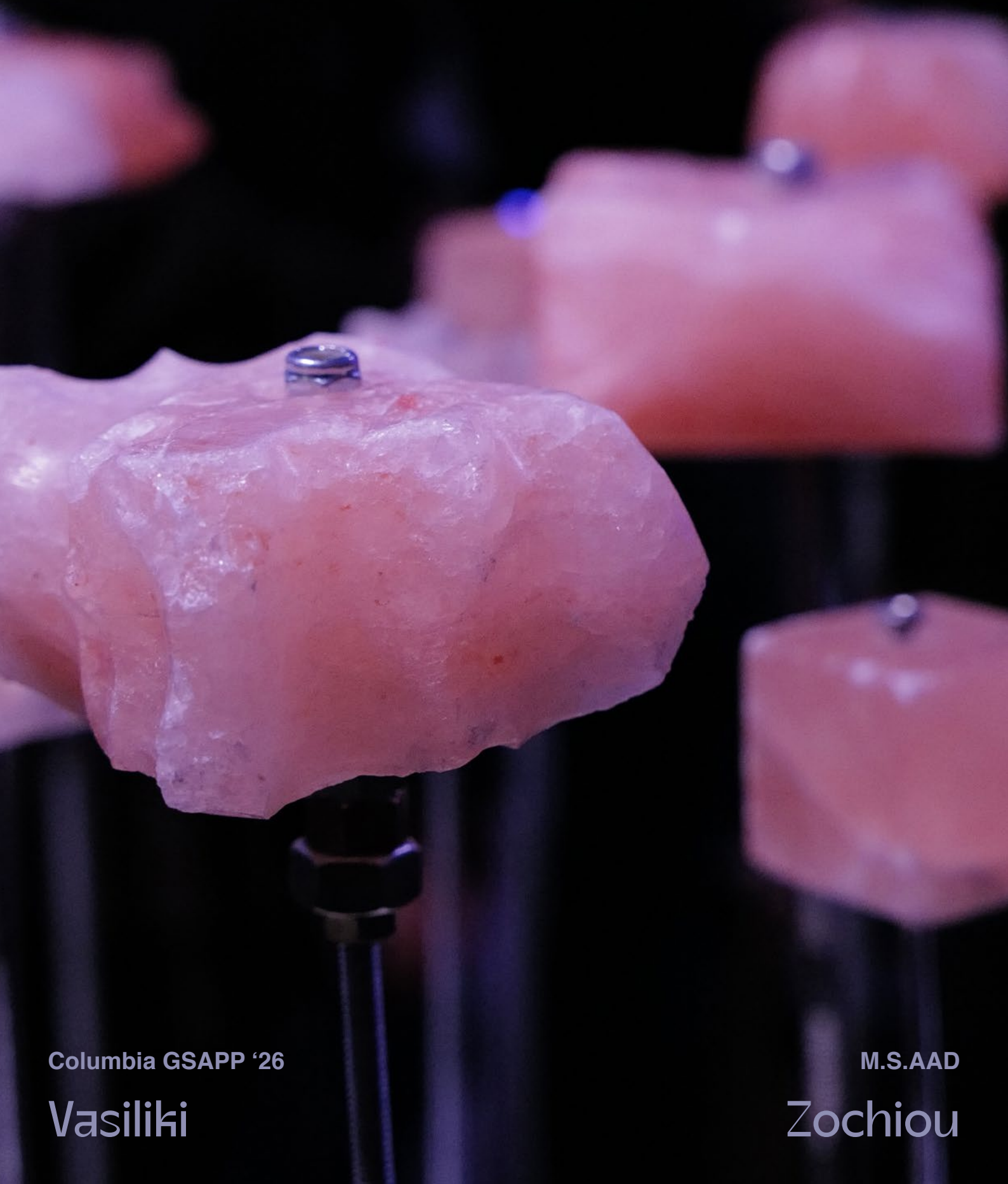


Performative

Negotiations

Or: Three Acts of More-Than-Human Encounters



Columbia GSAPP '26

Vasiliki

M.S.AAD

Zochiou

Performative Negotiations

To ask where our attention is directed is to ask what we care for, what we value, and what deserves our concern. (Young, M. (2024) Hyperhomogeneity: or Attention within the Background,” Perspecta 56: Not Found. Cambridge, MA: MIT Press, 2024, p. 1)

Architecture has long been understood as a material practice: the shaping of form, structure, and space. I recognize it as a *performative* discipline—one that does not merely design spaces of encounter, but *designs the conditions* for them to exist; one that provokes the aforementioned attention, care, and concern by foregrounding lived and embodied experiences.

This portfolio gathers a body of work developed across drawing, performance, writing, filmmaking, and installation design, investigating how architecture creates the conditions for performative relations between *bodies, technologies, species, materials, and temporalities* to emerge.

During this year, I am grateful to have explored and visited tidal landscapes of periodic repetitions, swamp territories of national reconstruction, rubber plantations as post-colonial sites of recovery, and salt and marine biomass as structural materials, among others. I researched historic sites and cases --like the Michelin rubber plantation-- as well as cintemporary topics that were in progress during the development of the project --like Hudson River’s climate data erasure or deep-sea mining in the Pacific Ocean—. All these, asking how political and ecological *negotiations are embedded within space*, and what the *agency* of architecture—and of us, as architects—is within these negotiations. Asking *what is at stake* in every decision.

Before this year at GSAPP, several of these questions existed intuitively, as fragments and concepts within my work. Throughout this year, I developed a language through which to express them, as well as the conceptual and expressive tools to critically examine them. I am grateful for the time, space, and feedback I received from my professors, peers, and everyone we crossed paths with throughout the year, all of whom became part of the development and culmination of this work—that I hope to continue onwards.



Act 1

Hudson River's Tidal Choreographies

Hudson river tidal estuary, NY
Summer 25: Grandenza Studio

Interlude 1

A swamp national scenography

Environmental modernity in the DDT anti-malaria campaign in rural Greece, as documented in photographs, maps and charts of the Rockefeller Centre Archive.
Toxicity Archives: Mark Wasiuta

Interlude 2

Carousels of extraction

A study on a cow-milking rotary parlour as an extractive system
Architectures of and for the more-than-human: Mireia Luzzaraga

Act 2

The Palace of Pneumatic Labour

A radio-navigated club for communist workers and rubber trees in the former Michelin rubber plantation, southern Vietnam.
Spring 26: Mark Wasiuta

Interlude 3

From Michelin pneumatics patent to Aerolande

Tracing the colonial and military roots of building with Air
Construction details as Cosmopolitical Enactments: Andres Jaque

Act 3

The Powers of Manganese Nodules

An investigation of deep sea mining in International Waters, that led to a minerals', sharks' and humans' solidarity.
Clarion Clipperton Zone, Pacific Ocean
Fall 25: Imani Brown, Andre Santos

Interlude 4

Material Libraries or Cataloguing the irregular

Collective exhibition design and research on marine biomass as building material
Spring '26: Lola Ben Alon

Outro

Salt Archaeologies

Edible Summits: Lydia Kallipoliti, Xiaoxi Chen
Avery 100, Columbia GSAPP

Hudson River's Political Personhood: Staging Alternative Fluvial Futures
Instructors: Grandenza Studio (Amaia Sánchez-Velasco, Jorge Valiente-Oriol)
Teaching Associate: Amy Suzuki
ADV IV Studio
Summer '25

Keywords: eco-monitoring, body of water, body of data, periodicity, tidal repetitions, performance, tarot reading

Hudson River is one of the most intensely **monitored rivers** in the world.

Data regarding its **water level, temperature, oxygen, salinity, currents, as well as its species' lives**, are registered every 15 minutes, transmitted and published every hour, and **federally collected and archived** for the past 30 years. Hudson's data travels from small devices across the river (sondes, recorders, eel mops) to monitoring stations, ground satellites and supercomputers all over the States, eventually available to our screens as diagrams, once per hour.

However, the Hudson River's data is creating a stock of information, but not a narrative. In an era when environmental monitoring fosters scepticism—while data removal creates even more—it is important to weave the data into meaning.

Meanwhile, Hudson is a tidal river. Deeply defined by the **periodic movement** of its waters, its currents diverse direction every 6 hours, creating a vibrant ecosystem of natural periodic circles.

In this notion of rhythm and periodicity lies the unifying system of these two bodies: the body of water and the **body of data**.

The Hudson Institute of Tidal Choreographies is an ensemble shaped by tidal pulses and technological rhythms. Seeking new forms of engagement—ones that acknowledge the river's **temporal intelligence** and ask how to attune to it—the Institute **designs techno-natural devices** that draw the initiated species—humans, eels, bacteria—into new collective rituals of desire, care, and repair.

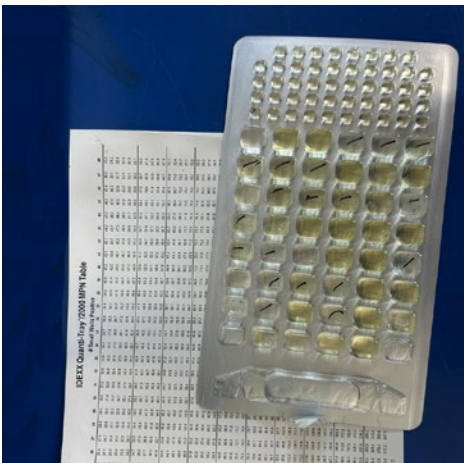
[Left]: Collecting marsh water
at Hudson River's Monitoring
Field Station, on the 23rd June
2025, 1:46PM, 42°C



HRECOS acoustics monitoring



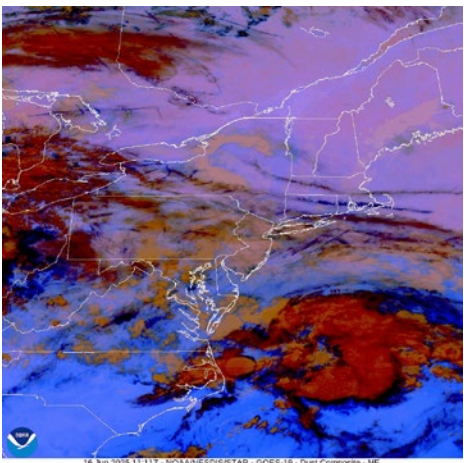
Lamont's monitoring fieldstation



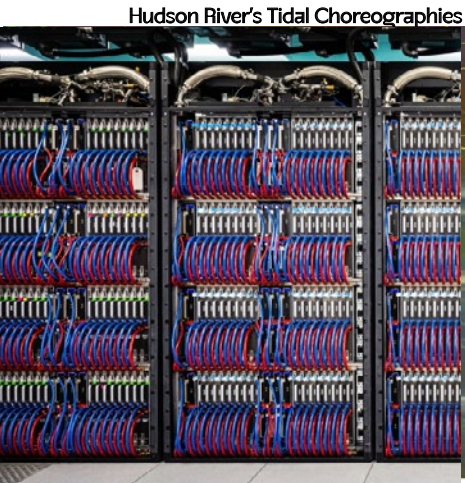
Enterococcus testing in the fieldstation



GOE-S satellite ground station



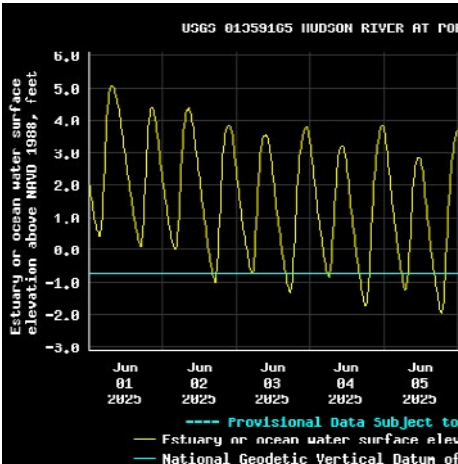
NOAA weather monitoring



USGS supercomputers

[Images]: The River's distributed monitoring apparatus

[Left]: Concept model: The River's accupuncture



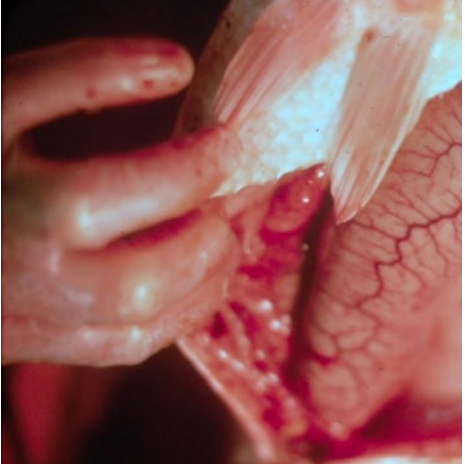
USGS estuary surface charts



NOAA headquarters



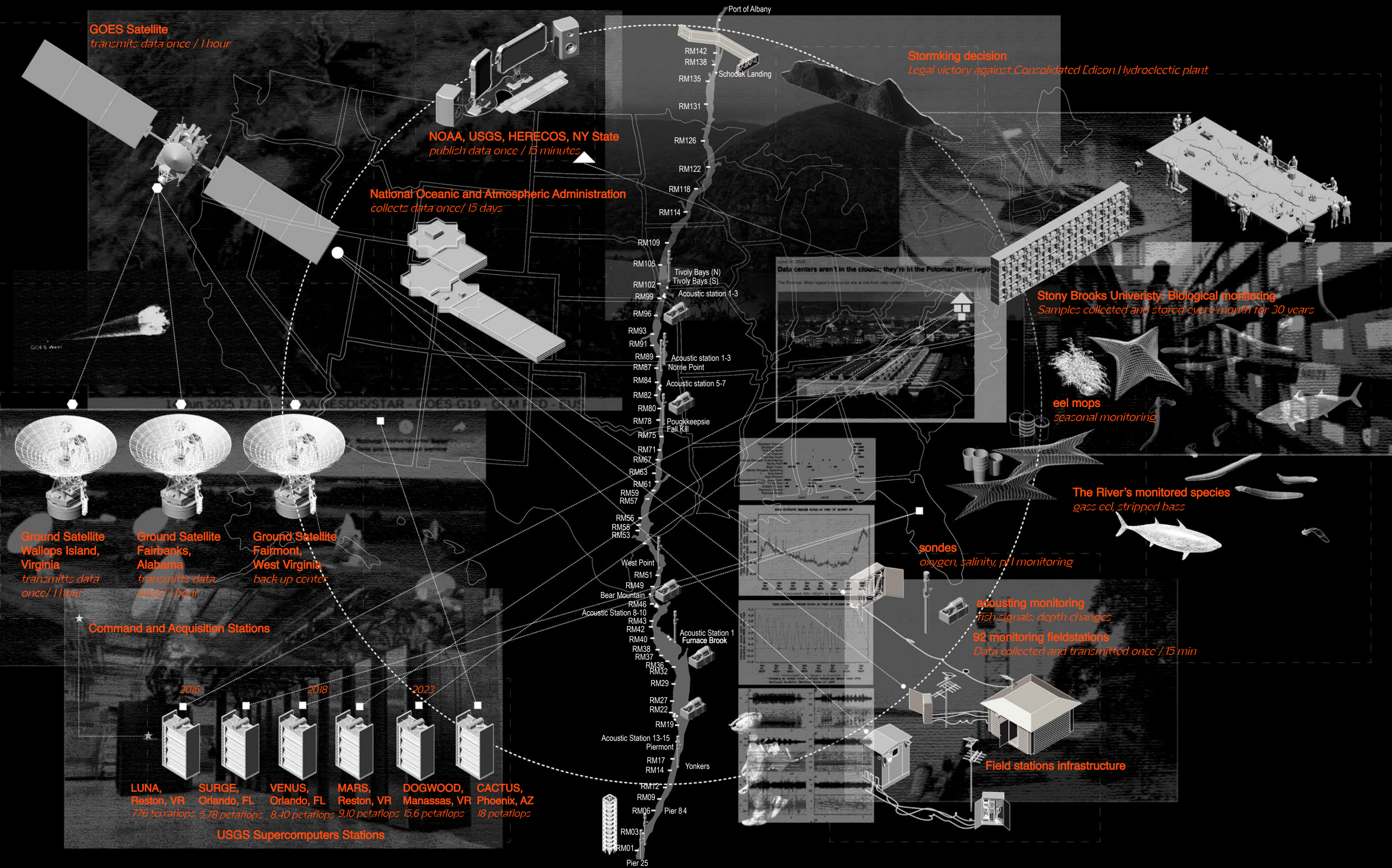
Monitoring sonde in the Piermont fieldstation



