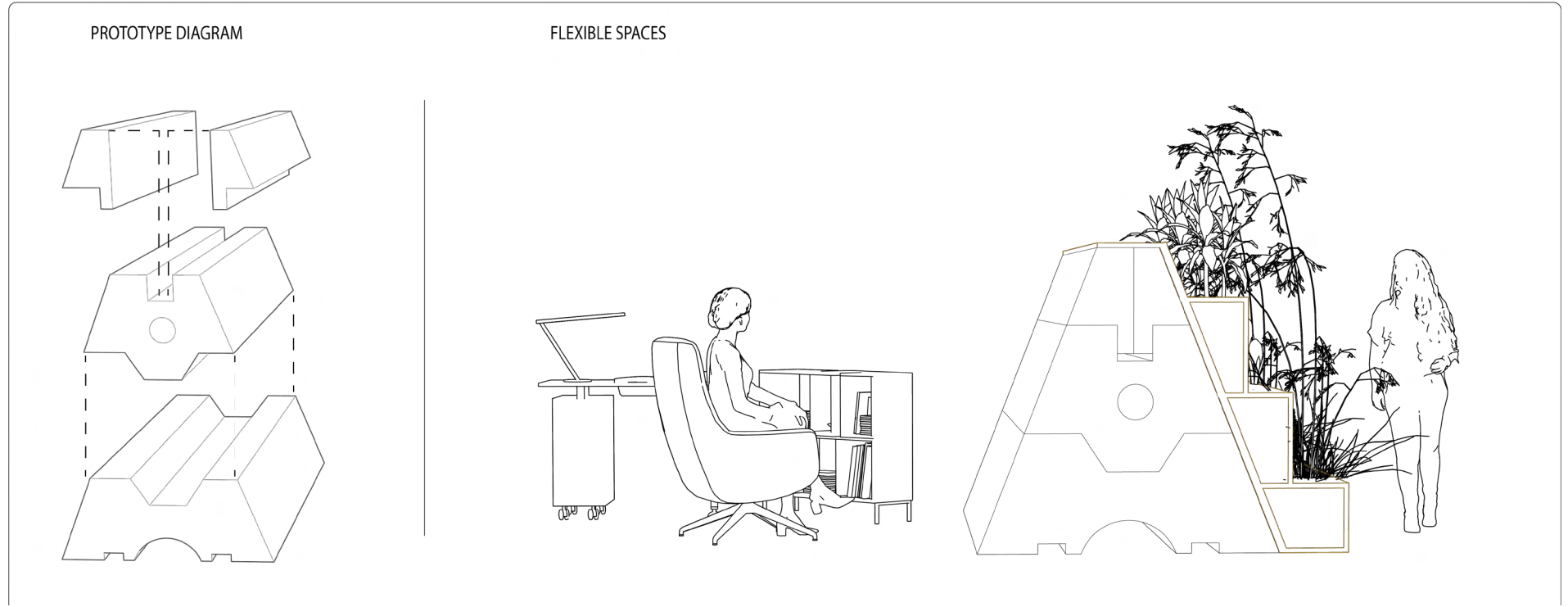
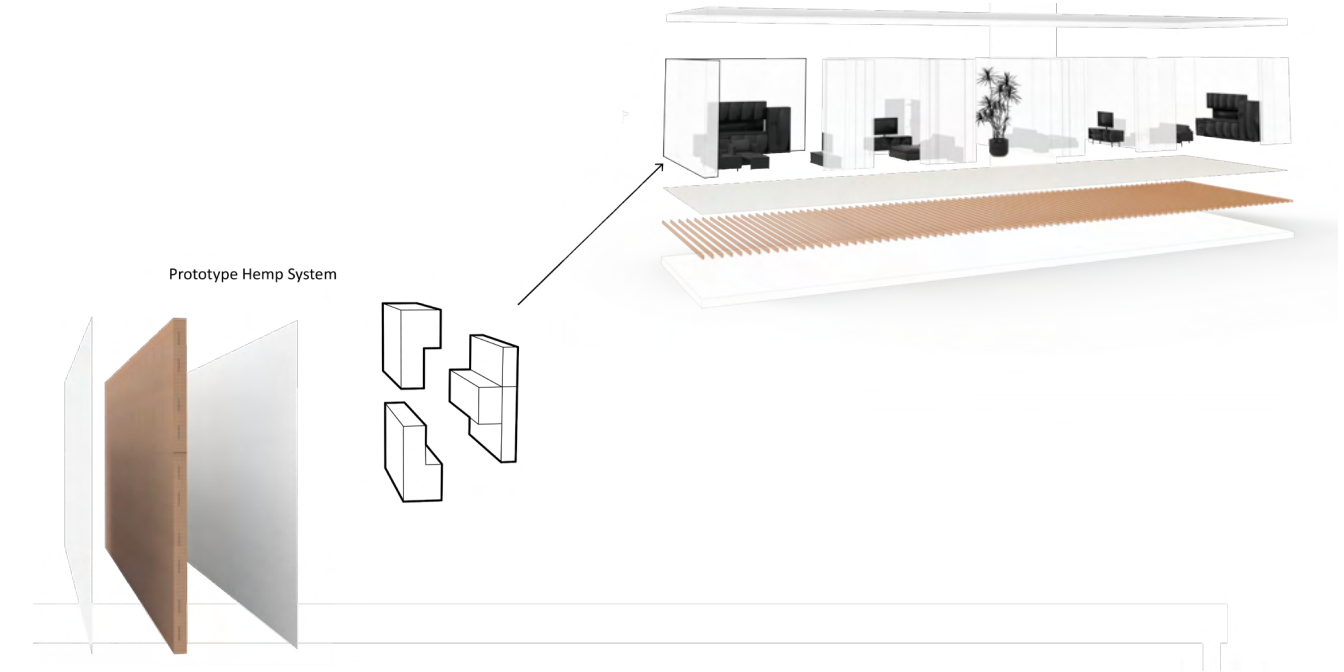
HYPHER LOCALIZED PRODUCTION

CIRCULAR ECONOMY

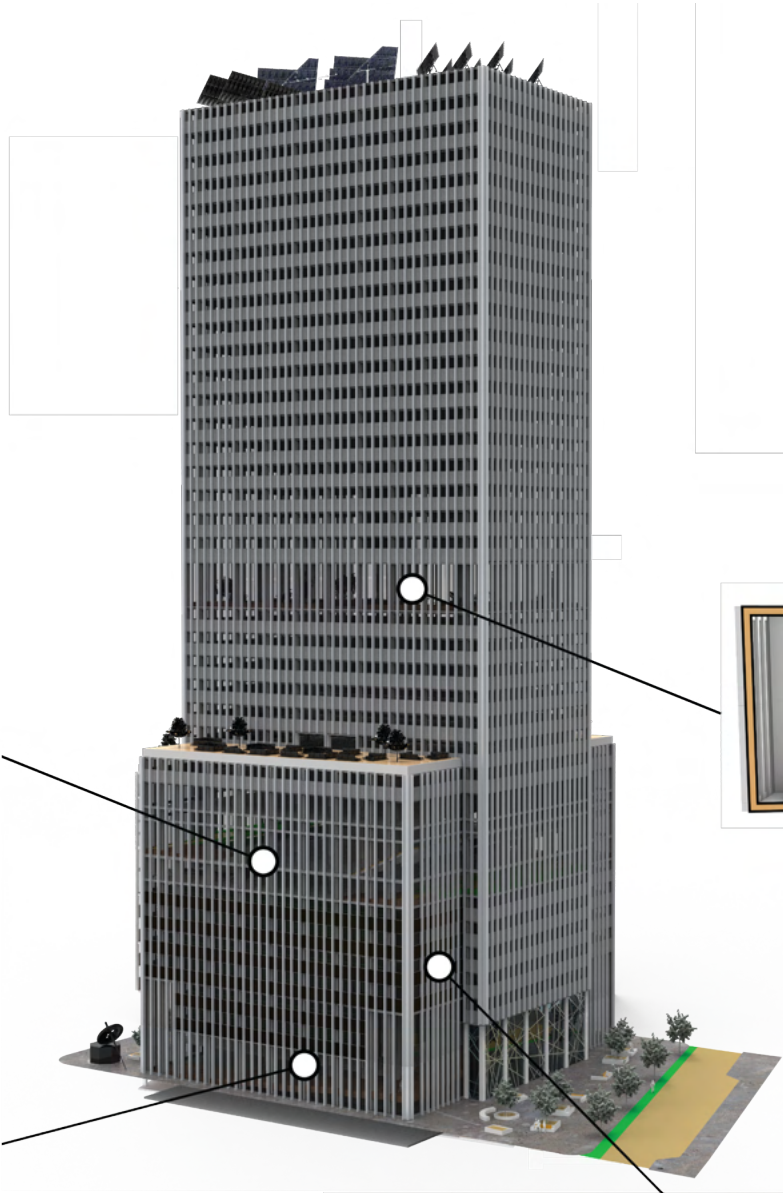
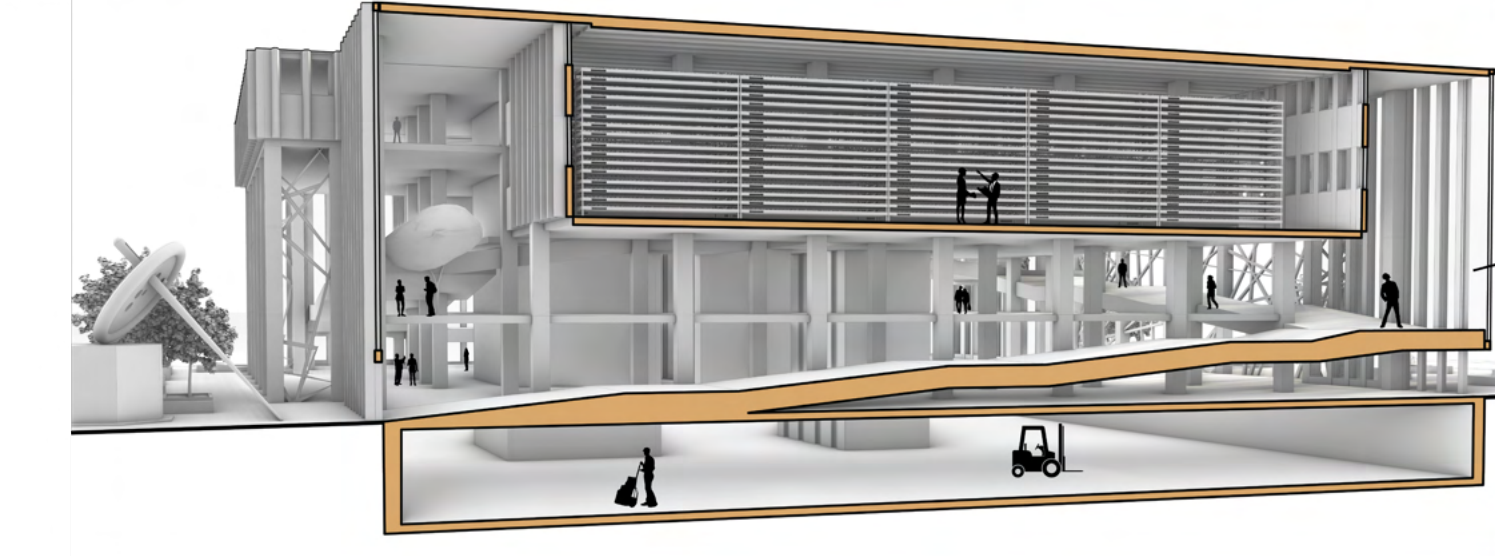
HOLISTIC WASTE MANAGEMENT

RESOURCE EFFICIENCY

Building with hemp is highly viable for concepts of urban metabolism and circular economies due to its sustainable and regenerative properties. Hemp cultivation requires minimal pesticides and water, absorbs significant amounts of CO2 during growth, and regenerates the soil with nutrients, supporting sustainable agricultural practices. As a building material, hemp can be used to create hempcrete, which is lightweight, insulating, and carbon-negative, effectively reducing the energy consumption of buildings and their carbon footprint. Additionally, hemp-based materials are biodegradable and can be recycled or repurposed at the end of their lifecycle, contributing to a circular economy by minimizing waste and reducing the demand for non-renewable resources. This makes hemp an exemplary material choice for promoting sustainable urban development and efficient resource utilization in line with urban metabolism principles.

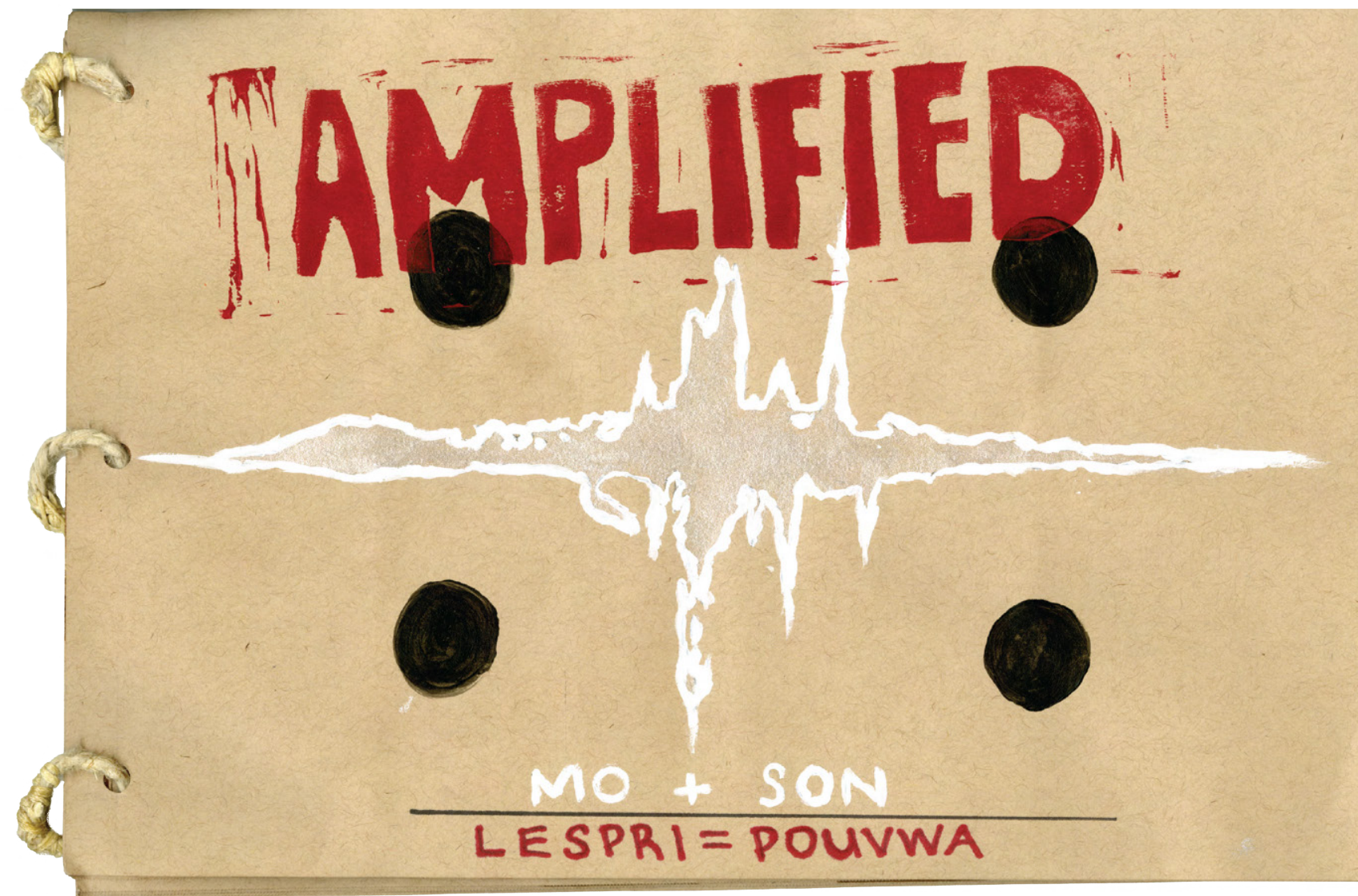
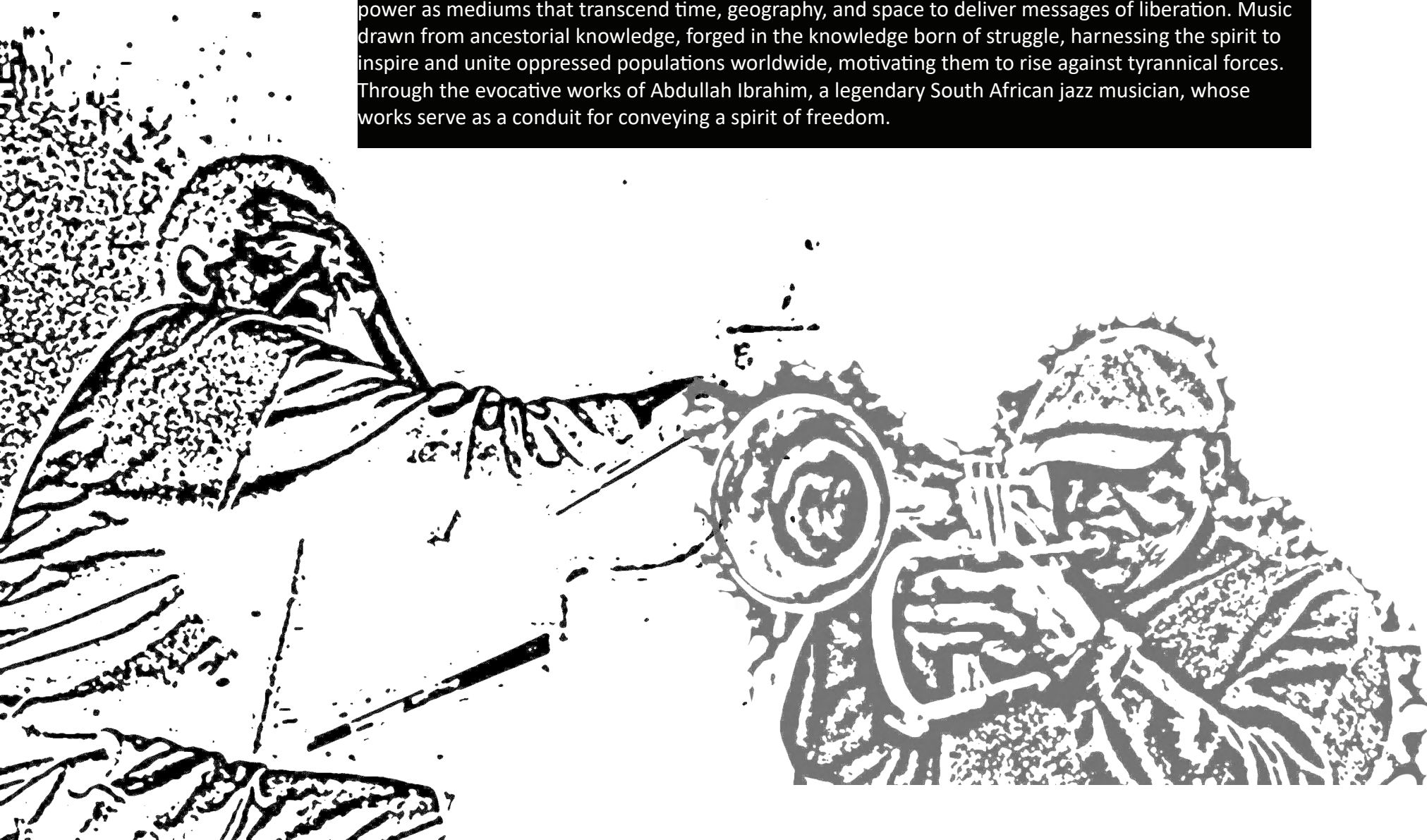