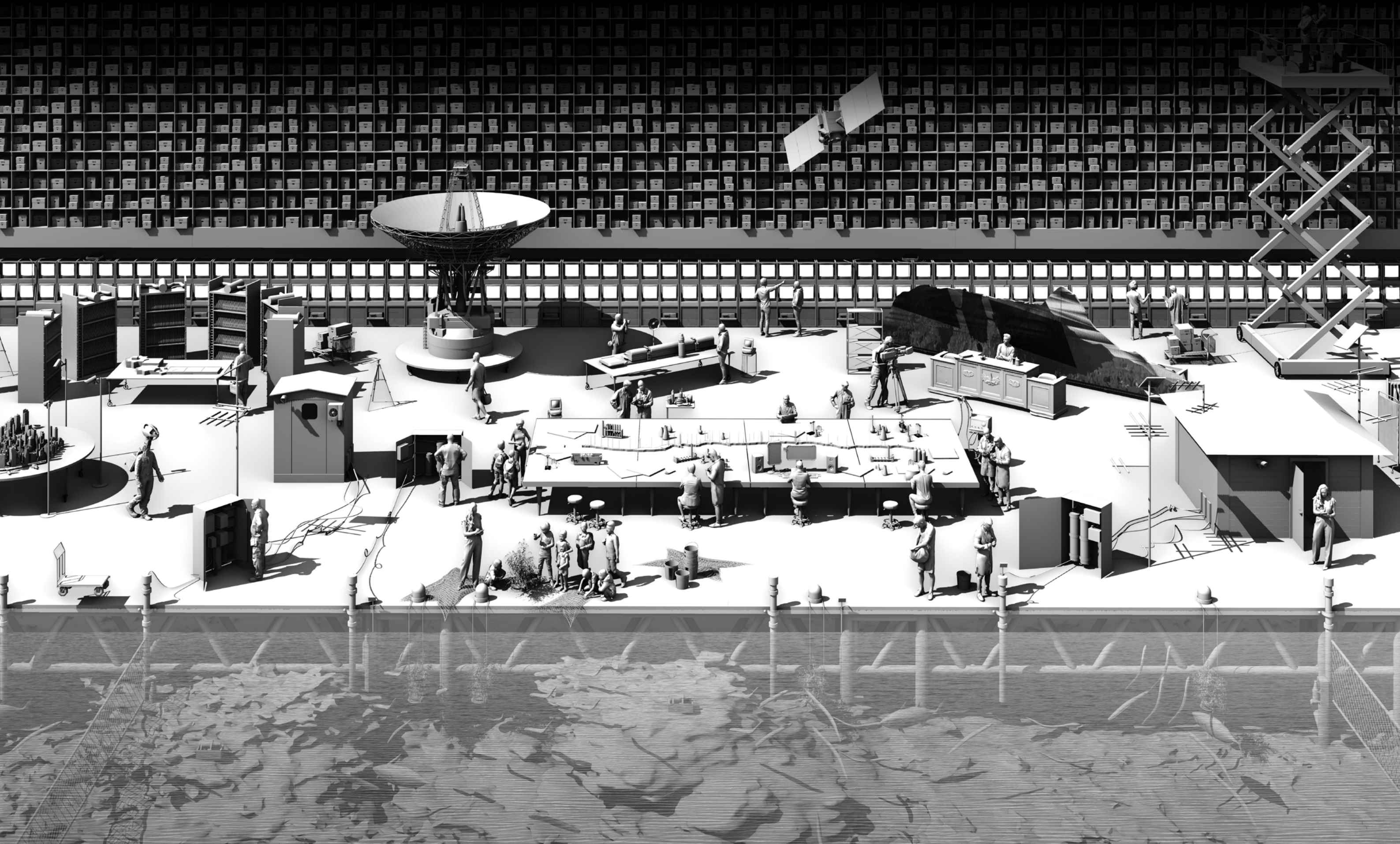
Stripped bass examination for microplastics



Eel mop in The Strooks Felt dam



Hudson River's Allegorical Scenography



Hudson is envisioned as a system of **floating techno-natural devices**, the Hudson's Institute of Tidal Choreographies that acknowledge the temporal intelligence of the river's tides, species, and monitoring devices and create a synergy between them. They are responsible to **restore the river from microplastics and enterococcus pollution**, to ensure that **tidal windows of mobility** are respected and to **develop repeating rituals of care** among humans and other species.

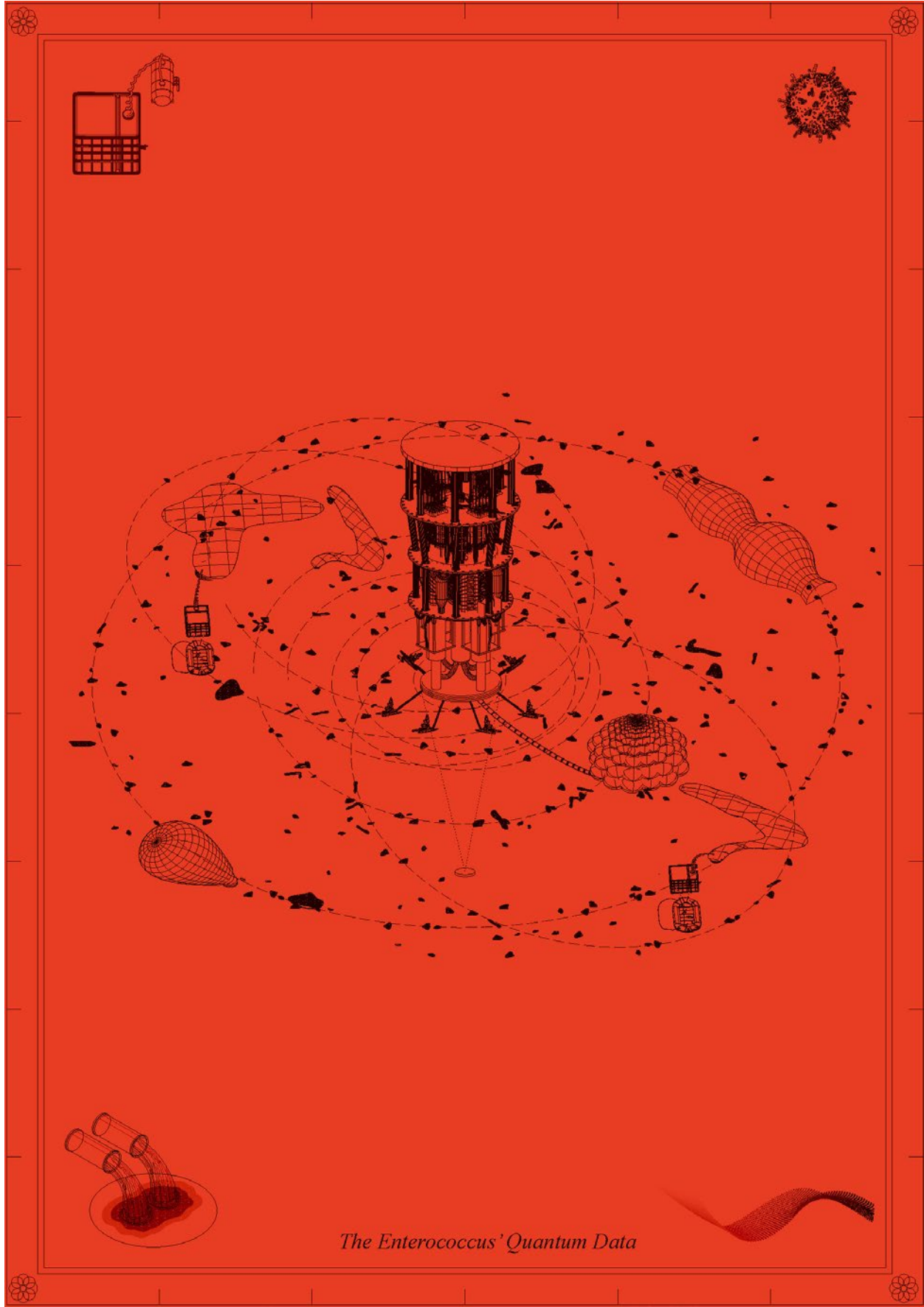
The River's body of **data** is **re-territorialised**, both so that it is kept safe from erasure, as well as so that creates new narratives; Instead of charts and diagrams, data become a way of drawing humans into the river's temporal intelligence, into cycles of care, and ultimately into a deeper recognition of its **interdependence**.

Initiation in the Institute takes place via a **tarot-like card reading**. Each of the devices is **represented by a card**, and defines the floating device that each new member of the Institute will be assigned to.

The Enterococcus Quantum Data:

*This is a very important card. Enterococcus monitoring is related to levels of **sewage** in the water and is happening in the 92 stations every ebb tide, and after a rainfall. You will be informed from the sondes real-time for the results. If the bacteria levels are beyond the indicated level, you will be responsible for collecting part of your area's sewage and process it through our biogas plant.*

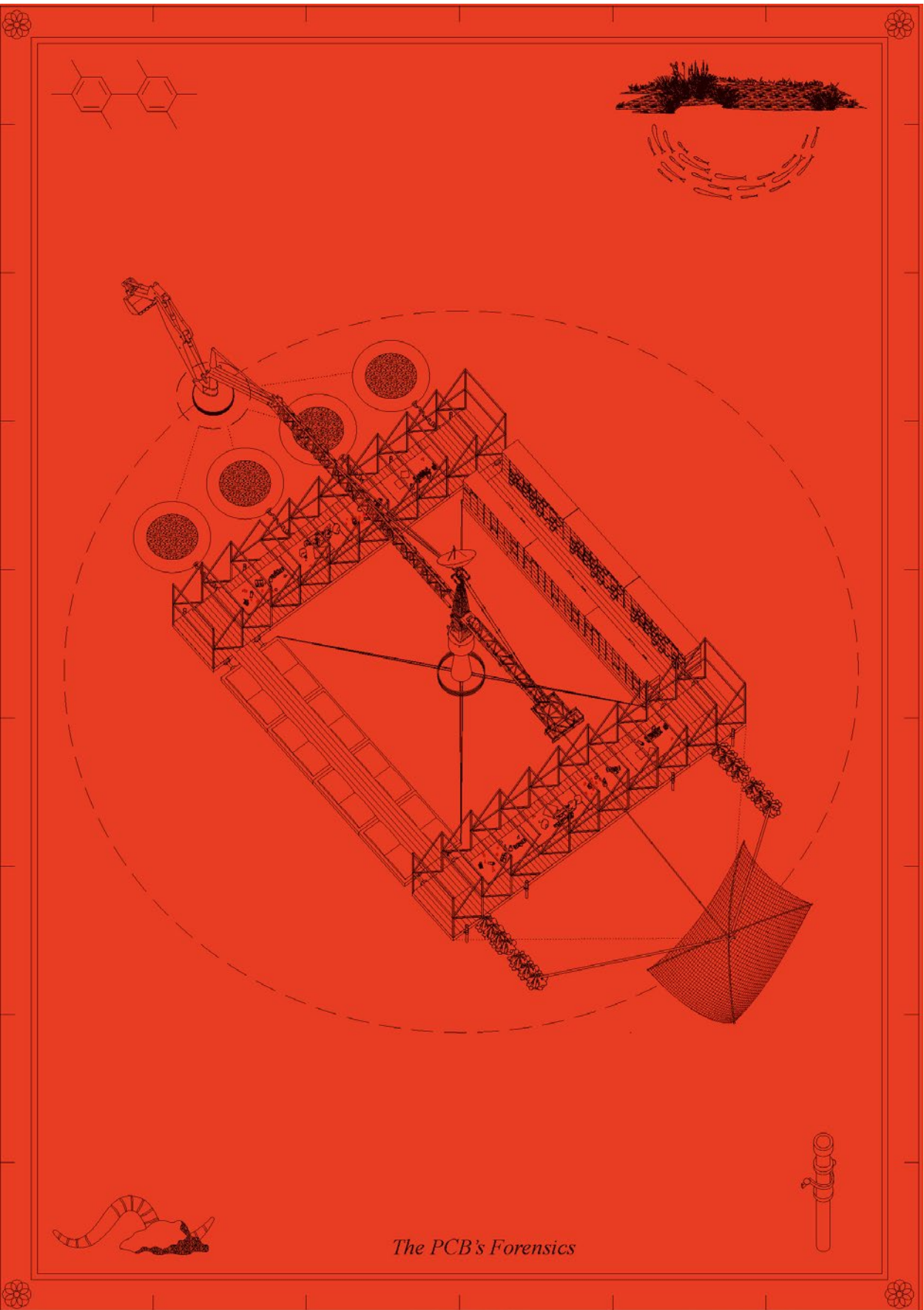
*Biogas, is how our community run data-centre operates. We have a brand-new quantum computer, transmitting data to our satellites **6 times per tide**. A lot of concerts and **bacteria parties** have been staged around the supercomputer in the summer. We are trying to be very careful with the sewage, but as you can see this is not always possible. Remember: having high enterococcus levels, is as important as having low ones; **we need the sewage to run our data-center**, as it is with its data that our whole institute operates.*



[Card 1] The Enterococcus Quantum Data



[Card 2] The Confession Nests



[Card 3] The PCB's Forensics

The Confession Nests:
One of the most powerful cards. Hudson river is one of the biggest migration corridors in North America. A lot of birds are injured and killed due to light pollution, and glass facades while trespassing the river.

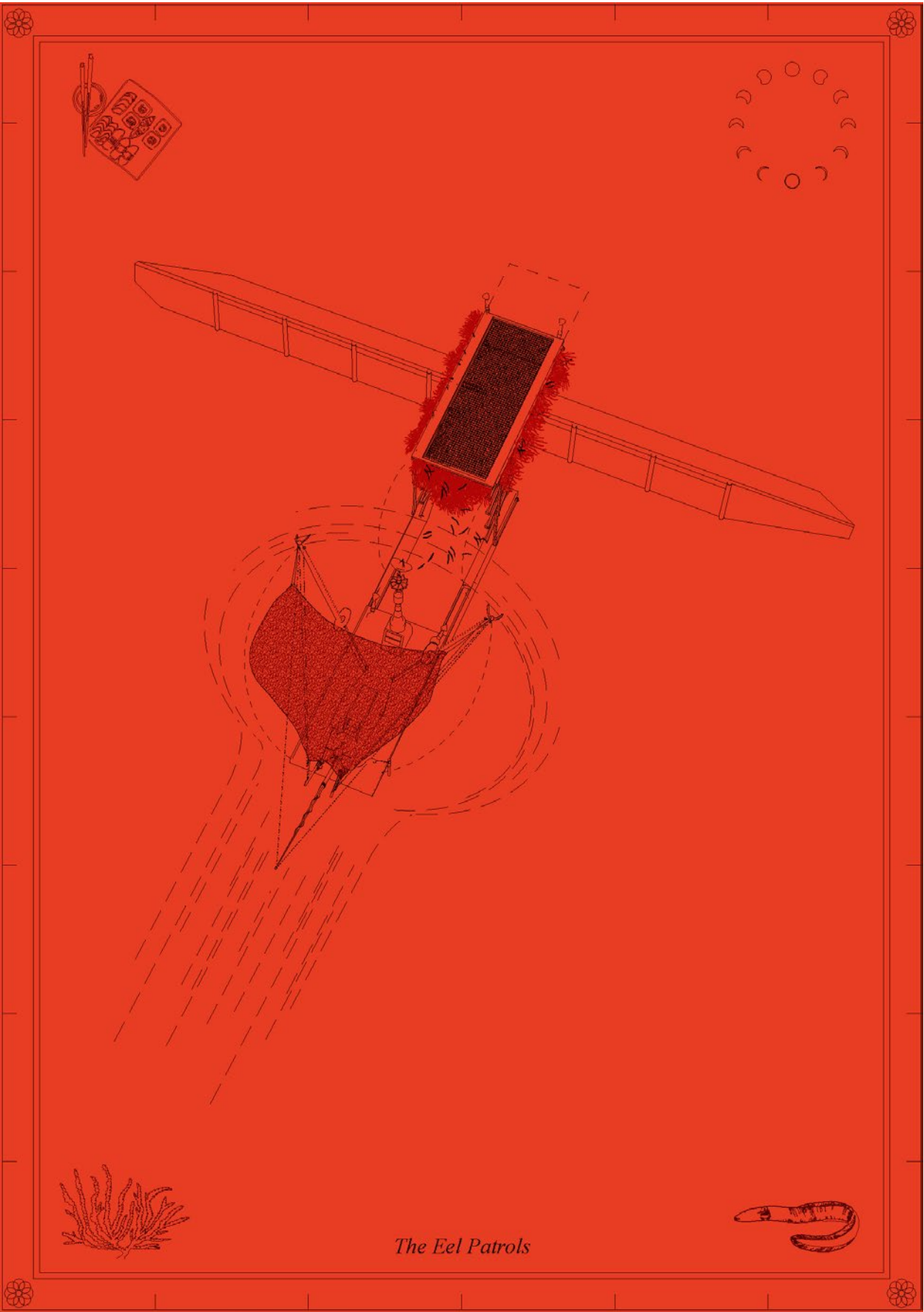
Confession nests are floating bird clinics; landscapes of accumulated bird feces. They are an invaluable living data archive that records bird data but also provides them shelter and treatment. They seem to be an interesting place for oysters, and most of them host oyster reefs.

This means that next to these moving bird feces islands, you will typically find the cleanest Hudson water to swim.

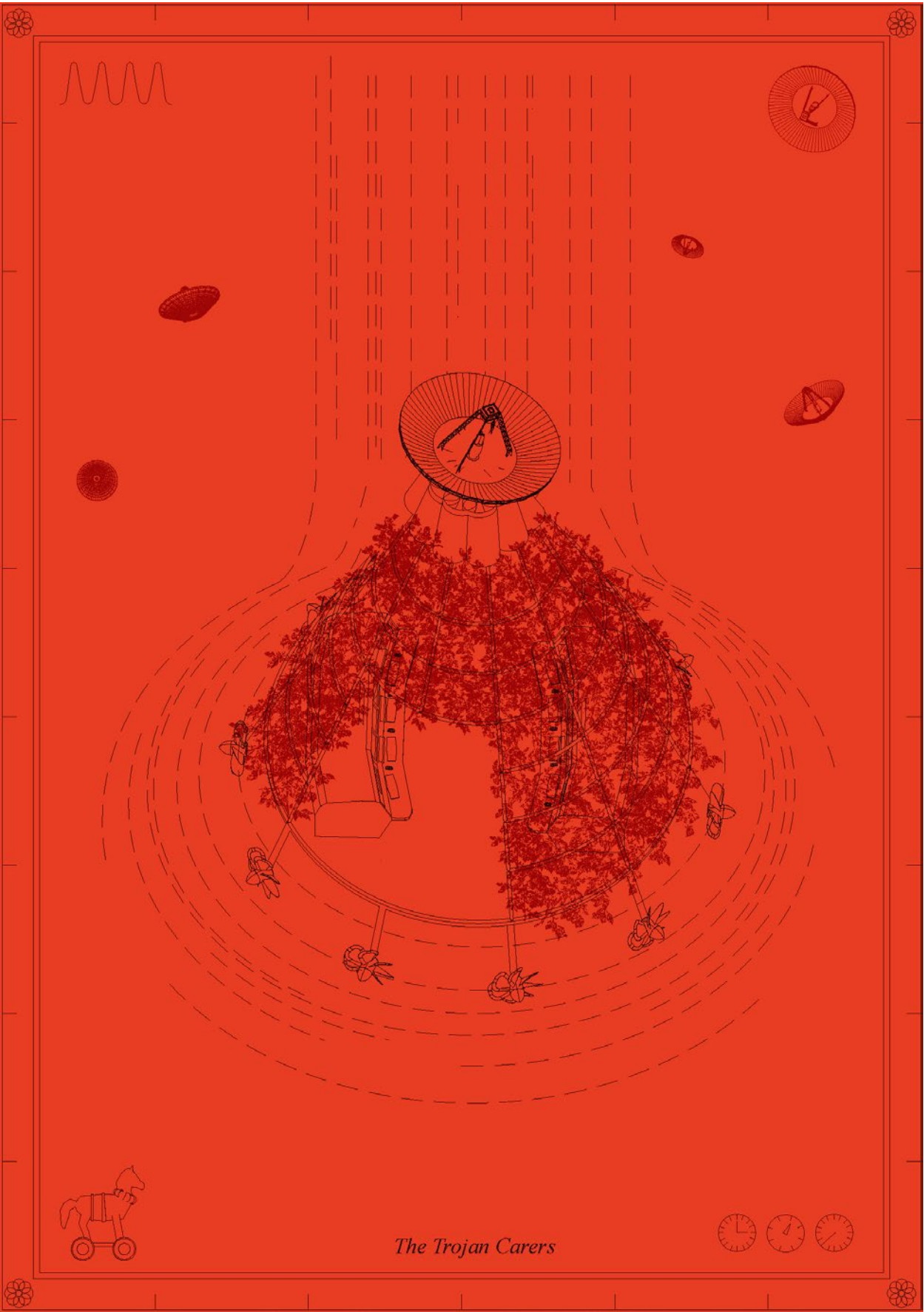
The PCB's Forensics:
US government declared that PCB microplastics monitoring in Hudson is a closed case, and that the data collected proved sufficient results. This is not true.

The Forensics keep on collecting soil and fish data, as evidence that pcb's are still an existing problem. Your forensic vessel will be in touch with the sondes that keep track of oxygen and phosphorus in these areas and you will need to intervene accordingly.

Also, you should exchange data with the closest confession nest; bird excrements have nitrogen, and nitrogen can be useful for your soil.



[Card 3] The Eel Patrols



[Card 4] The Trojan Carers

The Eel patrols:
Great card! Eels enter the river every summer, and try to travel upstream. Small dams across Hudson are preventing them from going upstream, and their numbers decrease.

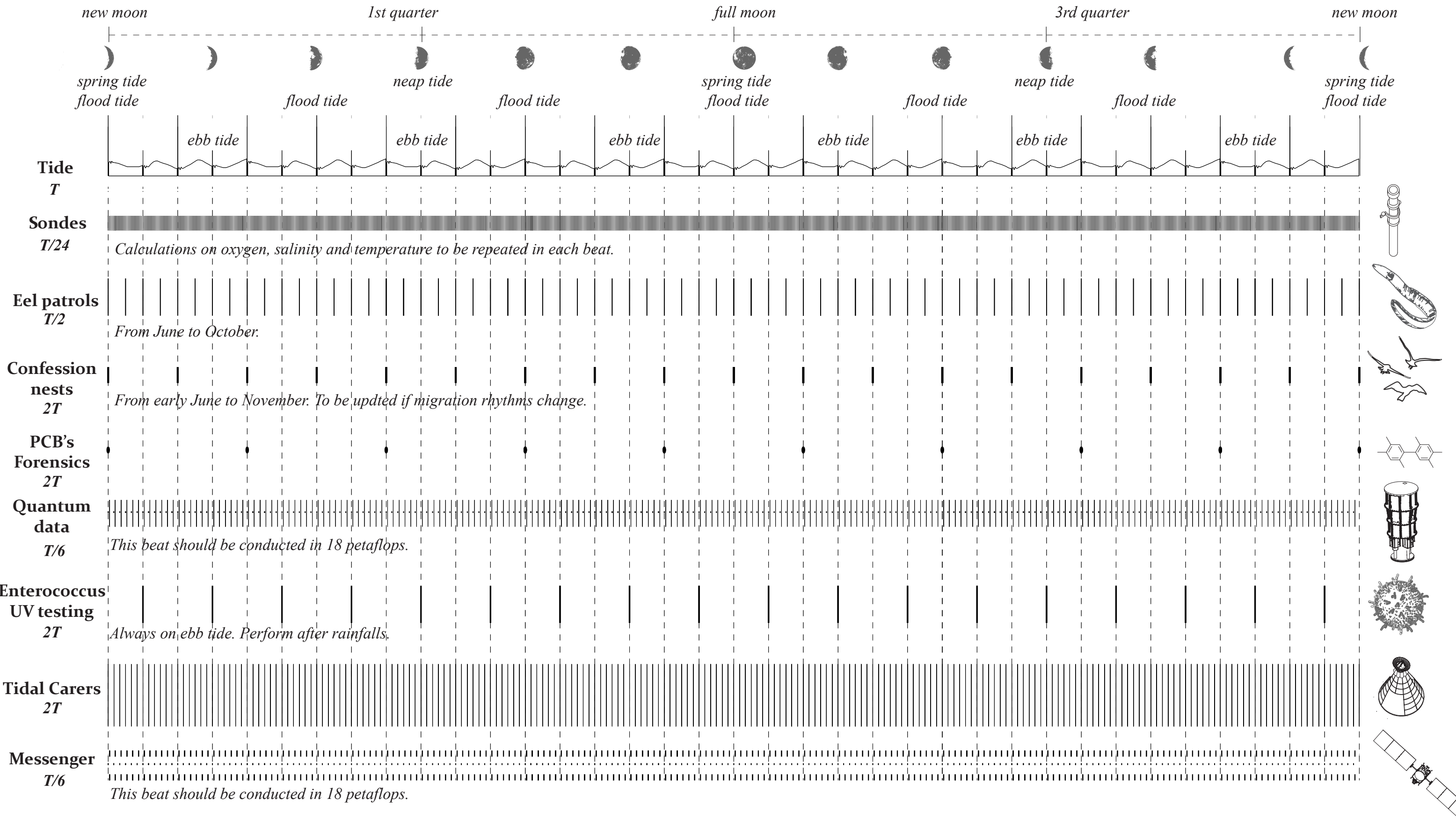
This is why eel patrols have sondes that receive a transmission from tagged eels, alerting the patrols when a shoal is trying to cross a dam. They work in individual vessels, or in groups. These vessels carry an eel landscape that can be lifted over the dam.

The Trojan Carers:
Trojan Carers, receive satellite data with the moves of all vessels in the river.