Sections



Amplified Extraction

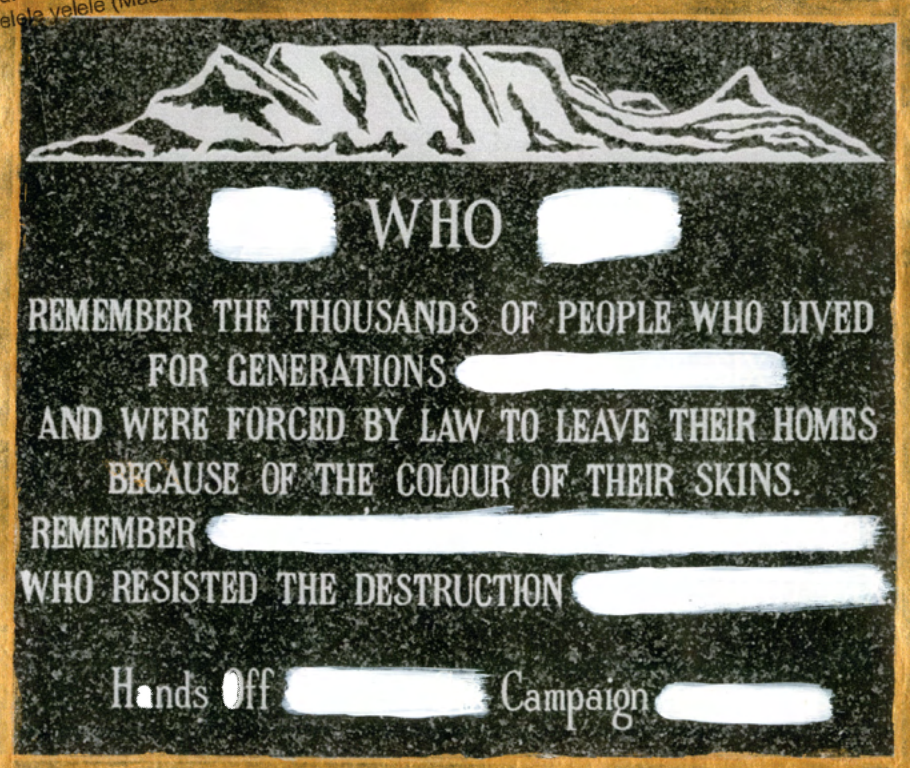
This project delves into the profound essence of sound and language, investigating their transformative power as mediums that transcend time, geography, and space to deliver messages of liberation. Music drawn from ancestral knowledge, forged in the knowledge born of struggle, harnessing the spirit to inspire and unite oppressed populations worldwide, motivating them to rise against tyrannical forces. Through the evocative works of Abdullah Ibrahim, a legendary South African jazz musician, whose works serve as a conduit for conveying a spirit of freedom.



lyohhh stimela
 Sind' inyul' enkomponi (stimela)
 Stimela!
 Sihleli njengezinja, siyelele mame
 Emigodini mama (Bathi stimela)
 Sikhalel' izihlobo zethu (Masibuyeleni! eDalagubhayi)
 Sikhalel' abazali wethu, mama oh! (Masibuyeleni! eDalagubhayi)
 Sikhalel' abafazi bethu!
 Yelele yelele yelele yelele (Masibuyeleni! eDalagubhayi)

Stimela sihamba ngamalahle
 Sivel' eDalagubhayi
 Sangilahla kwaGuqa
 Bathi sizomba amalahle (Sizomba amalahle)
 Stimela sihamba ngamalahle
 Sivel' eDalagubhayi
 Sangilahla kwaGuqa
 Bathi sizomba amalahle (Sizomba amalahle)

nela
 amba ngamalahle
 el' eDalagubhayi
 mela
 namba ngamalahle
 vel' eDalagubhayi
 elelele abathi stimela ma wol
 timela
 ihamba ngamalahle
 sivel' eDalagubhayi
 -aaa bathi Stimela ma wol
 Stimela
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 Stimela!
 Sihamba ngamalahle
 Sivel' eDalagubhayi
 Sihamba ngamalahle



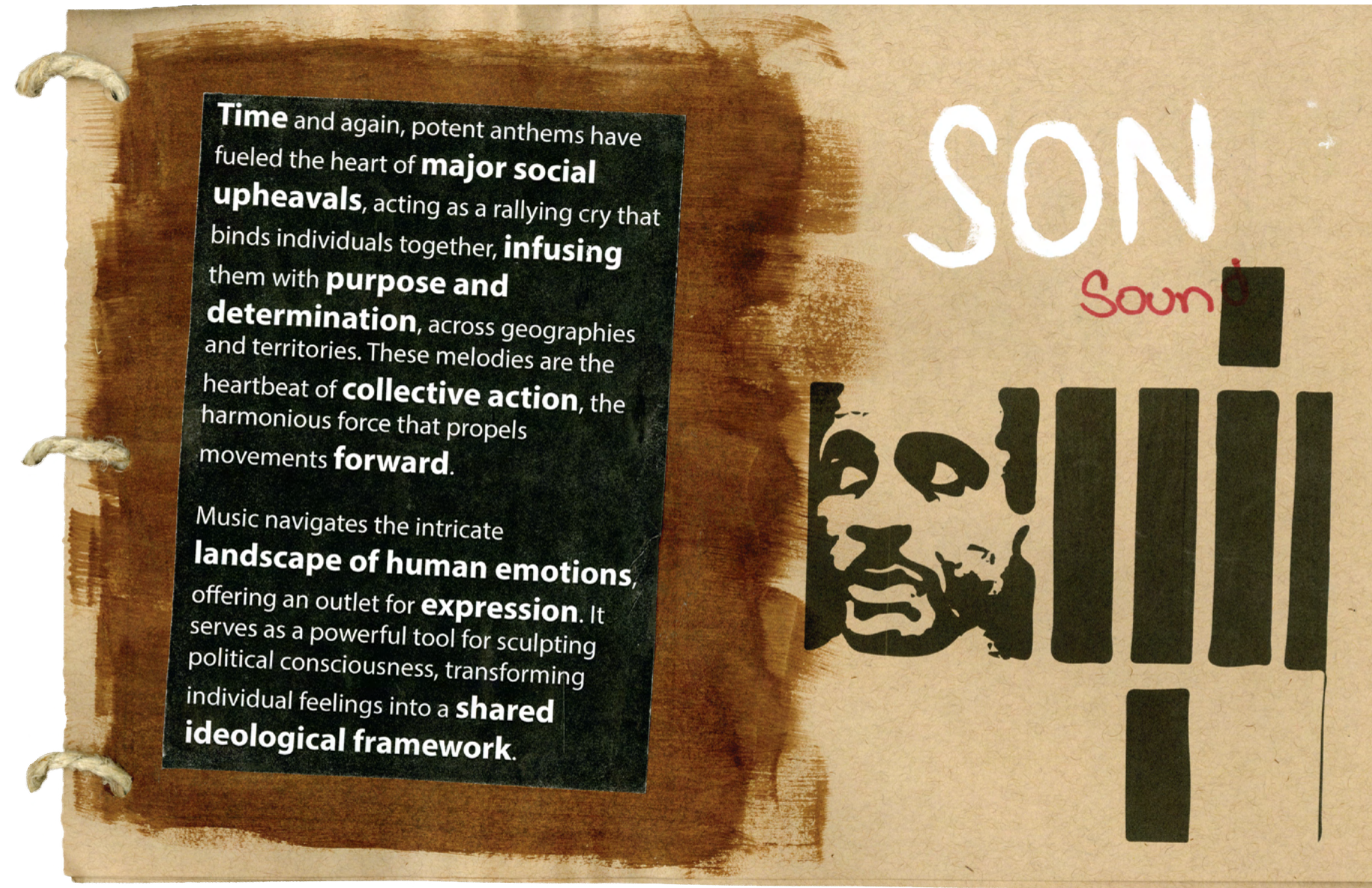
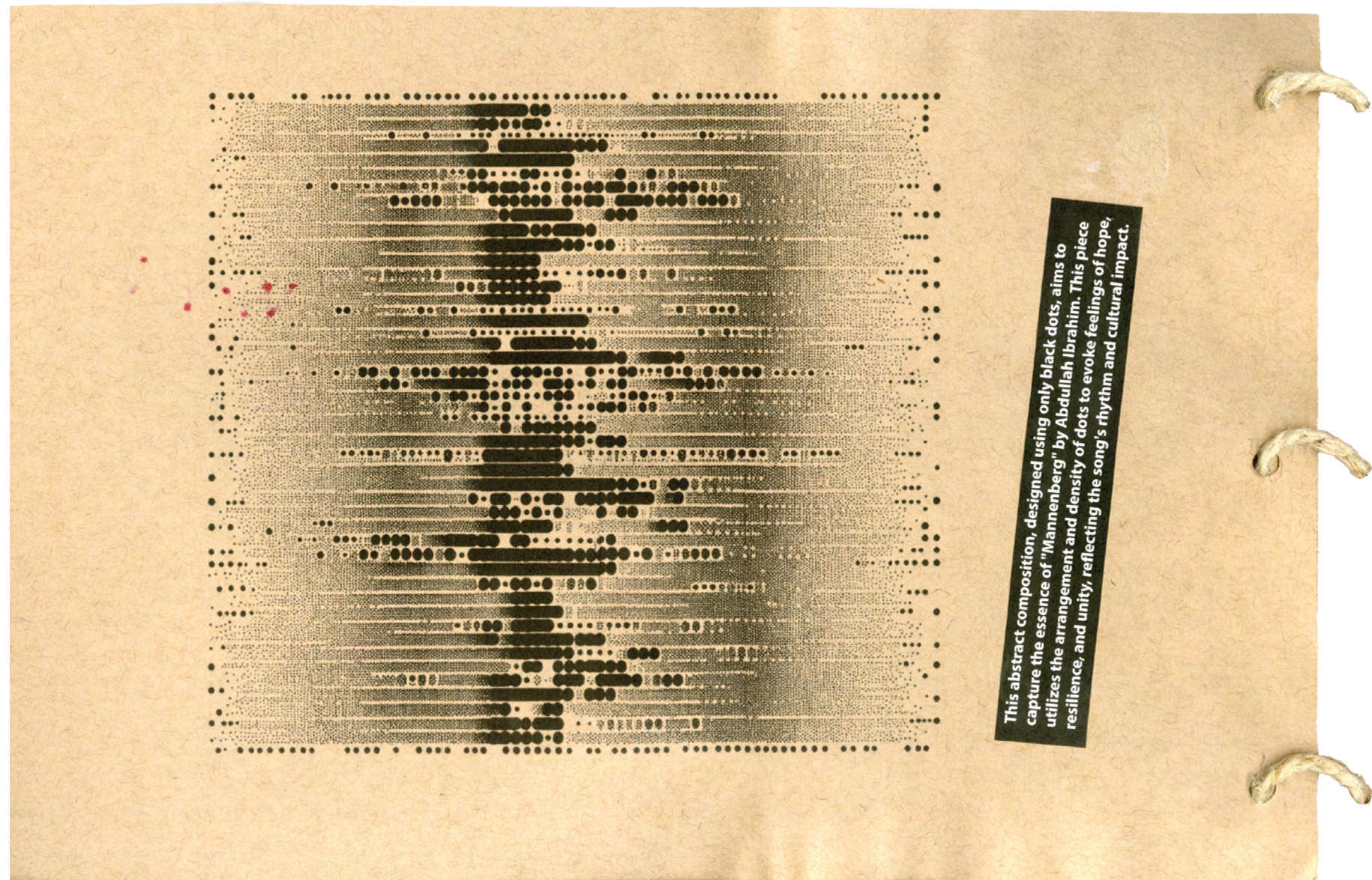
Stimela
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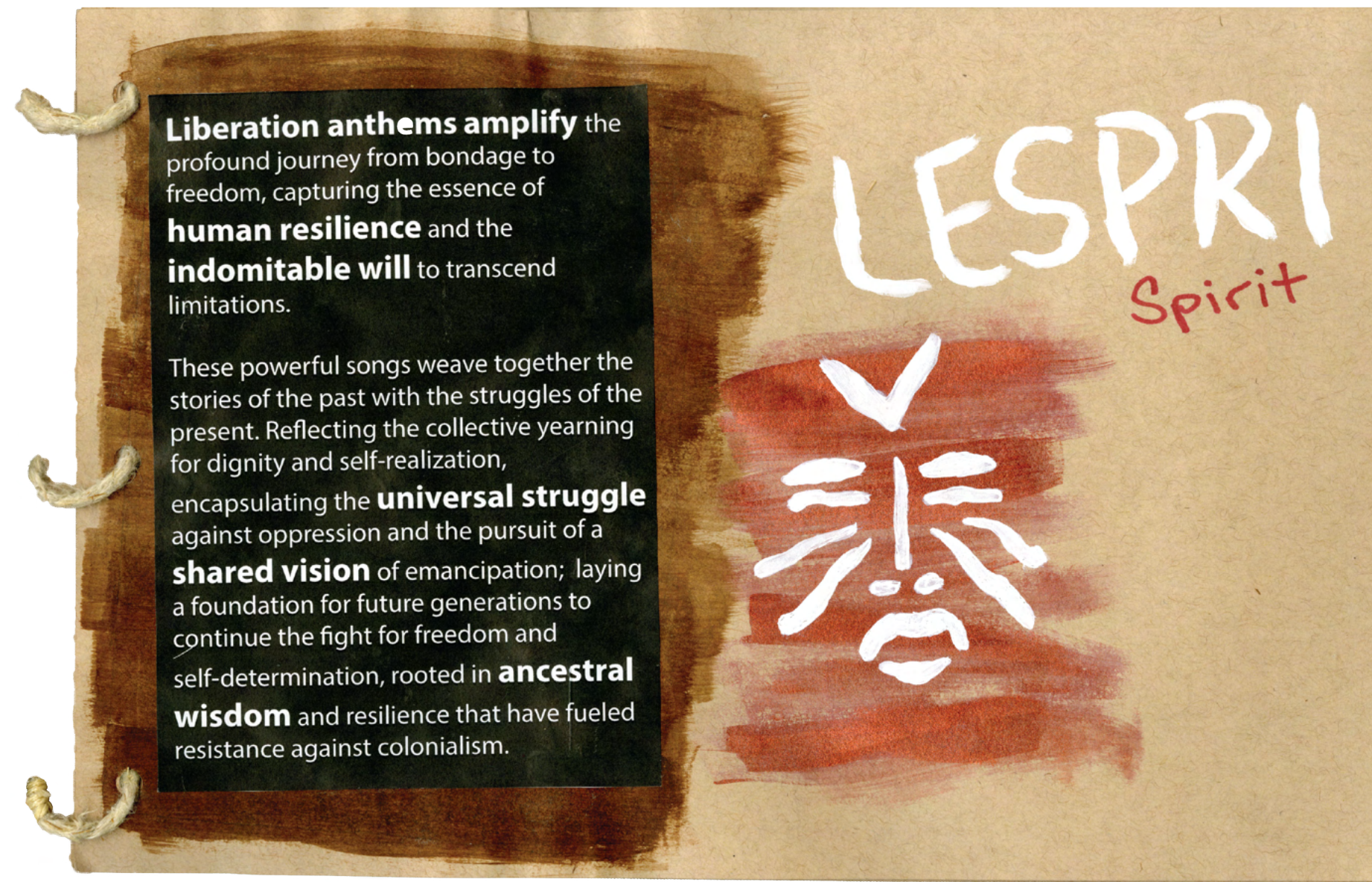
They will attempt to **diminish your power**, claiming your voice amounts to mere words, urging silence upon you. Yet, in that silence, your voice becomes rebellion, the initial **stand against oppression**. The act of speaking out is, in itself, a form of resistance.

The spoken word heralds the dawn of **resistance**. Whether etched on paper, declared aloud, or woven into **song**, it serves as a beacon of **defiance**. This inaugural step in **rebellion** resonates on a psychological plane, imbuing words with immense power and laying the mental groundwork for revolution. It is through the articulation of thought that the mind begins its journey towards **liberation**.

MO
 Word









Impactful anthems serve as the driving force behind significant social changes, providing a **unifying anthem** that galvanizes individuals into collective action, sharpening their **focus and fortifying** their resolve. These songs are the **pulse** of movements, guiding footsteps towards **social and political progress**.

The realm of music, offering a sanctuary for the release of suppressed emotions, serving as a **transformative agent** for the marginalized. It transcends its therapeutic role, evolving into a **pivotal instrument** for crafting and disseminating political thought, and **shaping** the **ideological landscape** of communities.

POUVWA
Power



Sharpeville: 69 killed in peaceful protest

ON 21 MARCH 1960, 69 people were killed and 180 wounded by police bullets outside Sharpeville police station, near Verwoerd. This was the first time a white police force had been used to suppress a peaceful protest for democracy in South Africa.

The 1960s saw the rise of the African National Congress (ANC) and the Pan Africanist Congress (PAC). The ANC was founded in 1912 and was the first African-led mass political organization in South Africa. The PAC was founded in 1944 and was a more radical organization. The two groups merged to form the African National Congress (ANC) in 1961.

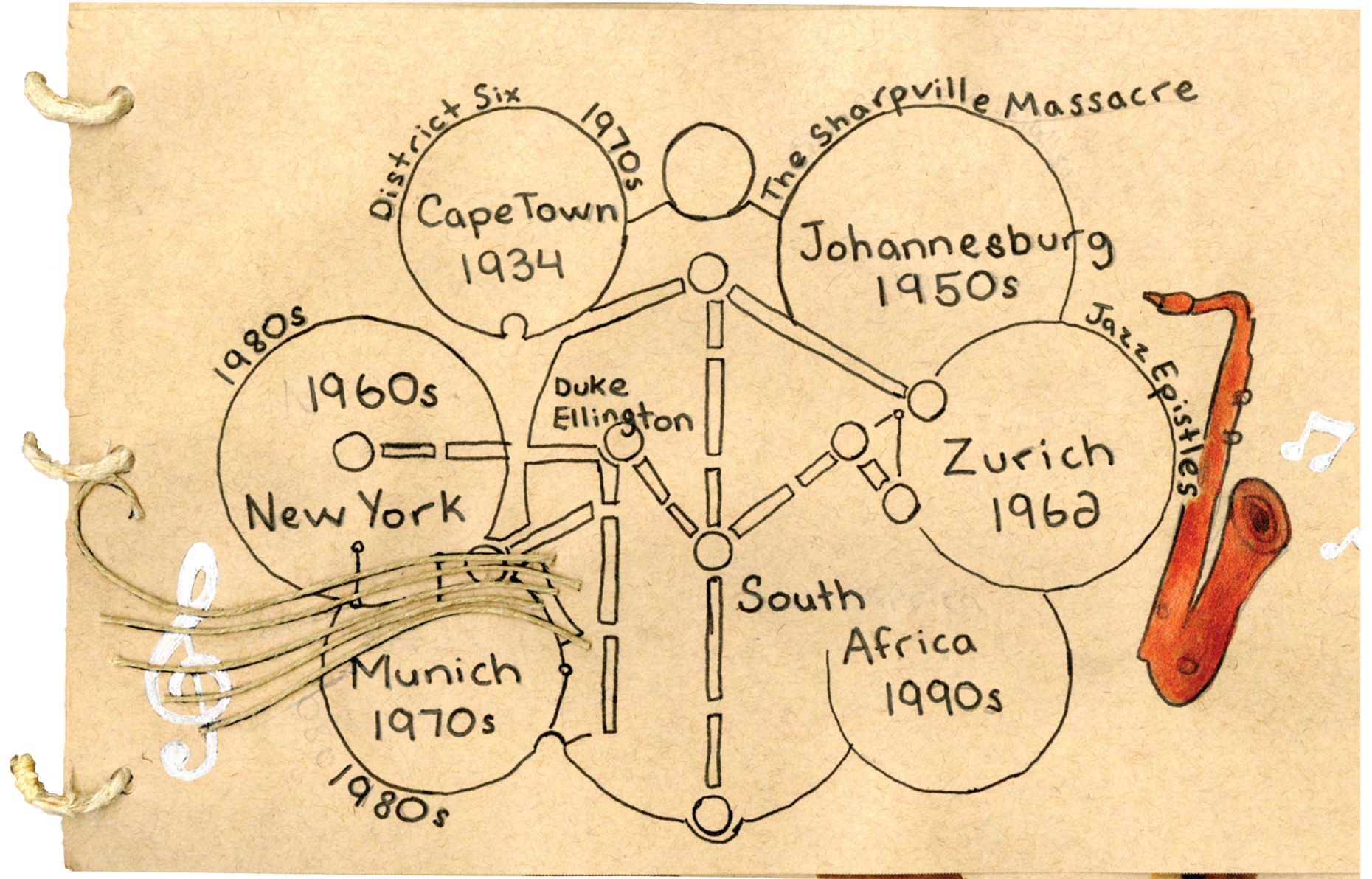
The ANC was banned in 1960 and the PAC was banned in 1961. The two groups continued to operate underground. The ANC was the main force behind the anti-apartheid struggle.