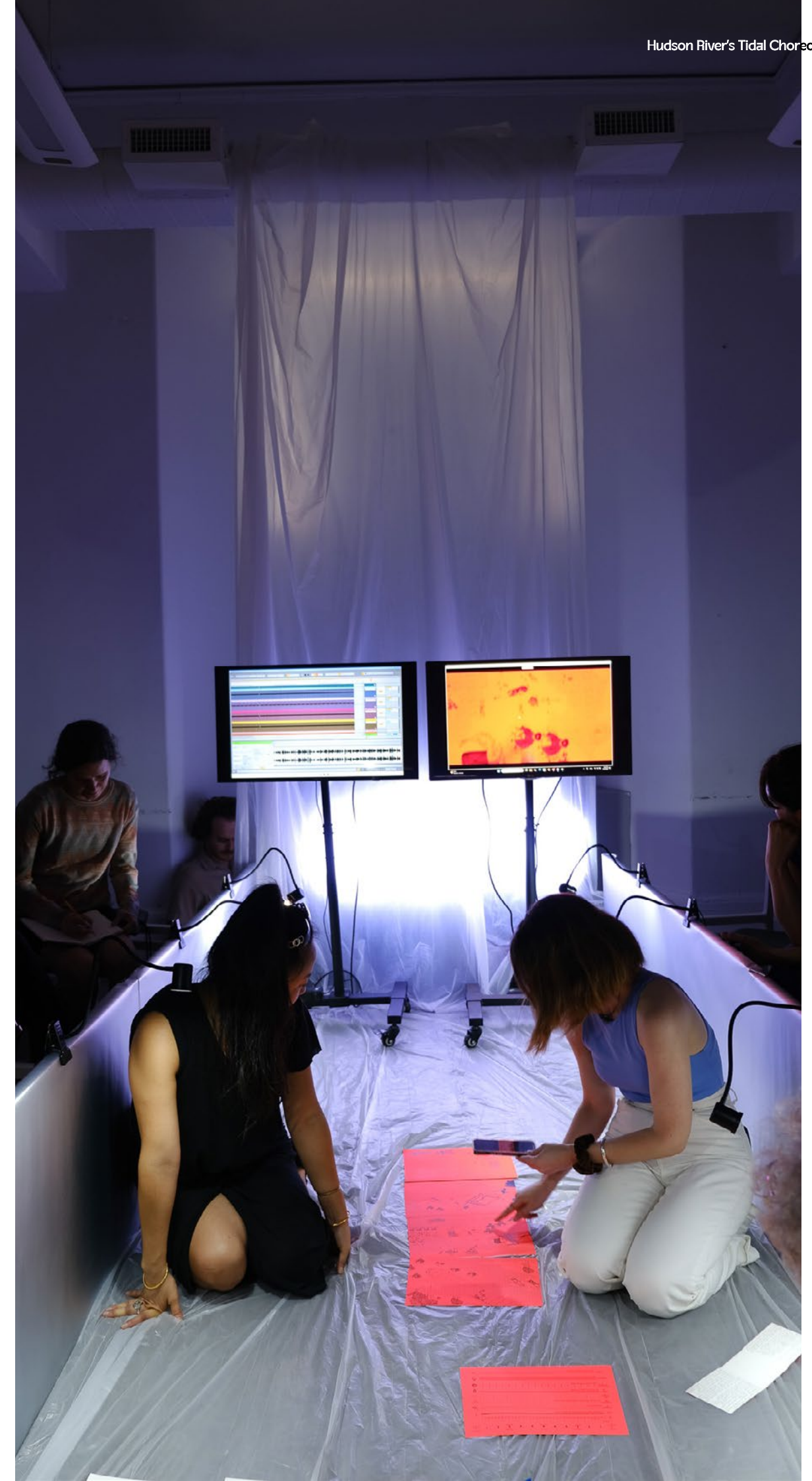
To avoid riverbed's erosion and save fuels, all cargo ships that trespass Hudson, should move according to the river's currents and tidal windows. They receive tidal predictions models for their route and data we collect. If their route exceeds this time, they must slow down and reach their nearest anchor point, to wait for the next window.

If any cargo vessel breaks this rule, the Carers should approach it and hack the vessel's orientation system, eventually leaving it data blind.

Time is counted in **periodicity and rhythm**, the common language of the river, of humans' **body circles**, of the species **mi-grations** and of the machines' **data monitoring and transmission circles**, all counted in tides. The river is the **choreographer** of it all.



The card-reading session:
The card reading session took place
in Avery 408 on the 30th of July 2025,
4PM and on the 31st of July, 2PM.

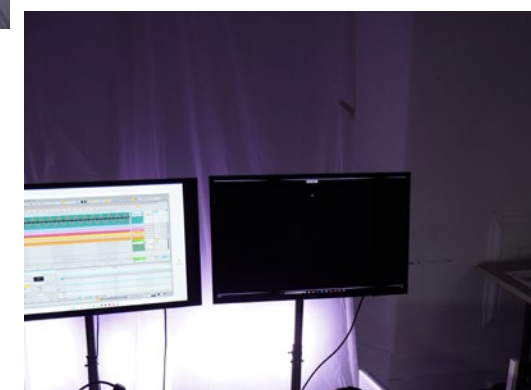
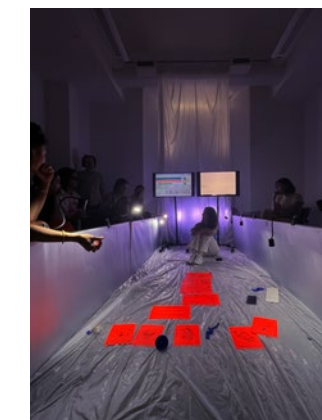
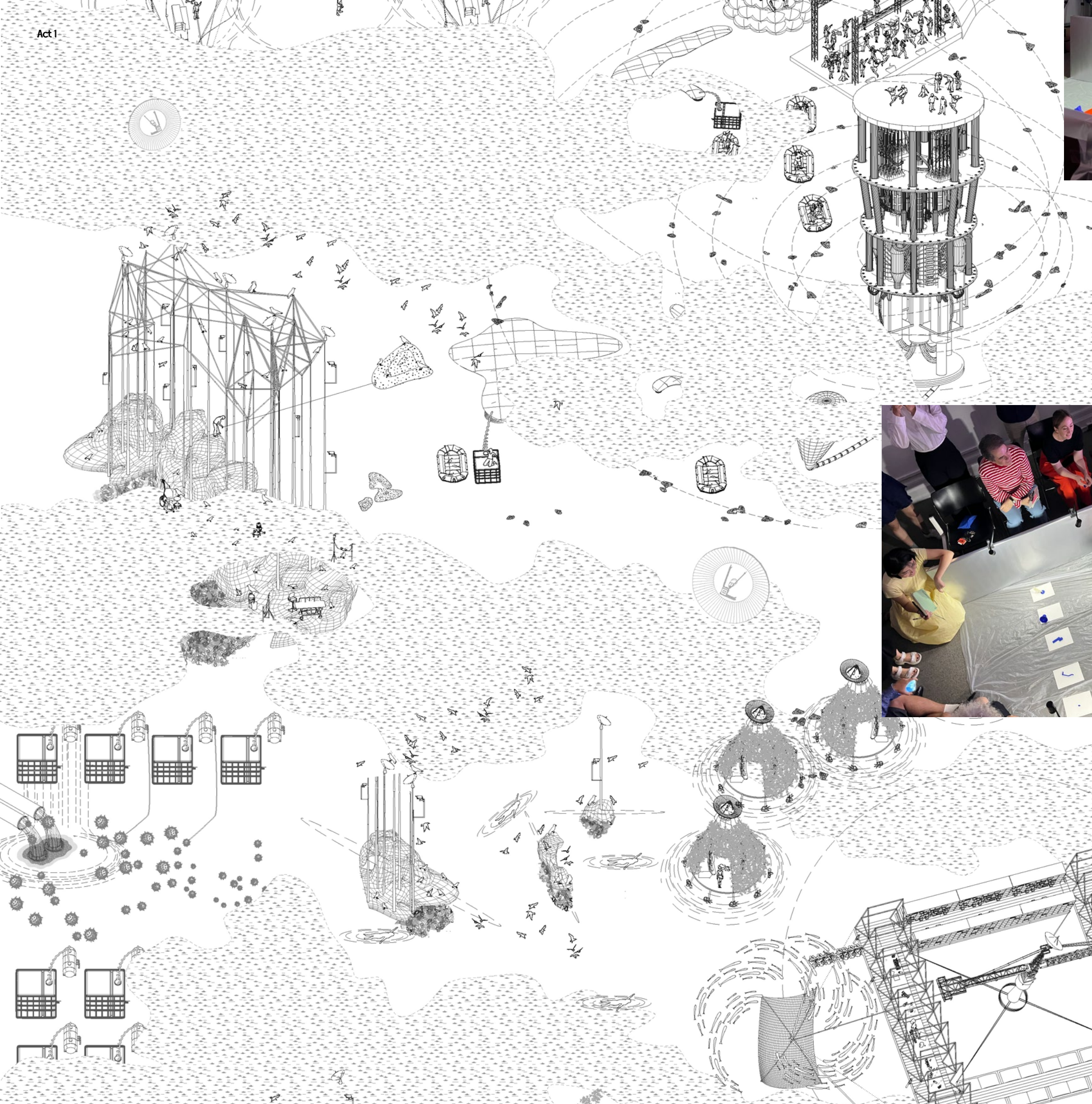




[Top Left]: Concept collage for the performance setting in Avery 408. Printed photo, mylar and purple light filter.
[Top Right] A discarded protective sheet from Avery 600 studios renovation became the set of the performance

[Bottom Left]: The card reading was live projected via my phone on the monitor.
[Bottom Right]: Each participant was assigned an 'agent' before entering the room: one of the monitoring devices of Hudson.

[Next page]: Each device had its own periodic sound, that started playing when the card was revealed. Special thanks to George Menegakis for assisting me with the sound design and control during the performance!



Interlude 1

A swamp national scenography

Staging environmental modernity in the DDT anti-malaria campaign in rural Greece, as documented in photographs, maps and charts of the Rockefeller Centre Archive.

Toxicity Archives
Instructor: Mark Wasiuta
History/Theory seminar
Fall '25

Keywords: environmental modenrity, Greece, Rockefeller campaing, 1950s, aerial spraying, toxic rituals, rural landscape, national re-construction, archival research



Only few kilometers apart from each other, in the swampy landscape of Marathon, Greece, stand two monuments dedicated to the salvation of Athenian population across radically different historical moments and occasions. The first commemorates the Athenian victory over the Persians in 490BCE —an event mythologised as a victory of Western civilization. According to historians, the morphology of the attic landscape favoured the victory of the Athenians; the great swamp of Marathon neutralised the cavalry of the Persians and forced them into a drowning trap. The second one is the Rockefeller monument, one that marks a twentieth-century victory of the American-Greek campaign against malaria, a disease that had shaped Greek rural life for centuries. The swamp was the enemy in this case, and its draining framed salvation as a technoscientific achievement that transformed landscapes, bodies and everyday lives in rural Greece of the 1940s and 1950s.

The anti-malaria campaign and in specific the DDT interventions supported by U.S. Institutions in post-war Greece functioned not only as a medical response to a long-standing disease, but also as political and environmental enactments of chemical modernity. Though exploring the Rockefeller Archive’s photography, maps and chart materials, a scenography of postwar western visions of progress, of architectures of control (and fear) over nature, of expert actors, as well as of new everyday toxic rituals of hygiene is constructed. In the case of DDT anti-malaria campaign in Greece, the population’s exposure to toxicity is underlying as an inevitable encounter during a glorious a celebrated moment of disease control and environmental management.

[Left]: Monument to the battle of Marathon, 490BCE (reconstruction)
[Right]: Monument to the draining of Marathos Marsh, 1934. Largest letters represent Greek for 11 ‘Rockefeller’ and inscription includes “gratitude to this great organization.”



The Greek Landscape before draining, as captured by United Nations Relief and Rehabilitation Administration (UNRAA) sanitary engineers.

A. The Rockefeller DDT anti-Malaria Campaign in Greece

Malaria was one of the most persistent diseases in Greece in the twentieth century, endemic across large parts of the countryside, particularly in lowland and coastal areas. According to K. Gardikas, malaria was widely blamed for the economic backwardness of post-war Greece and had affected four-fifths of the population, with deaths numbering in thousands after World War II.¹ Before the 1940s, malaria control relied mainly on quinine prophylaxis and localized larval control measures. The Rockefeller Foundation, active in Greece since the 1920s, was a key actor in the international campaign against the disease.² In the mid-1940s, global malaria strategy shifted toward chemical eradication of mosquitoes and direct spraying of breeding environments. The introduction of DDT during and after the Second World War marked a turning point in malaria control, transforming Greece into a testing ground for chemical eradication and rural modernization.

DDT (dichloro-diphenyl-trichloro-ethane) was first synthesized in 1874, but its insecticidal properties were discovered only in 1939. It was quickly celebrated as a means of eliminating insect-borne disease. As Rachel Carson noted, it became so widely used in the post-war years that it appeared harmless and familiar.³ Its cost-effective application through residual spraying revolutionized vector control and replaced most earlier antimalarial strategies. Greece, where wartime hardships had destroyed earlier progress, became one of the first places where the new DDT campaign was applied.⁴ The campaign was supported by international actors including the Rockefeller Foundation, the United Nations Relief and Rehabilitation Administration, and later the World Health Organization. The Rockefeller Foundation supplied DDT, spraying aircrafts, and experts to advise on techniques, logistics, and evaluation, while training Greek personnel to implement the campaign.⁵

The effects were dramatic. In many regions, malaria incidence dropped sharply within one or two transmission seasons, with major declines in infection rates, hospitalizations, and mortality. For Greek authorities, the campaign demonstrated state capacity and modernization after war and civil conflict. For the Rockefeller Foundation, Greece became a powerful example of the effectiveness of DDT-based malaria control.

B. Conceptual reconstructions of the Malaria Landscapes

The name of the disease itself, is directly connected to landscape elements, namely air and swamps, both in its international (Italian) as well as its Greek term;

- (italian) **malaria** (**mal+aria**) : bad air, resonating the long-dated belief that the disease was transmitted through breathable air
- (greek) **elonosia** (**elos=swamp + nosos=disease**) : the disease of the swamps

Pre-war malaria studies in Greece focused on the specific climate, topography, and ecological conditions of each region, promoting localized approaches. In contrast, post-war American strategies reduced landscape to quantifiable data, promoting DDT as a universal technological solution. This shift—from ecological specificity to numerical standardization—was both scientific and political, aligning malaria control with U.S. post-war visions of modernization and geopolitical influence. According to K. Gardikas, the DDT campaign reflected the modernist belief that scientific progress could ignore local diversity and social particularities, rendering the complex ecologies studied during the interwar years increasingly irrelevant.⁶

Unlike pre-war Greek maps emphasizing regional diversity, post-war malaria cartography flattened landscape into standardized units of intervention. Villages and populations became countable targets, while maps, charts, and statistics replaced detailed environmental descriptions. Whether in Marathon or Epirus, DDT promised the same outcome: interruption of malaria transmission through chemical mosquito control.

This epistemological flattening made the anti-malaria campaign scalable. As Arun Agrawal argues in the case of India, numbers became central to technologies of governance, helping not only to represent land and vegetation but also to constitute them. In Greece, Rockefeller archive photographs labeled river streams as “breeding places” and rural areas in Crete as “malaria reservoirs.”

C. Hygiene as a matter of infrastructure

Under this framework of redefining the rural Greek landscape in numeric and functional terms, malaria control became a social and state concern beyond its hygienic dimension⁷. As seen in the Rockefeller Archive documentation, U.S. policy focused on three aspects: rural infrastructures related to disease control, state dependence on imported DDT, and the translation of human loss into lost work-days and wages, promoting a modern view of the rural population as productive labor force.