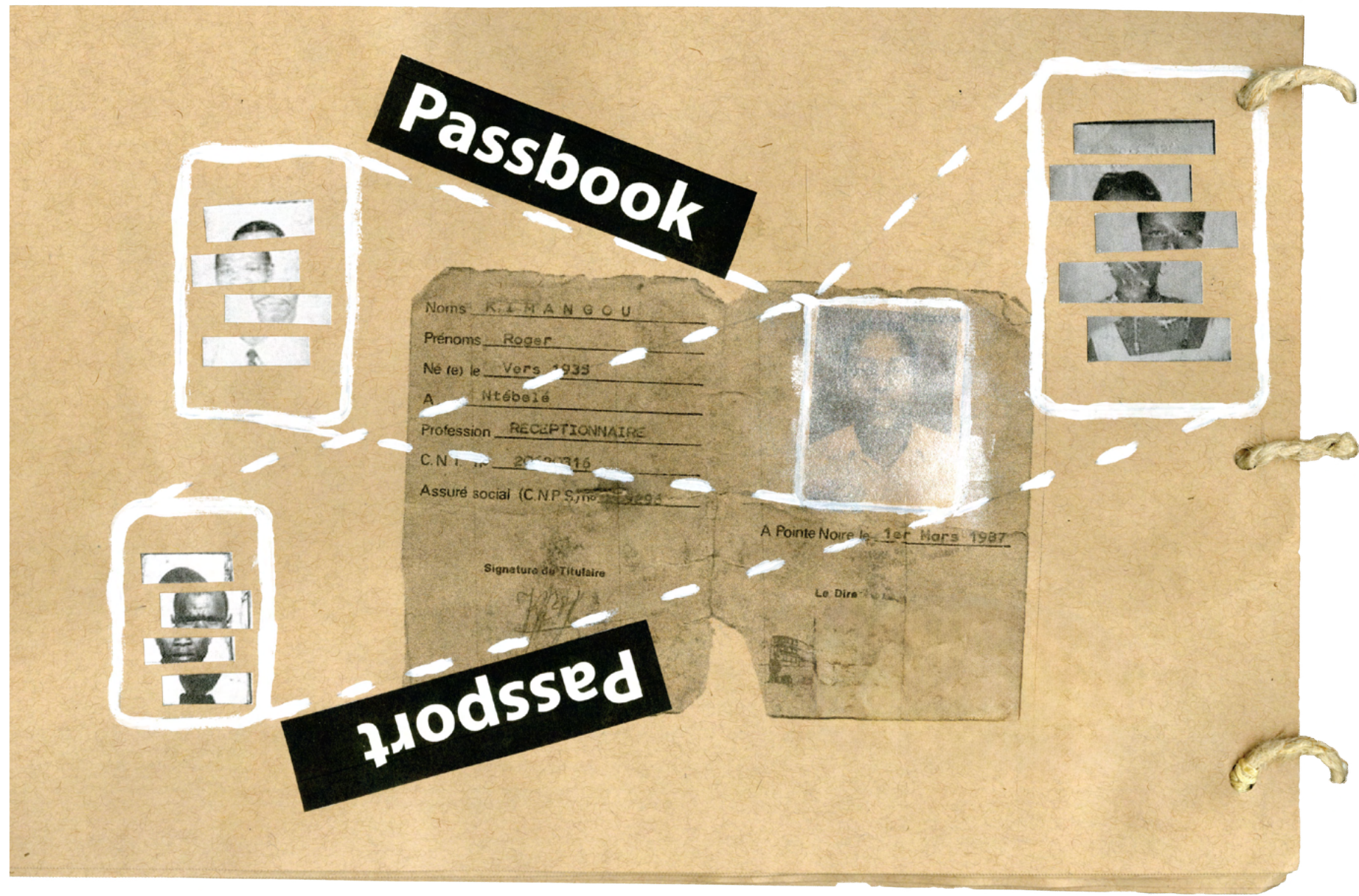
The Sharpeville Massacre was a turning point in the anti-apartheid struggle. It showed that the apartheid government was willing to use violence against peaceful protesters. This led to a more radical approach to the struggle for democracy in South Africa.

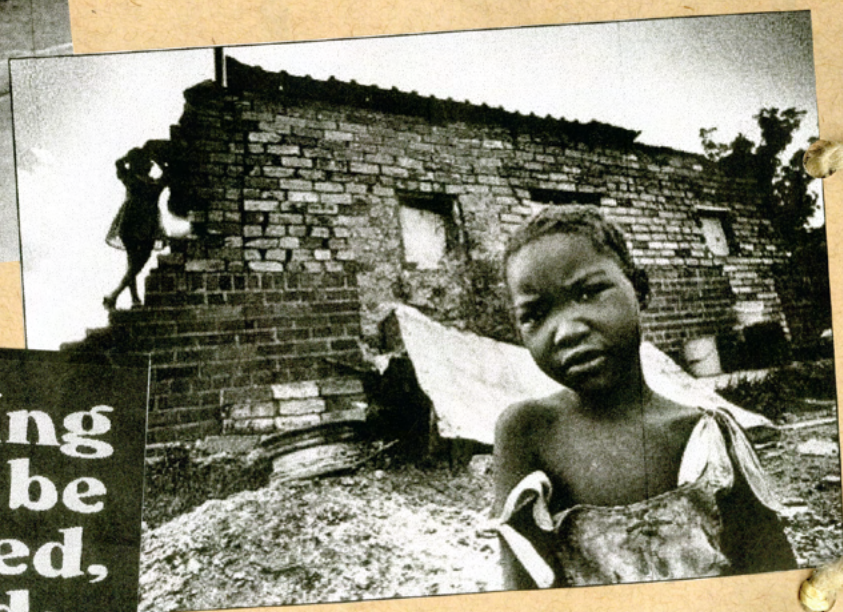


On 21 March 1960, a group of about 5000 people gathered in the town of Sharpeville to protest against the apartheid government's new pass laws. The protesters were peaceful and were carrying signs and banners. The police, however, used force to disperse the crowd. They fired tear gas and bullets, killing 69 people and wounding 180 others.

The Sharpeville Massacre was a turning point in the anti-apartheid struggle. It showed that the apartheid government was willing to use violence against peaceful protesters. This led to a more radical approach to the struggle for democracy in South Africa.





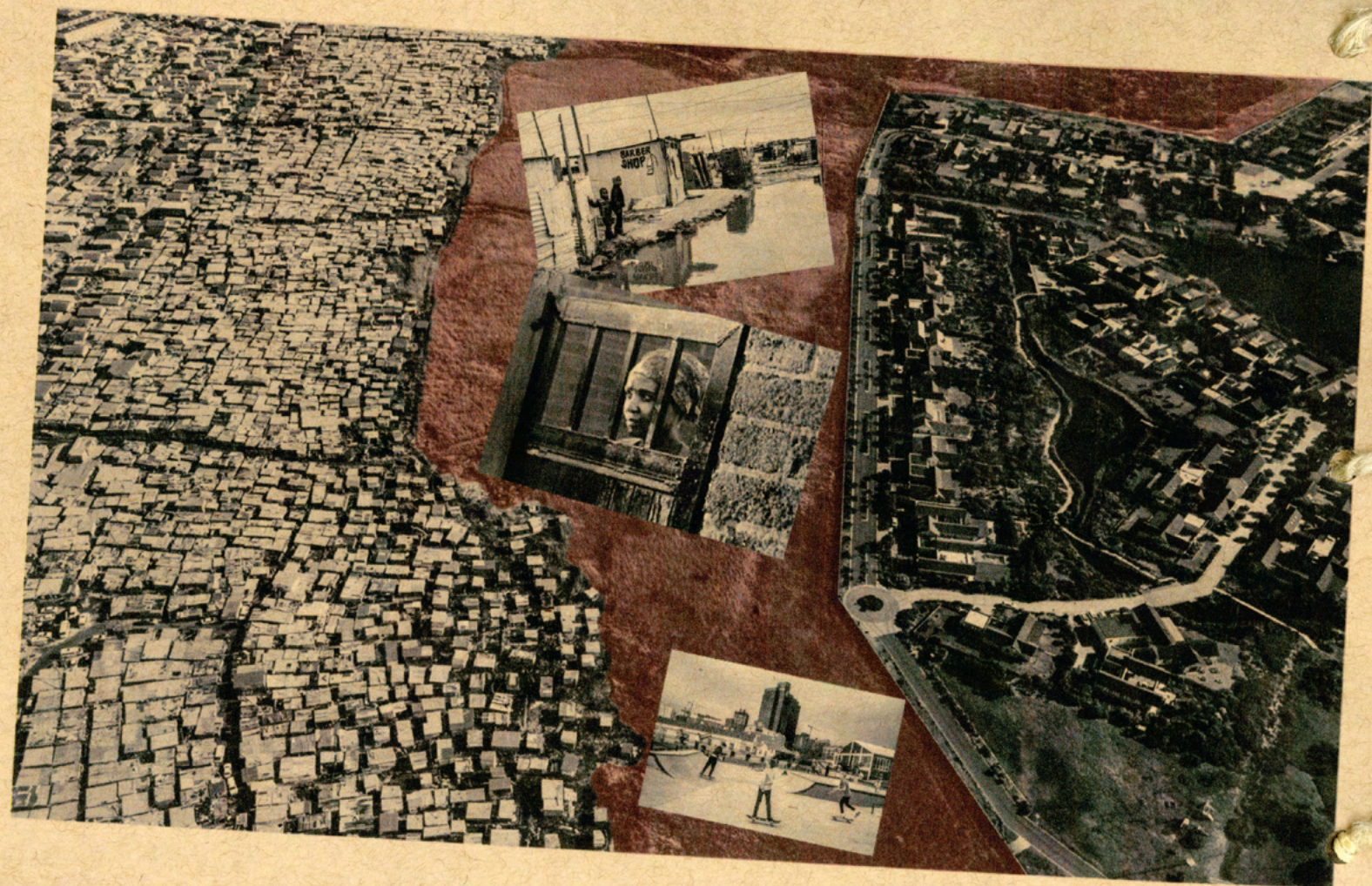


Anyone disobeying these laws will be imprisoned, fined, and/or whipped:



By order of the South African Ministry of Justice.





In the echoes of history, where spirit and struggle blend,
A symphony of souls rises, their voices will not bend.
Spirit, ever-evolving, through thesis and antithesis, finds,
A synthesis in the rhythm of anthems, in the heartbeats of
humankind.

"From the chains of the real, to the freedom of the ideal,"
Whispers the wind through Johannesburg's streets, a call to feel.
In Mannenberg's notes, a cry for the unity of the oppressed,
A melody of hope, of a community unbowed and unblessed.

The spirit moves, dialectically, from darkness into light,
Through the struggle, emerges a world of wrongs made right.
Each chord on Ibrahim's piano, a step towards freedom's song,
A journey through conflict, where only the brave belong.

In the heart of Soweto, the spirit dances, it cannot be contained,
Against the backdrop of apartheid, a brighter world is gained.
The spirit of the people, in resistance, they find their voice,
In the songs of liberation, in unity, they rejoice.

Music, in the march for justice, finds its place,
In the transcending of the self, in the collective embrace.
The spirit of the world, in the anthem's powerful rise,
Reflects the struggle for freedom, under the skies.

So let the piano play, let the spirit soar,
In the melody of Mannenberg, hear the lion's roar.
For in the music of resistance, in the harmony of the fight,
Lies the philosophy of spirit, moving towards the light.



AMPLIFIED
extraction

The past is always alive in the present, not merely as a memory but as a living influence that shapes current realities.

Philosophically and culturally, it carries forward themes of struggle, identity, and resilience. In this way, the past and the present are not

Project Video Link:
[With 1:15 Intro](#) | [Without 1:15 Intro](#)

Dollar Brand



Music, has found echoes in civil rights movements, illustrating music's powerful role in both reflecting and shaping the spirit of various eras. This ability to transcend the immediate and speak to universal themes of liberation and human dignity showcases the profound impact that music can have as a catalyst for change, connecting disparate struggles for justice across the vast expanse of time and space.

A TRIBE CALLED QUEST INSPIRED BY MILES DAVIS AND JOHN COLTRANE

A Tribe Called Quest frequently incorporated jazz elements into their music, blending jazz samples with hip hop beats to create a rich, layered sound. They often spoke of the influence Davis and Coltrane had on their approach to music, particularly in terms of improvisation and complexity.

Miles Davis



Art Blakey

As a band that often uses live instruments, The Roots have been influenced by many jazz musicians. Art Blakey's emphasis on groove and Miles Davis's innovations in jazz have helped shape their sound.

THE ROOTS INSPIRED BY ART BLAKEY AND MILES DAVIS

Impactful anthems serve as the driving force behind significant social changes, providing a **unifying anthem** that galvanizes individuals into collective action, sharpening their **focus and fortifying** their resolve. These songs are the pulse of movements, guiding footsteps towards **social and political progress**.

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research frameworks are concerned with understanding complexity, and the self-determination of lived lives.

DESIRE DAMAGE DESIRE DAMAGE DESIRE

Desire-based

Hip Hop - Emerging in the 1970s in the Bronx, New York, hip hop can be viewed as a "synthesis" in the Hegelian sense. It combined elements of both blues and jazz, such as the focus on personal struggle and social commentary, with new forms like MCing, DJing, breakdancing, and graffiti.

Hip Hop



Time and space are not just abstract concepts but intrinsic elements that deeply influenced music and identity. Transcending the immediate into a realm where time and space converge, offering a reflection on the past and a vision for the future, all while rooted in the present moment.

GURU GANG STARR INSPIRED BY CHARLIE PARKER AND THELONIOUS MONK

Guru's "Jazzmatazz" series was a pioneering fusion of live jazz and hip hop, featuring collaborations with numerous jazz musicians. His work highlighted the seamless integration of hip hop lyricism with intricate jazz melodies.



These powerful songs weave together the stories of the past with the struggles of the present, reflecting the collective yearning for dignity and self-realization, encapsulating the **universal struggle against oppression** and the pursuit of a **shared vision of emancipation**, laying a foundation for future generations to continue the fight for freedom and self-determination, rooted in **ancestral wisdom** and resilience that have fueled resistance against colonialism.

The spoken word heralds the dawn of **resistance**, whether etched on paper, declared aloud, or woven into **song**, it serves as a beacon of **defiance**. This inaugural step in **rebellion** resonates on a psychological plane, imbuing words with immense power and laying the mental groundwork for revolution. It is through the articulation of thought that the mind begins its journey towards **liberation**.

word power They will attempt to diminish your power, claiming your voice amounts to mere words, urging silence upon you. Yet, in that silence, your voice becomes rebellion, the initial stand against oppression. The act of speaking out is, in itself, a form of resistance.

Kendrick Lamar's critically acclaimed album "To Pimp a Butterfly" features complex jazz arrangements and has been noted for its deep jazz influences. He has spoken about how Davis and Coltrane's works have inspired his narrative style and musical experimentation.

John Coltrane



Ma Rainey

The Blues - Originating in the Deep South of the United States around the end of the 19th century, the blues was deeply rooted in the African American experience, particularly in the suffering, struggle, and resilience of slavery and segregation.

The Blues

In the realm where melodies and colors blend, Music, the unseen force, stirring souls to awake. A story of resistance and liberation ascends. Visual arts, the silent speech, urging chains to break. Spirit of Liberation

In every melody, a message, strong and clear, In the power of expression, transcending words, In the silence between notes, our voices are heard. The dance of liberation, moving hearts to feel, The color of change, painting a future ideal. Music and art, in their beauty, hold the key. To unlock the spirit of freedom, to set us free. So let the music play, let the colors blaze. In the chorus of the fearless, find the strength to face. The challenge of tomorrow, with the art of today. In the quest for liberation, they lead the way.

Through the rhythm of defiance, spirits soar high, In the harmony of unity, our hopes touch the sky. The art of resistance, a beacon through the night, Guiding us through darkness, towards the light. In the symphony of struggle, notes rise and fall, A canvas of bravery, echoing the freedom call. Each chord, a whisper of dreams long confined. Each stroke, a testament to the strength of the mind.

Sorry, not sorry, for we will never be silenced. We rise, we play, we fight, we dance— Our lives a melody, our resolve the rhythm. So heed this word, world, hear our harmonious revolt, Music, the unseen force, stirring souls to awake. In the realm where melodies and colors blend, Visual arts, the silent speech, urging chains to break. Spirit of Liberation

Yeah! Sorry, not sorry, for the flames we stoke, For our loud legacy, our undying pride, For the rhythms we claim in the face of the night, Where every step is stamped in resistance, And every beat is a declaration of our heart's undying fire.

Sharper than the tick of time's unyielding march, From every throat worn, every voice risen in defiance, We sing survival, stitch our own vibrant tapestry.

Hear the call of these anthems— From Cape to Compton, A melody shared in the quest for the dawn, Where the sun casts long legacies and taller tales, Of unyielded souls, unbridled, unfazed by the shackles they fought.



healing

Life



Immortality

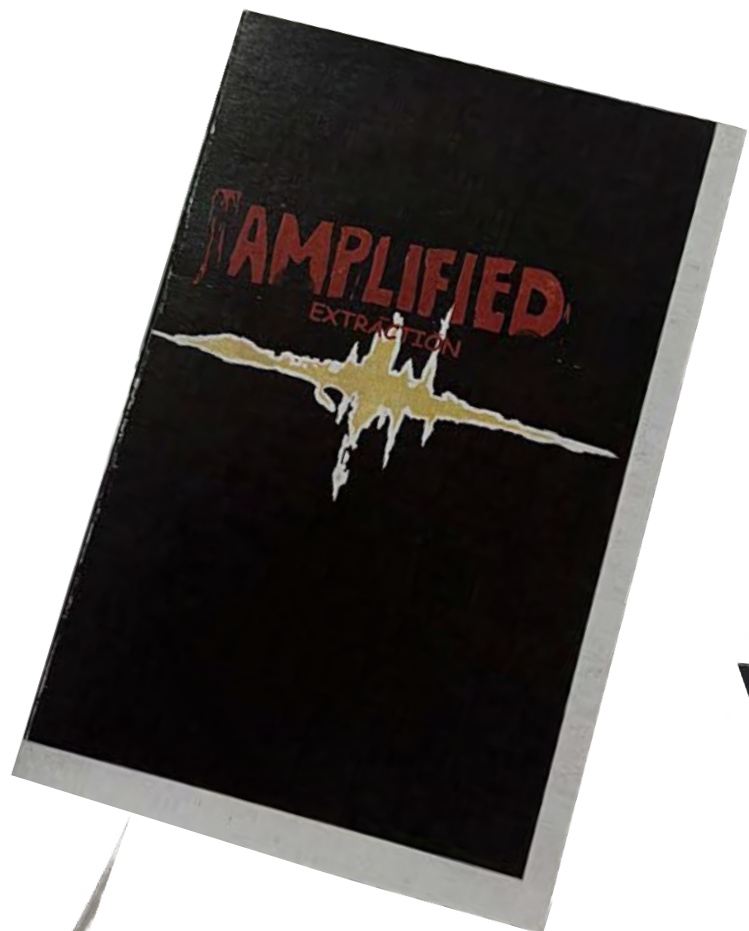
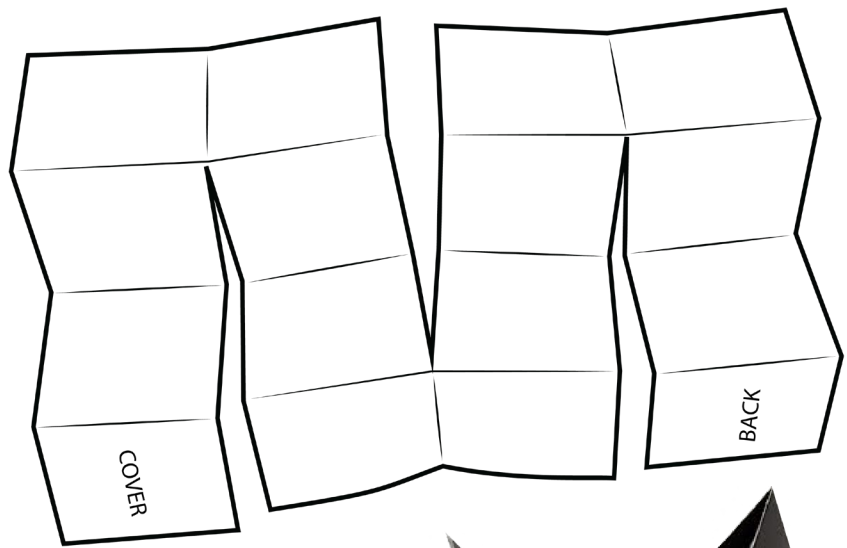
In every tune, behind each word that's thrown, Yeah!... Sorry, not sorry, for claiming this sound— Our music, a legacy mightier than your grand... your petty apartheid, That places Black faces in high spaces To sit atop corrupt systems Birds in misplaced locked cages They cannot save us. They... they cannot hear us. Can you hear me?

Jazz

As African Americans migrated to urban centers, especially during the Great Migration, jazz emerged in the early 20th century as a new musical form that represented both a continuation and a counterpoint to the blues. Jazz introduced more complex harmonies, improvisation, and a faster tempo.

harmony





America's blues, born from the depths of struggle.
 A hymn of resistance, bodies turn to matter,
 Then spirits turn vibrations, spit life into the stories
 of the oppressed.
 Sung by those seasoned by hard days, harder nights.
 Blessed are those capable of picking up these
 frequencies.
 Harmoniously across geographies, across time across
 space.

In every tune, behind each word that's thrown—
 Yeah!... Sorry, not sorry, for claiming this sound—
 Our music, a legacy mightier than your grand... your
 petty apartheid.
 That places Black faces in black...

Input 8:25+
 252:32:48:25
 PRODUCTION
 Output 0:05:57:05

Here we stand—
 In the shoulders and resounding of freedom's three and
 That declares, "We are here, we've always been here."
 We are thriving, resilient, in defiance of the odds.
 We are thriving, resilient, in defiance of the odds.
 Unapologetically Black... unapologetically brilliant.
 Dame Simone Young Gifted and Black!

So, heed this song, word, hear our...
 Our lives a melody, our...
 We live, we play, we...
 Sorry, not sorry, for we will never be silenced.

The past is always alive in the
 present, not merely as a
 memory but as a living
 reality.
 Philosophically and culturally,
 it carries forward and
 struggle, tenacity, and
 past (blues and jazz) and the
 present (hip hop) are not
 distinct periods but part of a
 continuous narrative.