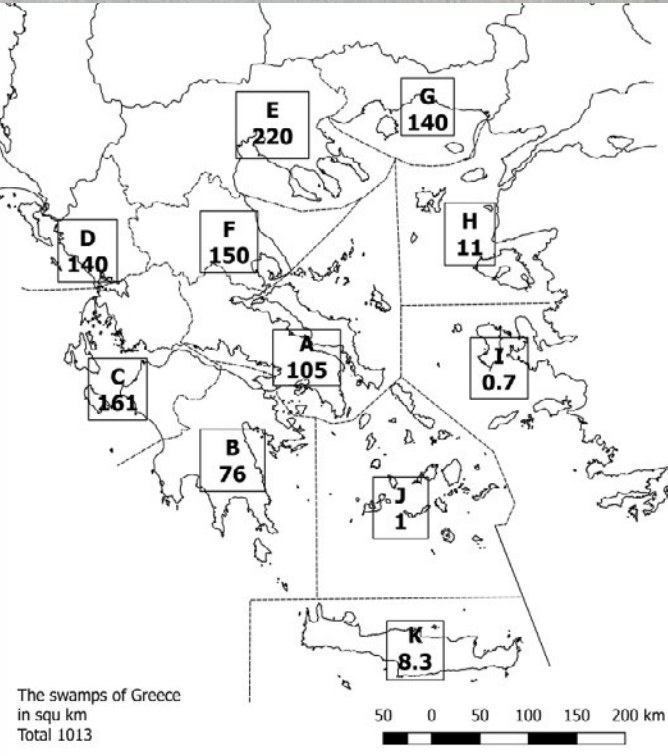
1 Gardikas, K. (2018) Landscapes of disease: Malaria in modern Greece. Budapest: Central European University Press. , p. 11
2 Box 2, Folder 12. Series 749 Greece. Rockefeller Archive Center, Sleepy Hollow, New York. Date accessed:11/13/25.
3 Carson, R. (1965) Silent spring. Harmondsworth: Penguin in association with Hamilton, p. 34
4 Landscapes of disease, p. 66
5 Box 2, Folder 14. Series 749 Greece. Rockefeller Archive Center, Sleepy Hollow, New York. Date accessed:11/13/25.
6 Landscapes of disease, p. 41
7 Ibid, p. 34

The following tables obtained from official data. (Malaria Division of School of Hygiene) are of interest in connection with malaria in Greece and indicate the importance of its control.

1. A very conservative estimate of the economic losses due to malaria prevalence.

(1921 - 1928)

I. Wages lost through sickness	
(Group ages 0-4, 15 & : 64% // 5-14 : 36%)	
Annual death average 4500 x 200 (malaria cases to each death): 901,800 malaria cases	
901,800 x 0,64 x 10 (lost wages for at least three malaria attacks) x 35 (wage per day).....	219.923.200
II. Reduced efficiency of the workmen, weakened by anaemia and cachexia: 901,800 x 0,64% x 20 x 35.....	439.846.400
III. Medical Care:	
901.800 x 5 (doctor's calls) x 50 drs. (doctor's fee)	245.450.000
IV. Malaria Drugs:	
901.800 x 50 drs. (100 & 20 gr. quinine tablets)...	45.090.000
V. Losses through death from malaria :	
4500 x 250.000 Drs.....	1.227.250.000
Total in drachmas based on the pre-war value of Drachma.....	2.161.559.600
Equivalent in \$.....	21.815.506



[Top left] Economic losses due to malaria 1921-1928
[Bottom left] The Swamps of Greece and the divided Areas of Intervention.

On February 1945, the annual cost of malaria was estimated at 4,636,000,000 drachmas, while in the 1960s Livadas and Athanassatos estimated the benefits of malaria elimination at US\$26 million.⁸ Rockefeller archives also translated sickness and deaths into lost wages, reinforcing the transformation of the Greek countryside into a productive modern landscape.

Within this framework, the anti-malaria campaign reframed hygiene as a question of infrastructural performance linked to environmental engineering and economic productivity. Drainage, long central to malaria control, became an index of infrastructural modernity. Marshlands, irrigation systems, and flooding were treated not only as environmental problems but as failures of hygiene and development. Rockefeller archival photography often portrayed locals beside poor housing and animals, associating rural proximity with infection and bad hygiene. Stables became “architectures of fear,” carefully counted and documented, while their elimination reflected the American push from small-scale rural infrastructures toward larger production systems.

The introduction of DDT extended this infrastructural conception of hygiene into global supply chains. By relying on DDT as the basis of malaria eradication, Greece became dependent on imports produced and regulated largely by U.S. petrochemical industries linked to the Rockefeller Foundation. According to K. Gardikas, the UNRRA program in Greece consumed half of U.S. industrial DDT production, receiving around 300 tons of pure DDT—more than any other country in the program. At its peak in 1946, the sanitary engineering section in Greece was second in size only to that of China. Alongside the United Nations Relief and Rehabilitation Administration, the campaign involved the Greek Army, the British Army, and the U.S. Navy’s 404th Epidemiological Unit.⁹ As a consequence, Greek rural hygiene became inseparable from the infrastructures of petrochemical capitalism.

D. Actors and different forms of international and local expertise

Different forms of expertise were needed for the successful implication of the campaign, consisting both of Greek and American professionals. Looking closely the tree organization chart of 1945 found in the Archive, the interdependency of international and local forces as well as of pilots, doctors, foremen and other actors of the campaign is evident.¹⁰ However, although their roles were complementary, conflicts and questions of sovereignty were common to arise. In particular, several pages of Rockefeller Archive’s folders of 1948 are dedicated to the extended correspondence of Col. Wright (working under the UNRAA and responsible for the DDT supplying and air spraying) and Professor Livadas (the Greek malariologist supervising the house spraying and the conventional methods of larval control) with G. Strode of the United Nations, regarding the credits for the campaign’s success.¹¹

In the Rockefeller Archive the different kinds of expertise and actors are often documented often along with the architectures, objects, vehicles that define their contribution to the program, each of them conveying messages about the country’s narrative towards modernization. Pilots, doctors, malariologists, and rural populations were all essential actors in the success of DDT spraying. From the aerial operations of pilots surveying and spraying the countryside, to the experimental spaces of laboratories and swamps, and finally to the intimate interiors of rural homes and bodies, the campaign unfolded as a layered chemical choreography of spraying in different scales; the swamps, the homes, the bodies.

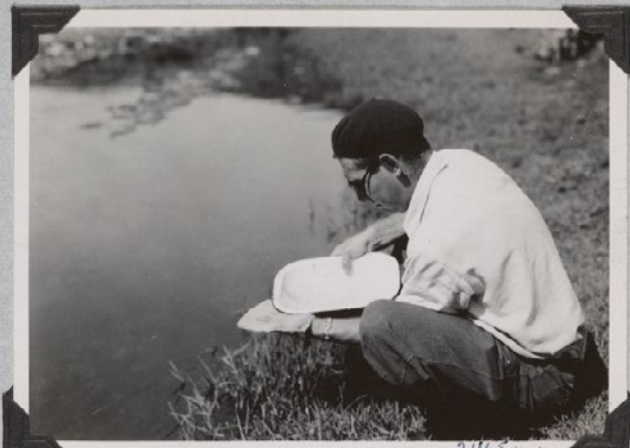
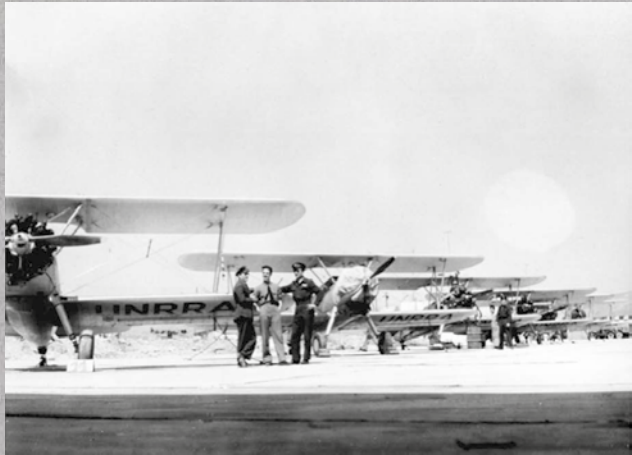
Pilots of Greek Airforce Service were trained within U.S. military and Rockefeller-supported frameworks.¹² They brought wartime technologies and practices into the realm of public health. The campaign relied heavily on the aircrafts provided by the UNRAA (and funded by the Rockefeller centre) that enabled massive spraying operations and rapid territorial coverage. Documented in the Archive’s photography, pilots and their aircrafts are promises of progress. (In contrast the rural populations are often photographed next to their donkeys.) Architecture is important in the photographs, indicating the actors’ associations with modernity; Photographs of Eleusis airport show planes positioned against a newly built modern infrastructure of a concrete dome, emphasizing aviation as a symbol of technological advancement.

Airforce contributing to the disease’s eradication makes the latter’s approach as a spatial problem and the abstraction of the landscape to numbers and maps more evident. Pilots not engage with the environments of malaria but with their representations—maps, grids, and operational zones. This perspective privileged efficiency and coverage, reinforcing a model of disease control of uniform application. Pilots played a crucial role in redefining malaria as a problem solvable through distant chemical control on the environment, and operating in scales, vehicles and spaces that acted as modern promises for the country.

Doctors and malariologists were the ones previously involved in the pre-war campaigns, therefore approached with scepticism the DDT air spraying —as evident in their early correspondence with the United Nations and the Greek Government¹³. Rockefeller photographs frame Greek doctors and malariologists working on-site; examining wetlands and standing knee-deep in water, or working in their laboratories; often ephemeral structures constructed from cheap materials, readily available in the Greek countryside. Their laboratories included experimental cages, which are documented in the Archive and are labelled to contain pigs, dogs, and mosquitoes among others. Malariologists and doctors were responsible of supervising the house spraying, working from the ground, in a scale of villages and regions. Despite

8 Landscapes of disease, p. 206
9 Ibid, p. 263
10 Ibid, p. 263
11 Livadas correspondence: Box 2, Folder 12. Series 749 Greece. Rockefeller Archive Center, Sleepy Hollow, New York. Date accessed:11/13/25.
12 Landscapes of disease, p. 263
13 Livadas correspondence: Box 2, Folder 12. Series 749 Greece. Rockefeller Archive Center, Sleepy Hollow, New York. Date accessed:11/13/25.

The Actors



The Pilots

[Top left] 'View showing D. D. T. Thermal Aerosol over Marsh after spraying..'
[Bottom left] 'Stearman Pr-17 used for larviciding work at Kalemata. The plane is equipped with an exhaust generator to produce DDT thermal aerosol.'
[Top right] 'Part of W.H.O. Greek Malaria Control Fleet of Stearnan planes at Elefsis Airport.'

The Doctors

[Top left] 'Inside larval cage of roof of Salonica Lab'
[Bottom left] 'Lamia valley malaria field studies Ypati laboratory'
[Top right] 'Nestos delta. "A" pool in which were found ova of elutus, messeae and typicus. Observer is wearing egg mitten.'
[Bottom right] 'Lamia valley malaria experimental cage with a donkey,calf,pig'

The Rural Population

[From left to right] 'Individual DDT spraying in Drama valley', 'Drama Valley', 'Indoor spraying in Nea Carvalli. Another completely screened house, in this case with aluminum screening which has stood up very well, better than the other screens.', Untitled





U.S. plane spraying DDT over Athens (1944).
Source: ELIA archive

their central role, doctors and malariologists operated within constraints, as they depended on Rockefeller expertise and UNRRA materials, in many cases struggling in the lack of decision-making.¹⁴

At the most intimate scale of the campaign were rural populations, whose homes and bodies became the final sites of chemical intervention. This scale involved systematic indoor residual spraying of rural houses, stables, and public buildings. Spraying teams, often composed of locally recruited workers under centralized supervision, moved village by village. This method disrupted the malaria transmission cycle by killing mosquitoes that rested on walls after feeding. Individual house spraying introduced new devices, routines, and rituals into everyday life. Handheld sprayers, protective equipment, and chemical mixtures entered domestic spaces, transforming walls, furniture, clothing and skins into surfaces of hygiene. Rockefeller archival materials document months of daily spraying in several Greek villages, with detailed instructions on the composition of chemical mixtures and the procedures to be followed¹⁵. Interestingly, the operation also blends with the countryside's traditions and inherent hygiene policies: As stated in correspondence between Greek doctors and UN representatives DDT was mixed with lime and applied to walls in Greek rural houses, replacing the tradition of wall whitening before Easter, in an attempt of integrating new ideas of chemical sanitization into older natural practices¹⁶.

E. Conclusion

The DDT anti-malaria campaign in rural Greece during the 1940s and 1950s can be examined as more than a medical intervention, instead as one that functioned as a staged enactment of environmental and chemical modernity. Through the visual and textual materials of the Rockefeller Archive—photographs, maps, charts, and correspondence—the campaign emerges as a carefully orchestrated project that reshaped landscapes, infrastructures, bodies, and everyday practices in accordance with postwar Western visions of modern progress.

By tracing the transition from pre-war ecological understandings of malaria to post-war analytical abstraction, the DDT campaign reveals how landscape diversity was translated into standardized units of intervention, enabling the scalability of DDT spraying and defining a new form of chemical environmentalism. Hygiene is reframed as a matter of infrastructure—dependent on drainage systems, petrochemical supply chains, and economic calculations that refers to illness as lost working productivity. At the same time, the campaign mobilized various actors with different forms of expertise; from pilots operating through aerial abstraction, to doctors that supervised house spraying, and finally to rural populations whose homes and bodies became sites of everyday chemical exposure. In this context, toxicity can be seen not as an unintended consequence but as an underlying condition of a celebrated moment of disease control, embedded within narratives of salvation, modernization, and national recovery.