AND TROUBLESOME
 Harmonious Monk

So, do you see?
 The past is always alive in the
 present, not merely as a
 memory but as a living
 reality.
 Philosophically and culturally,
 it carries forward and
 struggle, tenacity, and
 past (blues and jazz) and the
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research frameworks are
 concerned with
 understanding complexity of
 lived lives.
 Desire-based
 DAMAGE
 DAMAGE
 DAMAGE

Ma Rainey

Immortality

AMPLIFIED
 EXTRACTION

Follow the Money | Subsidies

By critically examining the evolution of subsidies in the United States and assessing their effectiveness and impact from their origins to their significant role in modern housing and infrastructure politics and policies, we can gain foundational understanding of subsidies as a crucial component which can hinder or aid in the re-scaling of housing. Initially designed to bolster agriculture and transportation, subsidies have expanded into a sprawling system of governmental spending that often faces scrutiny for economic inefficiency and negligence. Despite such criticisms, there is a pressing need to reevaluate and adapt subsidy strategies to address modern challenges in urban development, economic inequality, and especially in advancing key green energy infrastructure.

The history of subsidies, originating from the Latin root “subsidium,” which means “support” and/or “assistance,” traces back to ancient Rome. The concept was initially associated with providing support or relief, often in military contexts referring to a reserve or auxiliary body of troops called upon in times of battle, during the Roman Empire, which spanned from 27 BC to around 476 AD. This financial or material aid was crucial for reinforcing military campaigns and ensuring empire’s stability and expansion, a common thread in today’s governmental use of subsidies today. Over time, the use of subsidies evolved significantly, broadening to encompass a wide range of public funding mechanisms designed to support various sectors and activities.¹

Subsidies in the U.S. originated as part of the government’s effort to support essential industries and foster economic development. Starting with agricultural support, subsidies expanded under the New Deal in 1933 to include broader economic and social welfare programs, reflecting a shift towards government-led intervention in various sectors. Post-World War II, the United States emerged as a superpower around 1945. The U.S. played a leading role in the establishment of the United Nations and the framework for the global financial system at the Bretton Woods Conference, leading to a significant increase in defense spending, which included subsidies for military production and research. This period saw substantial investments in nuclear weapons, missile technology, and other areas of advanced military technology, cementing militarization as the primary recipient of US subsidies. Subsidies simultaneously also became integral in promoting homeownership and urban development through instruments like mortgage assistance and public housing funding.

1 Early Use of Subsidies

- **Military and Royal Support:** In medieval Europe, subsidies began as forms of taxation granted by parliaments to monarchs for specific military campaigns or royal needs. This financial assistance was crucial for maintaining the state’s security and performing royal duties, reflecting the Latin root of providing support in times of need.
- **Colonial Expansion:** During the age of exploration and colonial expansion, European powers used subsidies to fund voyages and colonial establishments overseas. These subsidies supported the global expansion of empires, providing the necessary resources to explore, conquer, and settle new lands.

Evolution of Subsidies in the Industrial Age

- **Agricultural Subsidies:** With the advent of the Industrial Revolution and the subsequent changes in economic structures, governments began to use subsidies to support agriculture. They were designed to stabilize prices, ensure food security, and maintain rural economies against the backdrop of rapid industrialization and urbanization.
- **Railroad and Infrastructure Development:** In the 19th and early 20th centuries, subsidies played a pivotal role in infrastructure development, particularly in the United States and Europe. Governments provided substantial financial support for the construction of railroads, ports, and later highways, which were critical for national development and integration.

Modern Economic Subsidies Policy Tools

- **Social Welfare and Public Services:** During the 20th century, particularly after the Great Depression and World War II, subsidies became integral to social welfare policies. Governments used them to provide public services like healthcare, education, and housing, aiming to improve the quality of life and reduce economic inequalities.
- **Industrial and Technological Advancements:** Subsidies were used to foster industry growth and technological innovation during the post-war period. This included support for emerging technologies, manufacturing industries, and in recent decades, the information technology and renewable energy sectors.

Despite their intended benefits, misuse of subsidies is often criticized for creating market distortions and dependencies. Economically, subsidies can lead to inefficient resource allocation by promoting overproduction or reducing incentives for innovation and cost reduction. Socially, while aimed at reducing inequality, they can inadvertently create entitlements that are difficult to roll back without causing disruption, as we see with oil subsidies, which continue to increase though attempts have been made by sitting US Presidents to scale them back, suggesting that a complete rollback may not be feasible or desirable, politically, placing sustainable energy development in direct conflict with oil subsidies as well as military subsidies within the US budget for funding.

Subsidies and the U.S. government budget are distinctive yet interconnected concepts within federal fiscal policy. Understanding their differences and how they interact is necessary for comprehending how government financial mechanisms operate. The U.S. government budget is a comprehensive financial statement presented annually by the President’s administration, detailing the government’s expected revenue and expenditures for the upcoming fiscal year, outlining the financial allocations across various federal agencies and programs. Subsidies are a part of the overall government budget; and are included within the expenditures detailed in the budget, designated for specific purposes under discretionary or mandatory spending categories.² These funds are primarily collected through various taxes.³ When tax revenues are not sufficient to cover government spending, the federal government borrows money to finance the deficit, through the issuance of various securities, such as treasury bonds, notes, and bills, which are sold to domestic and international investors, financial institutions, and other governmental entities. This may seem like a viable solution but, government borrowing in this manner will only have broader economic effects leading to higher interest rates, which might push out private investment. It can also influence monetary policy decisions, such as those related to inflation controls, further slowing economic growth.

This makes the distribution and regulation of federal subsidies to states crucial in its structure and complexity of processes governed by a variety of mechanisms and legal frameworks to hit targets successfully and repeatedly. The process begins with the federal budget, where Congress both authorizes and appropriates funds for different programs; authorization allows legal operation of federal programs or agencies, while appropriation allocates specific financial resources. This framework aims to ensure that federal subsidies are distributed and used effectively, supporting various state and local government initiatives in alignment with national objectives.⁴

2 U.S. Government Budget Components:

- **Revenues:** Total expected income from sources such as taxes (income, corporate, and excise taxes), fees, and other sources.
- **Expenditures:** These include all government spending on public services and programs, defense, social security, Medicare, and other mandatory and discretionary spending areas.
- **Discretionary Spending:** This part of the budget is determined through the annual appropriations process by Congress. It includes funding for government agencies and programs, which may be used for subsidies in various sectors such as energy, agriculture, and education.
- **Mandatory Spending:** Some subsidies are part of mandatory spending, which is authorized by laws other than appropriations acts and is not normally determined through the annual budget process. This includes subsidies embedded in larger programs like Medicare, Social Security, or farm support programs that have specific funding formulas set by law.

Subsidy Types:

- **Direct Subsidies:** These involve direct payments to firms or individuals to support their activities, such as farmers receiving payments to stabilize income.
- **Indirect Subsidies:** These can take the form of tax breaks, loans at below-market rates, or other financial incentives that indirectly support economic activities.

Subsidy Administration:

- **Targeted Distribution:** Subsidies are typically targeted towards specific sectors or initiatives, such as renewable energy, agriculture, or healthcare.
- **Regulated by Specific Legislation:** The allocation and regulation of subsidies are often outlined in specific legislative acts, which set the parameters for how they should be used and monitored.

3

- **Taxes | Main Sources of Revenue for the U.S. Government:**
- **Individual Income Taxes:** The largest source of federal revenue, these taxes are collected on the income of individuals and are progressive, meaning the tax rate increases as the taxable amount increases.
- **Corporate Income Taxes:** Are taxes on the profits of corporations, contributing significantly to the federal revenue, though to a lesser extent than individual income taxes.
- **Payroll Taxes:** These taxes are used to fund specific social insurance programs, primarily Social Security and Medicare. They are collected from both employers and employees.
- **Excise Taxes:** These are taxes on the sale or use of specific products or activities, such as tobacco, alcohol, and gasoline.

4

Federal Budget Process:

Authorization and Appropriation: The process begins with the federal budget, where Congress authorizes and appropriates funds for various programs. Authorization establishes the legal operation of a federal program or agency, while appropriation assigns specific funds to it.

- **Block Grants and Categorical Grants:**

The primary federal agency responsible for the distribution of federal subsidies for sustainable energy, including solar energy, is the U.S. Department of Energy (DOE). Specifically, within the DOE, the Office of Energy Efficiency and Renewable Energy (EERE) which plays a crucial role in administering programs related to solar and other renewable energy sources. The specific dollar amount allocated for these subsidies can vary significantly from year to year, depending on legislative priorities, government budget allocations, and specific initiatives underway from administration to administration. Resources for renewable energy often include a mix of direct subsidies, tax incentives, grants, and research and development funding. In recent years, under various administrations, the budget for the DOE's EERE has ranged from about \$2 billion to over \$3 billion annually, with solar energy programs often receiving a sizable portion of this budget. However, these figures can fluctuate with changes in administration, economic conditions, and shifts in policy focus. To put this in perspective, the overall discretionary spending of the U.S. federal budget is in the trillions of dollars, with renewable energy subsidies typically making up a small fraction of that total, often less than 1% of total federal subsidies!

As the U.S. faces environmental challenges and technological shifts, the strategic use of subsidies in promoting green energy and sustainable infrastructure is increasingly important. Current green energy subsidies, while beneficial, require greater efficiency and alignment with long-term environmental goals, which will require difficult restructuring and reallocation of subsidies. To re-scale we must rethink and mobilize financial tools and assets in emerging markets that offer financial stimulation at a human scale. With the current allocation of subsidies set aside for renewables in contrast with the exponential effects of climate changes, and increasing military spending, accompanied by an ironclad setup that does not allow for disinvestment in oil and other non-renewables, we are not likely to meet decarbonization goals. Reevaluation of subsidy policies and advocating for a framework that is responsive to both historical lessons and future imperatives, can work towards ensuring that subsidies effectively support critical areas like housing and green energy without undue economic distortion.

An additional measure which seems promising is in emerging digital assets. The classification of cryptocurrencies as property by the IRS represents a significant development in subsidy and tax policy. This classification subjects' cryptocurrencies to capital gains taxes, like real estate, which has implications for revenue generation and regulatory compliance.⁵ The comparison between these asset classes reveals disparities in tax treatment that could influence investment decisions and market stability. This emerging scenario underscores the need for policies that adapt to technological advancements while creating opportunities to utilize decentralized markets as funding sources leveraged against cryptocurrencies due to this tax treatment, digital assets can potentially be the new "housing" investment vehicle. This scenario is well underway today, as you can now mint your deed as a digital asset, allowing owners of this digital asset to borrow against it, without having to extract equity from the real property attached to the digital asset, placing only the associated cryptocurrency holdings in jeopardy in the event of a defaulted loan. Homeowners, if policies are in place, can move forward with electrification and seek tax credits from the federal government and their respective state. This can exponentially increase the use of much needed solar energy, while removing market distortion associated with subsidy distribution. There is a new world underway, and navigating this old and new complex economic landscape of subsidies will be crucial in achieving sustainable and equitable growth.

In this exploration of the evolution of subsidies, from ancient Rome to their extensive use in today's governmental strategies, reveals their per-

- Block Grants: These are large sums of money given to state or local governments for general purposes. States have broad discretion over how to use block grant funds, which allows for flexibility but less federal control. Examples include the Community Development Block Grant (CDBG).
- Categorical Grants: These grants are provided for specific purposes defined by federal law. Categorical grants often have strict requirements and are tied to certain conditions that states must meet to receive the funds. An example is the Medicaid program.
- Formula Grants: These are distributed based on formulas defined by legislation or administrative regulations. The formulas may consider population, per capita income, poverty level, or other specific factors relevant to the program. For example, the Federal Transit Administration provides funds to states for mass transit projects based on a formula that considers the state's population and transit needs.
- Project Grants: These are grants given to state or local governments for specific projects. Recipients must apply for these grants and compete with other applicants. The federal government selects the recipients based on the project's merits and alignment with federal objectives.

⁵ The Internal Revenue Service (IRS) in the United States classifies cryptocurrencies as property for tax purposes based on guidance first issued in 2014. The key document outlining this classification is IRS Notice 2014-21. This classification means that cryptocurrencies are treated like other forms of property such as real estate when it comes to federal taxes. Furthermore, because the IRS treats Crypto as property, not a security, the wash sale rule currently does not apply to crypto in the US. So, there is an opportunity for Crypto holders to benefit.

The Wash Sale Rule: is a regulation set forth by the Internal Revenue Service (IRS) to prevent taxpayers from claiming a tax deduction for a security sold in a loss if they repurchase the same or a "substantially identical" security within 30 days before or after the sale.

sistent necessity and the complexities involved in their application. Subsidies have been both beneficial for economic development and problematic due to their politicization and potential for causing market distortions and dependencies, particularly in the context of sustainable energy. The evolving landscape of digital assets has introduced a novel dimension to subsidy and tax policy. This development could potentially revolutionize funding mechanisms and investment strategies, making it imperative to adapt policies that can leverage these technologies for public benefit. As we navigate these changes, subsidies to better support emerging markets and green initiatives become crucial for fostering sustainable development and ensuring equitable growth in the face of global economic and environmental challenges.

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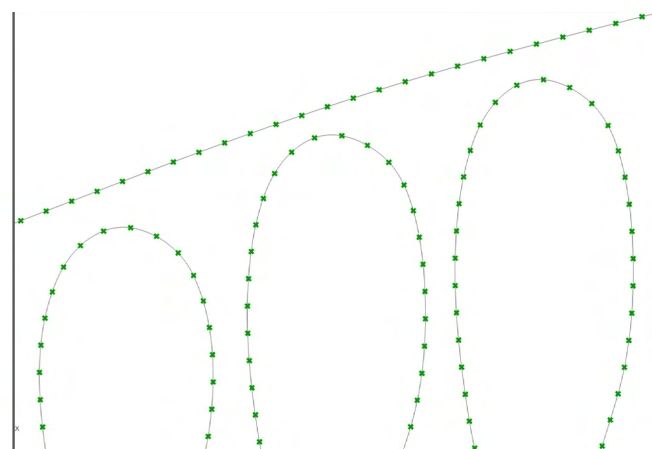
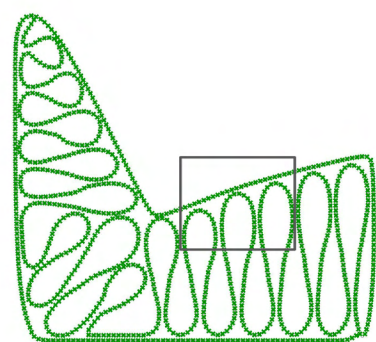
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2024. National Data | Table 3.13. Subsidies. March. https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey&_gl=1*1xgw128*_ga*Mjl4M-DAzODc3LjE3MTQ1OTk5NzY.*_ga_J4698JNNFT*MTcxNDY2NjU5Ny40LjEuMTcxNDY2NzI2Mi41MS4wLjA.#eyJhcHBpZCI6MTkslnN0ZXBzljpbMSwyLD-NdLCJkYXRhIjpbWyJjYXRIZ29yaWVzliwiU3VydmlV5I.

Pye-Smith, Charlie. 2002. The Subsidy Scandal: How Your Government Wastes Your Money to Wreck Your Environment. United Kingdom: Earthscan Publications Ltd.

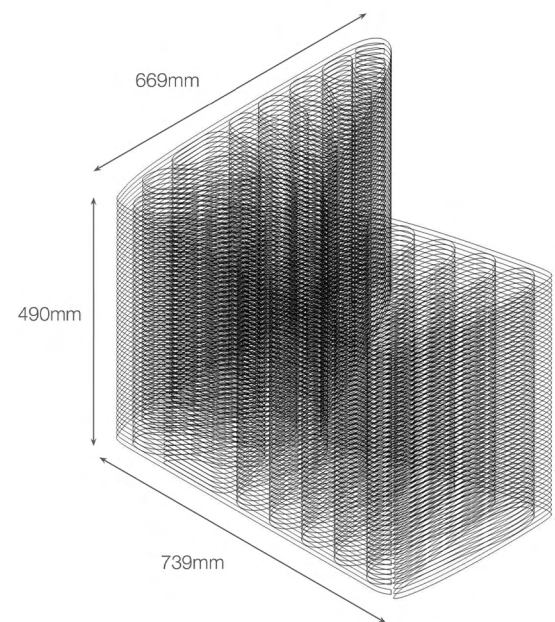
2024. The Federal Budget in Fiscal Year 2023: An Infographic. March 5th. <https://www.cbo.gov/publication/59727>.

Chair



Points spaced 10mm apart

Number points (approximately):
49,833



Approx volume: 0.16 cubic meters

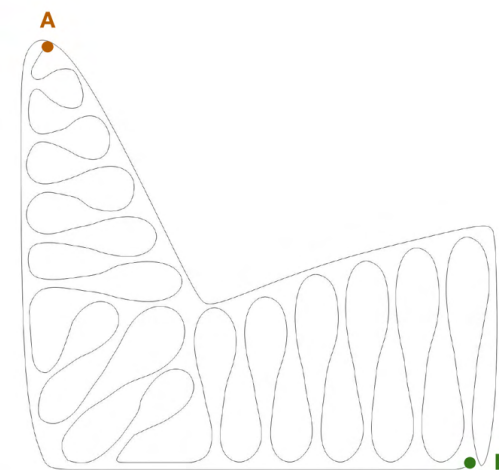
Layer height: 10mm

Number layers: 49

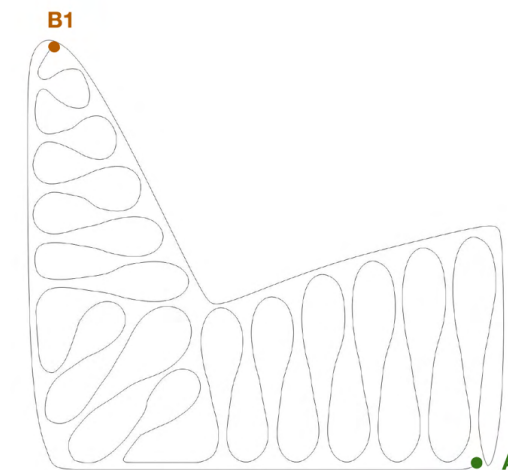
Number points (approximately): 49,833

Printing the first ten layers

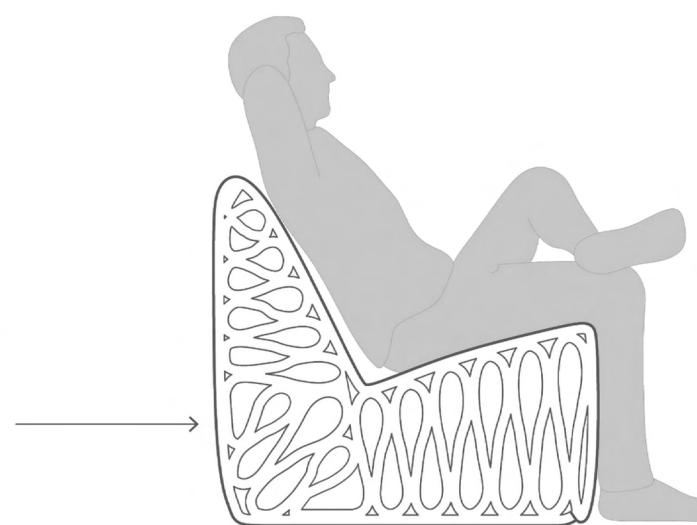
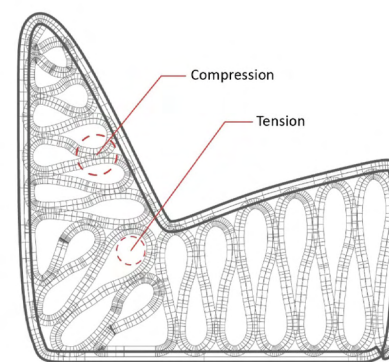
3D printing with earth and hemp has emerged as a groundbreaking approach in sustainable design, particularly in the creation of furniture like chairs. By combining the natural durability and biodegradability of hemp with earth-based materials, this method allows for the production of eco-friendly chairs that are both sturdy and environmentally conscious. Hemp fibers reinforce the earth material, providing enhanced structural integrity and resistance to wear, while maintaining the ability to decompose naturally at the end of the product's life cycle. This technique not only minimizes waste by using organic, locally-sourced materials but also significantly reduces the carbon footprint compared to traditional manufacturing processes. The 3D printing aspect offers immense flexibility in design, enabling the creation of chairs that are customized to specific ergonomic and aesthetic preferences, showcasing a perfect blend of innovation, sustainability, and comfort.



Layer 1 ends at point B



Layer 2 ends at point B1





Creating a pumpable mix for 3D printing with earth involves balancing the proportions of clay, sand, silt, and hemp fibers to ensure the material is cohesive, structurally sound, and maintains shape when extruded. Organic fibers like hemp enhance tensile strength and crack resistance, while the correct water content is critical for achieving optimal viscosity, activating the clay's binding properties without compromising flowability. Additives such as natural polymers can be incorporated to stabilize the mix, improving its printability and durability. Thorough mixing is essential to distribute components evenly and prevent nozzle clogging. Testing the mix on a smaller scale is crucial to refine proportions and ensure compatibility with 3D printer specifications, making adjustments based on structural integrity and drying results. This approach allows for the production of sustainable and durable printed structures using earth materials.