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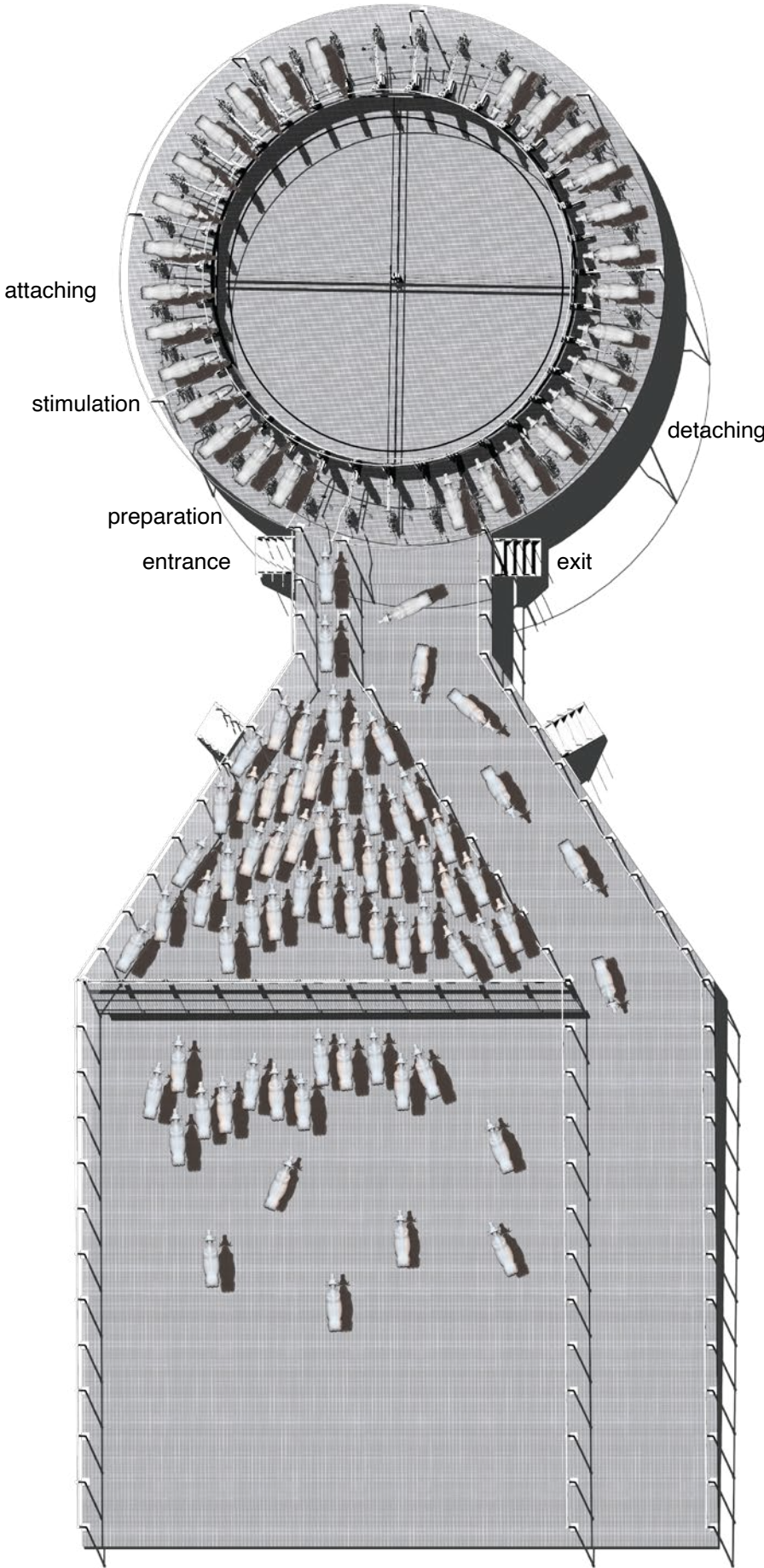
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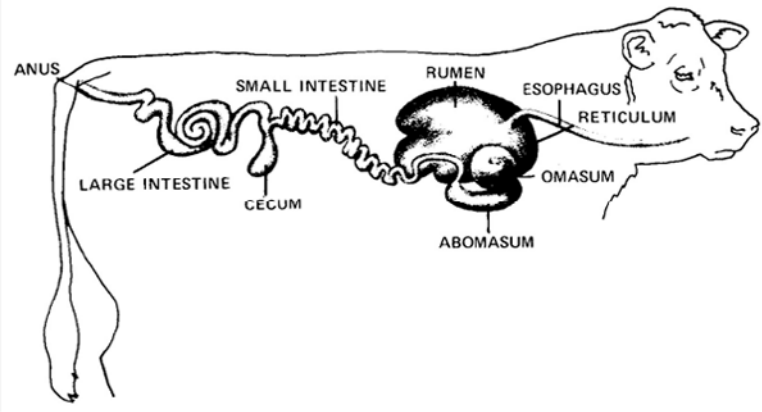
16 Box 2, Folder 12. Series 749 Greece. Rockefeller Archive Center, Sleepy Hollow, New York. Date accessed:11/13/25.

Keywords: rotary milking parlour, infrastructure, extraction

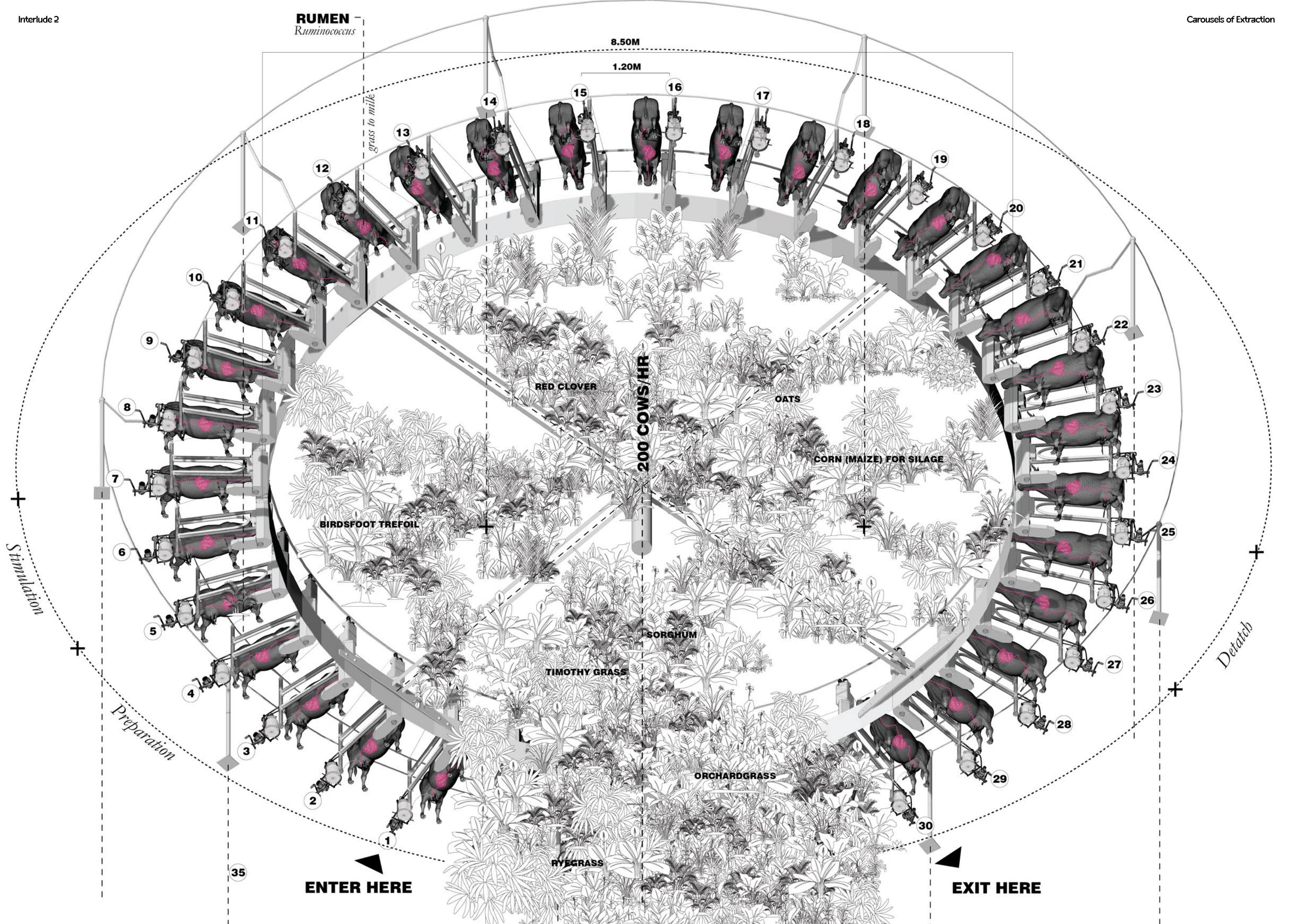


The rotary milking parlour is examined as an extractive apparatus starting from the cows' digestive system. Feed passes through the rumen, reticulum, omasum, and abomasum of the cow, where microorganisms and enzymes break down fibrous plants into nutrients, and turn grass to milk. Rumen is drawn as part of the apparatus. The cow's digestive system and the rotary milking parlor form a continuous system of milk production that moves from the interior of the animal into the milking carousel.

Speed and time play an important role; As cows step onto the rotating platform, the milk produced through digestion is collected and transferred into the dairy system, continuing the same productive cycle through space and structure. The apparatus rotates like a carousel and is in use at many large-scale dairy farms around the world. The parlour is designed to speed up milking for large herds, sometimes reaching the goals of milking 200 cows/hour. A new cow enters the carousel approximately every 7 seconds, allowing for full automation and round-the-clock milking.



[Left: The parlour as an organised infrastructure of confinements, bodies control and extraction
[Right]: Cow's digestion system



Act 2

The Palace of Pneumatic Labour

A communist worker's club in the former Michelin Rubber Plantation, Vietnam.

Detox USA

Instructor: Mark Wasiuta

Teaching Associate: Khloe Swanson

ADV VI Studio

Spring '26

Keywords: rubber plantation, colonialism, Vietnam war, workers' club, inflatable architecture, natural rubber, radionavigation, plants' communication, radio frequencies

The Palace of Pneumatic Labour transforms the former Michelin rubber plantation in southern Vietnam into a **radio-navigated, workers' club**. **Inflatable structures** made from the plantation's last latex support muscle rehabilitation and leisure activities — **reframing histories** of labor, war, and extraction into a new communist social infrastructure, while **radio establishes a common language** of frequencies for the humans and the rubber trees of the plantation.

The project asks how we design on a site of all these **inscribed histories and tensions**, and what is the future of former colonial plantations around the world, that all at the same time face the same question of rubber trees' exhaustion.

At the same time, **inflatable architecture** is explored as a typology relevant to this context of a natural rubber production site --probably more than anywhere else-- asking how we can **rethink pneumatic structures** as products of a natural material rather than petrochemicals.



[Figure 1] The **Pool club** of the Michelin plantation during the War: the plantation as a **land of exception**.
Source: Biggs, David A, and Paul Sutter. *Footprints of War* :



[Figure 2] A peculiar ontemporary Vietnamese relationship with rubber: **Balloons** are used as illegal **laughing gas** containers
Source: Vietnam Pictorial <https://vietnam.vnanet.vn/english/tin-van/39funky-balls39-could-be-added-to-banned-drug-list-230897.html>



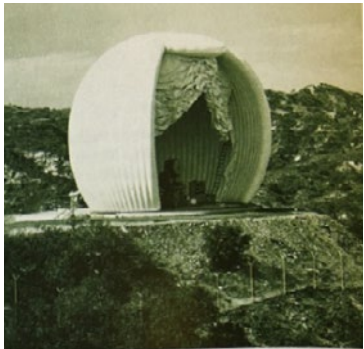
[Figure 3] Collecting **latex** at the plantation, 2024



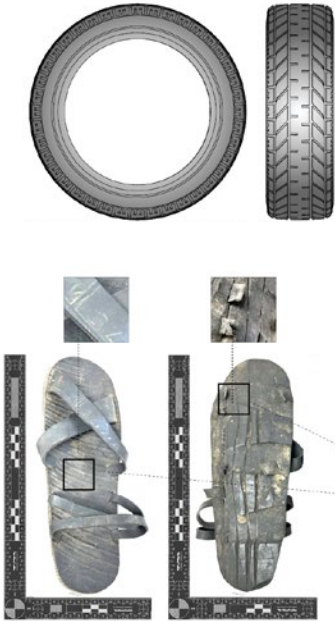
[Figure 5] The **War Radio Communications Room**, inside the bunker of Independence Palace, in Hanoi.



[Figure 6] American soldier installing radio **antennas on the rubber trees**, in the Michelin plantation, 1967
Source: Biggs, David A, and Paul Sutter. *Footprints of War* : *Militarized Landscapes in Vietnam*



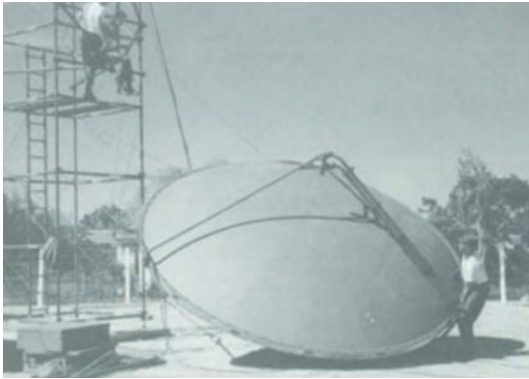
[Figure 7] A **radome**: An inflatable dome typology to facilitate **radio waves to pass through easily**, used for military radio-communication in Vietnam War
Source: Marc Dessauce (eds.) *The Inflatable Moment*.



[Figure 4] **Ho Chi Minh**, Vietnam's communist leader for more than 30 years, wearing a pair of **rubber sandals made out of Michelin military tires**; a symbol of resilience against foreign forces
Source: <https://vietnamnews.vn/society/1717855/ho-chi-minh-s-legacy-inspires-tourists-to-walk-his-path.html>

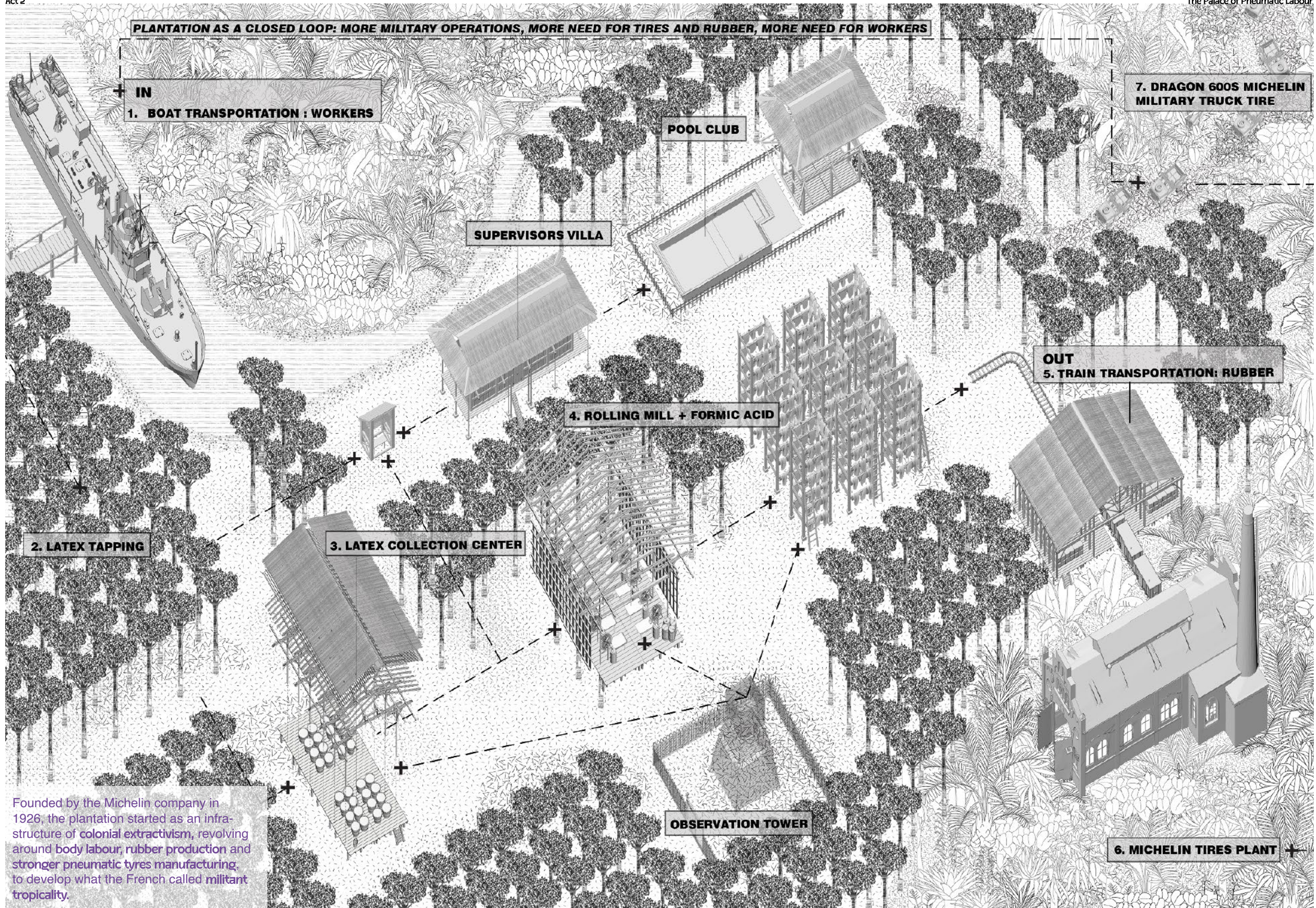


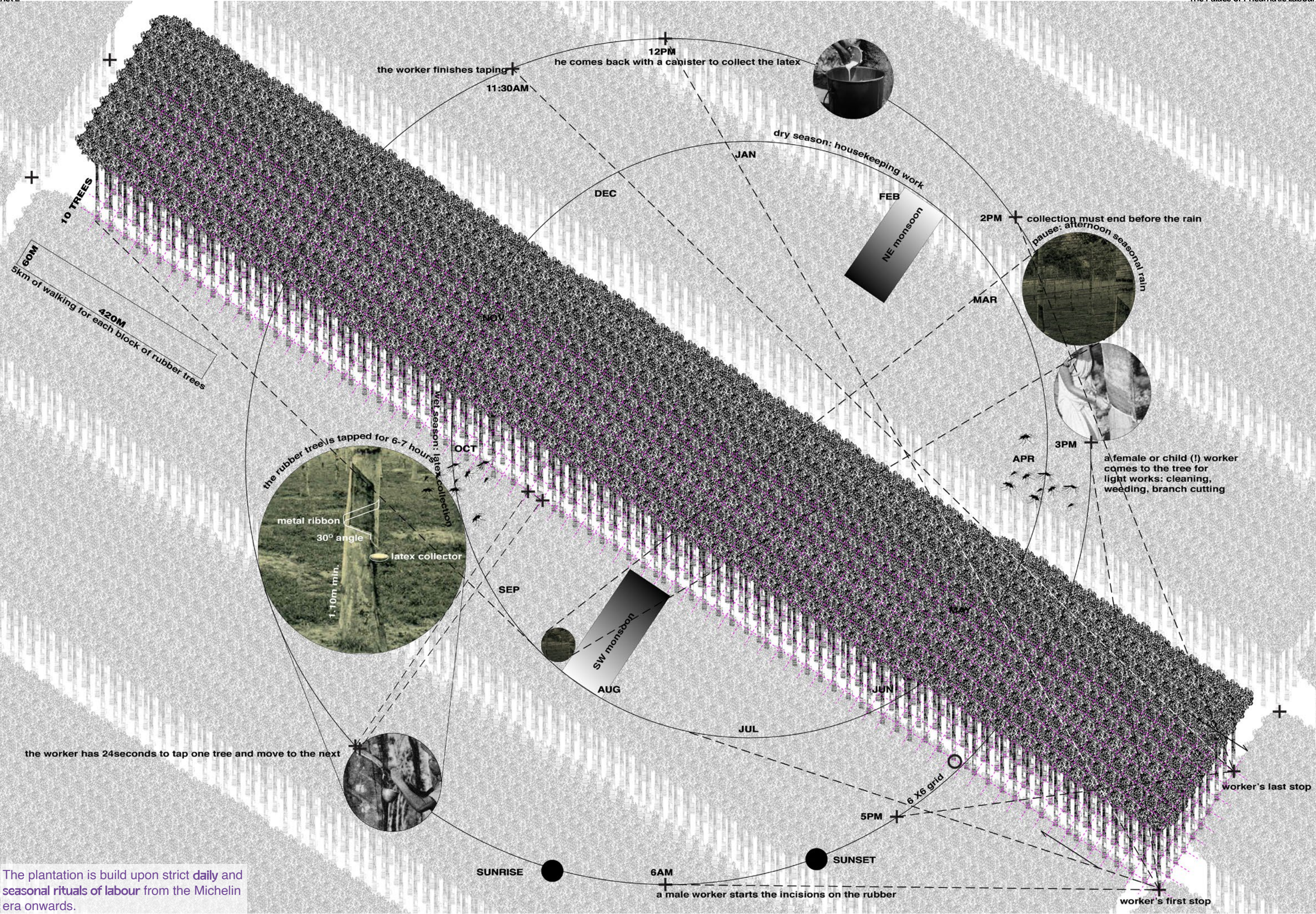
[Figure 8] The young --back then-- ruber trees that Michelin workers planted in 1926. The same trees are **tapped every day for 100 years**.
Source: Graveline, François. *Des Hévéas et Des Hommes*.



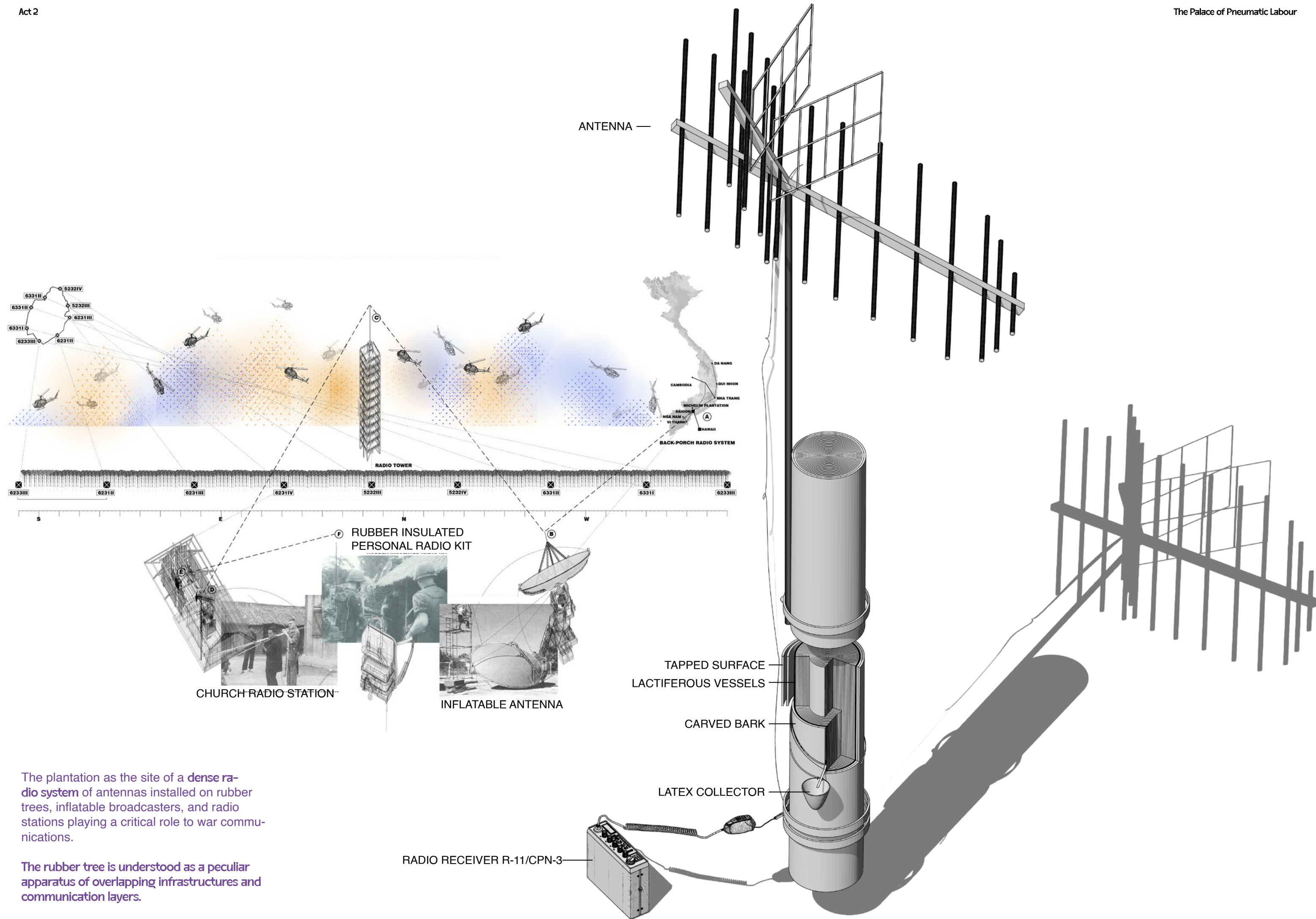
[Figure 9] The **Inflatable radio Antenna** of Saigon Radio Station, that transmitted to the Michelin plantation.
Source: Biggs, David A, and Paul Sutter. *Footprints of War* : *Militarized Landscapes in Vietnam*







The plantation is build upon strict **daily** and **seasonal rituals of labour** from the Michelin era onwards.



The plantation as the site of a **dense radio system** of antennas installed on rubber trees, inflatable broadcasters, and radio stations playing a critical role to war communications.

The rubber tree is understood as a peculiar apparatus of overlapping infrastructures and communication layers.

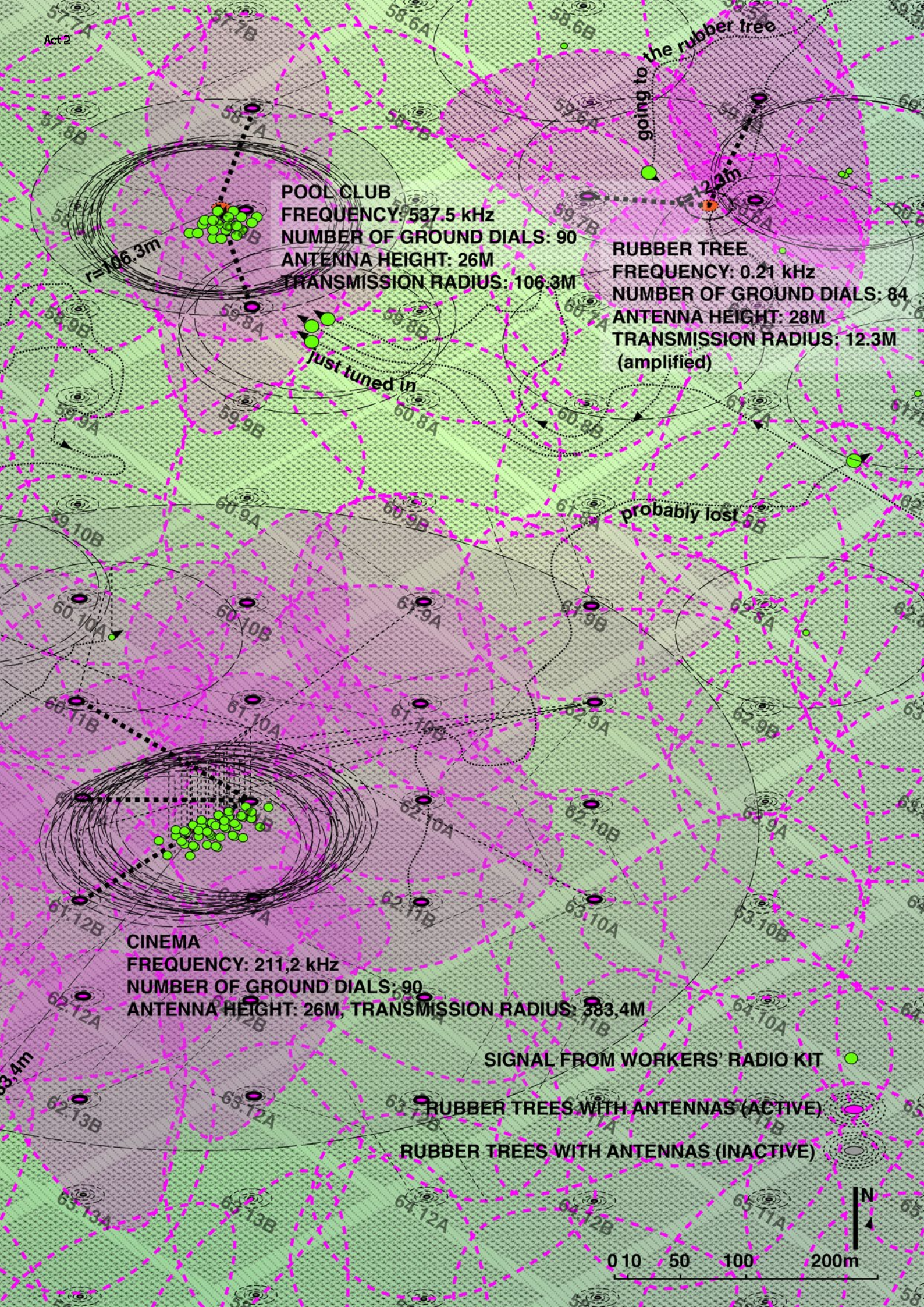
The Palace of Pneumatic Labour is a **communist worker's club** dedicated to **muscle rehabilitation**, that negotiates all these forms of **tension** in the plantation's legacy:

Rubber **molecules tension**,
Exhaustion from **mono culture**,
Different **infrastructures** plugged on the trees,
Body labour and **muscles tensions** of the workers.

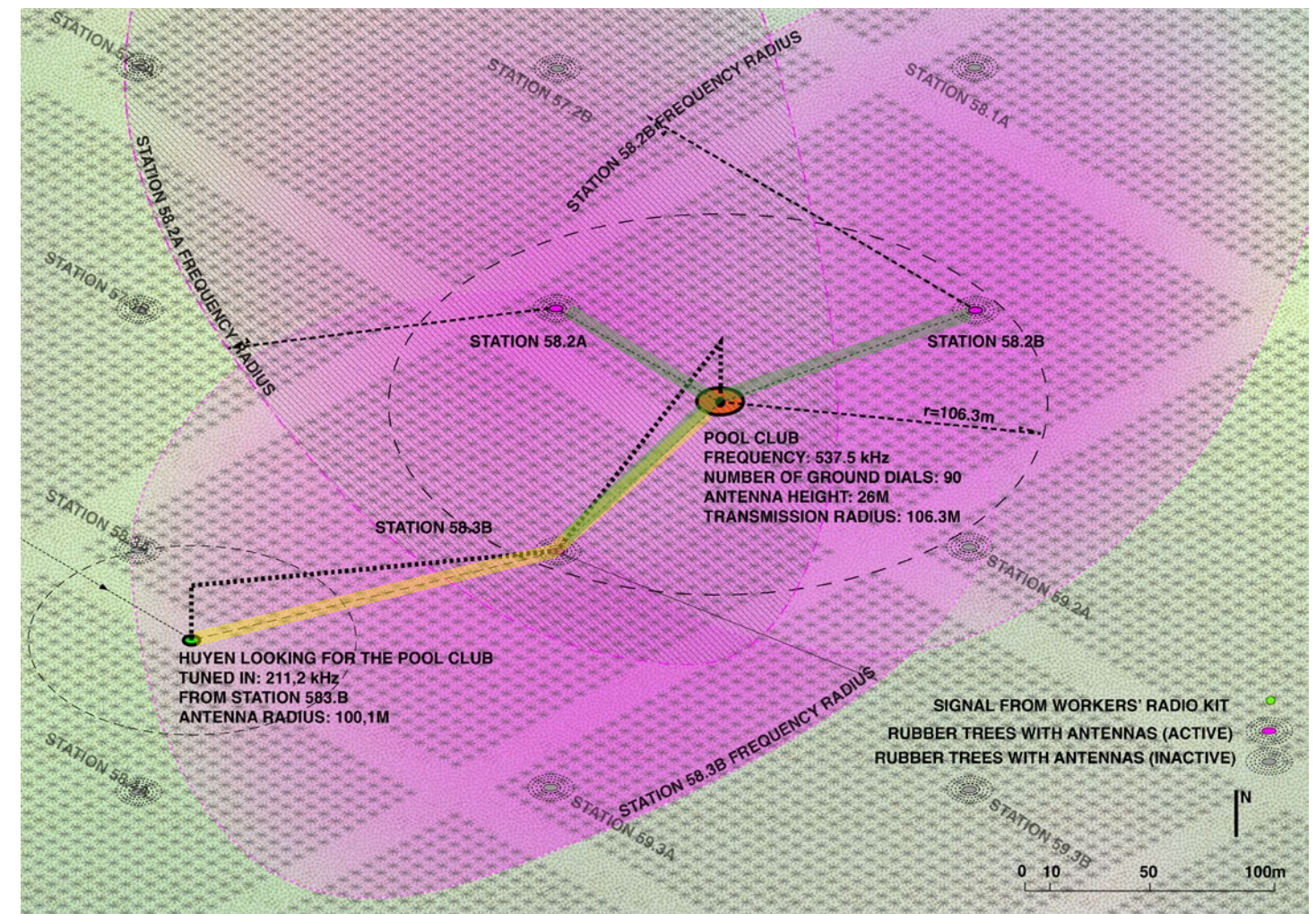
It creates a series of **inflatable follies** dedicated to **muscle rehabilitation** in the day, and **leisure activities** for the workers at night—**reframing histories** of labor, war, and extraction into a new **social infrastructure**.



[Right]: Concept experimentation on suspending inflatable structures from trees.
Latex balloon, steel mesh, steel grommets, branches, red clay

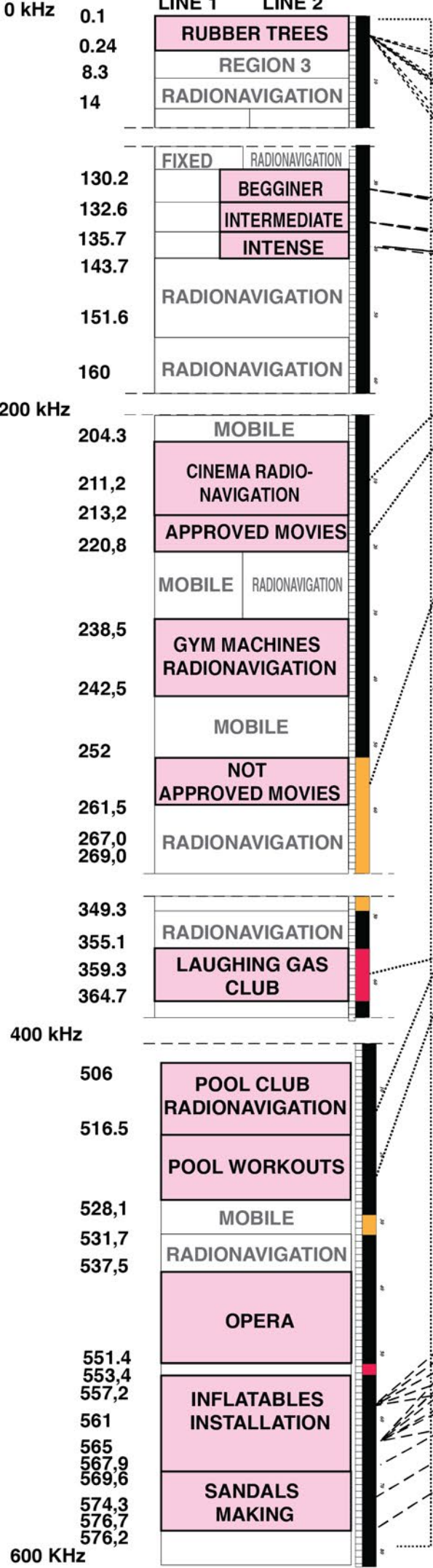


The plantation's site is re-organised through **radio frequencies**. The workers move (with their motorbikes or on foot) and tune with a **personal radio kit**, in the frequency of the folie they want to find.



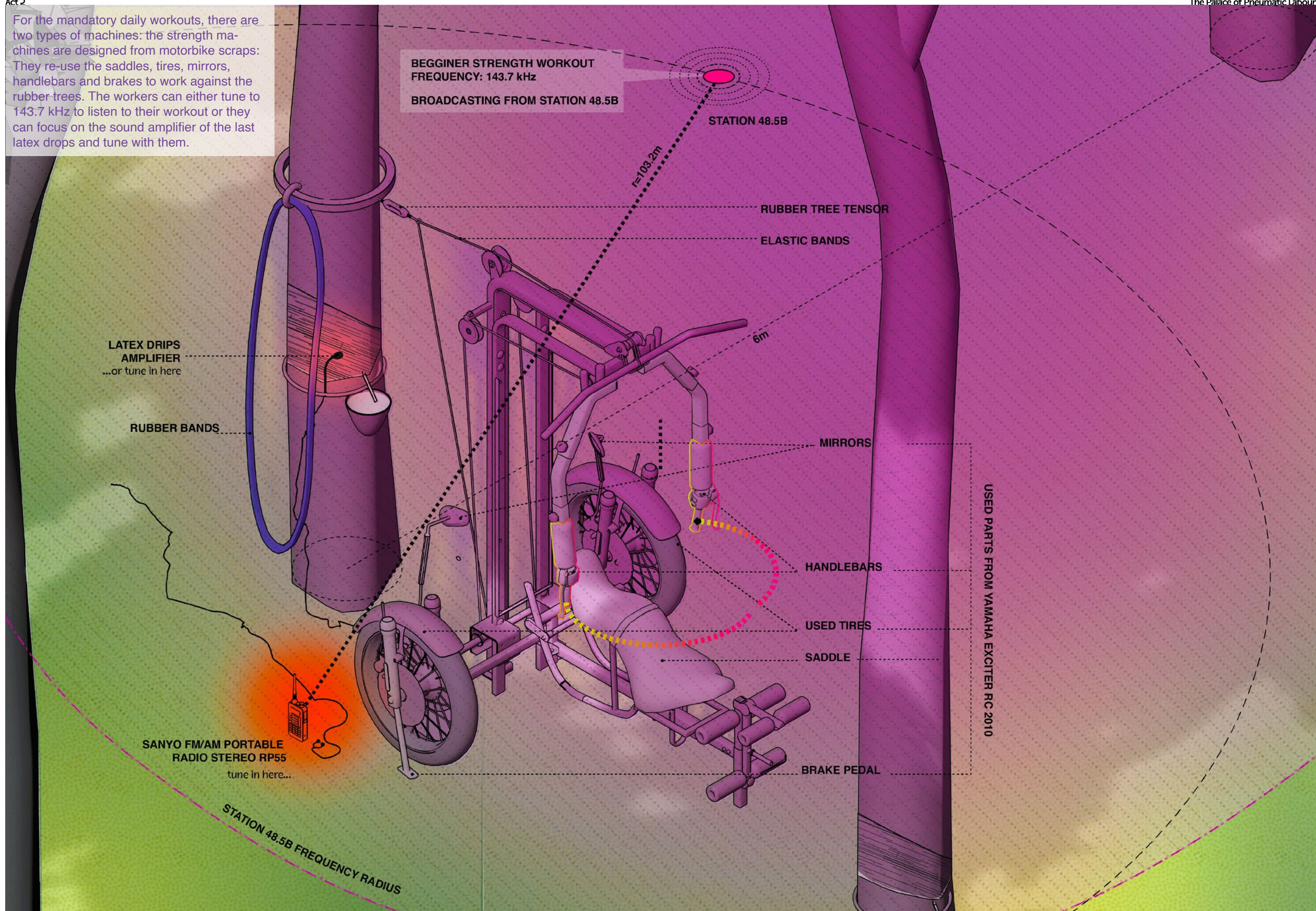
[Right] **RADIOLOCATION**: Each block has two **antenna trees**. Using the process of radiolocation, three different antenna rubber trees **calculate the distance** from the folie.

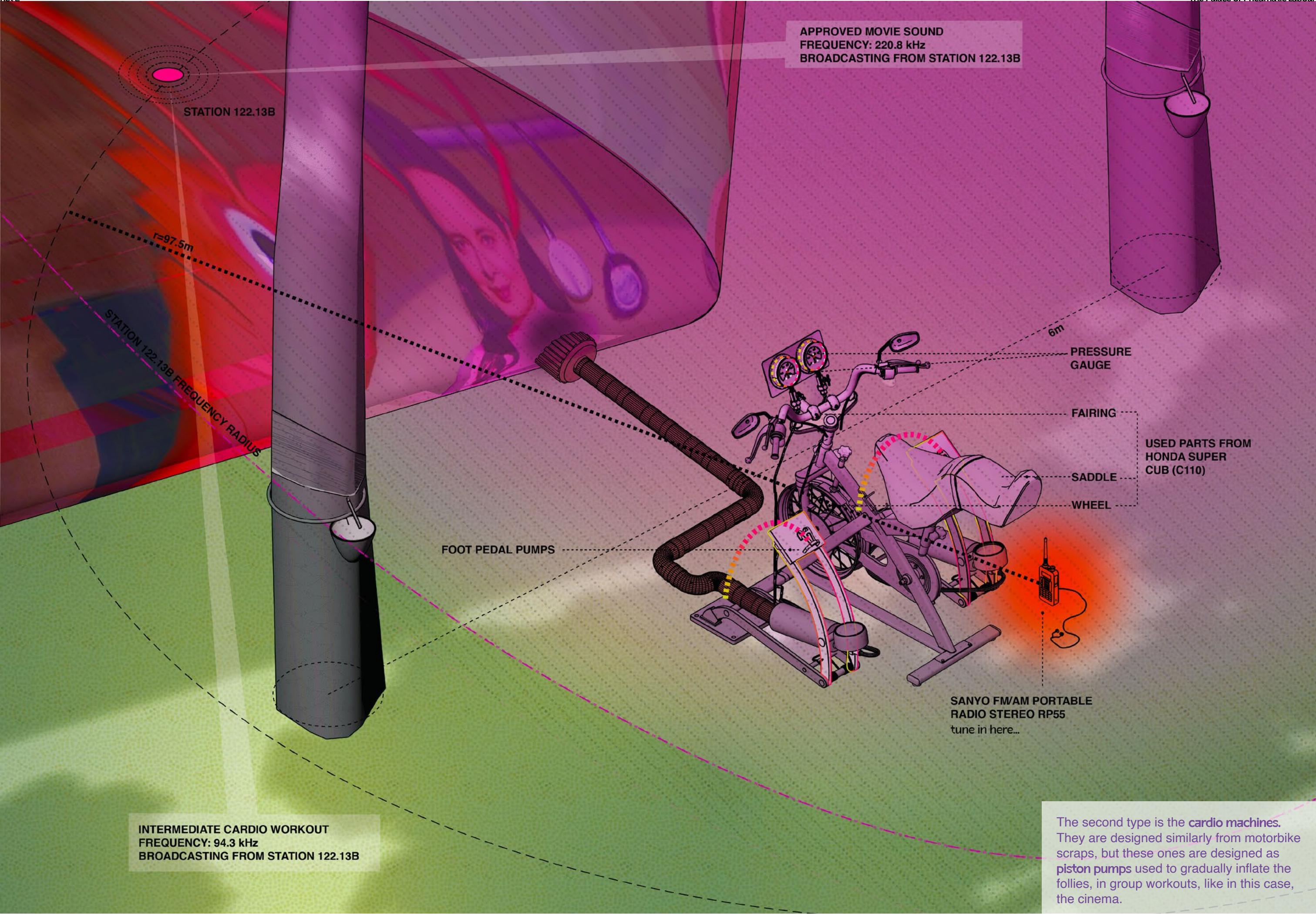
[Left] But, hundreds of workers try to go to the different follies or move around the plantation at the same time, all the time.



The Palace is organised as a system of intersecting and interconnecting movements and of architectures that sit within frequencies. To find them, workers have to look for their signals. The club's leisure activities depend upon relations of proximity to the antenna rubber trees and upon signal precision of the antennas.

For the mandatory daily workouts, there are two types of machines: the strength machines are designed from motorbike scraps: They re-use the saddles, tires, mirrors, handlebars and brakes to work against the rubber trees. The workers can either tune to 143.7 kHz to listen to their workout or they can focus on the sound amplifier of the last latex drops and tune with them.



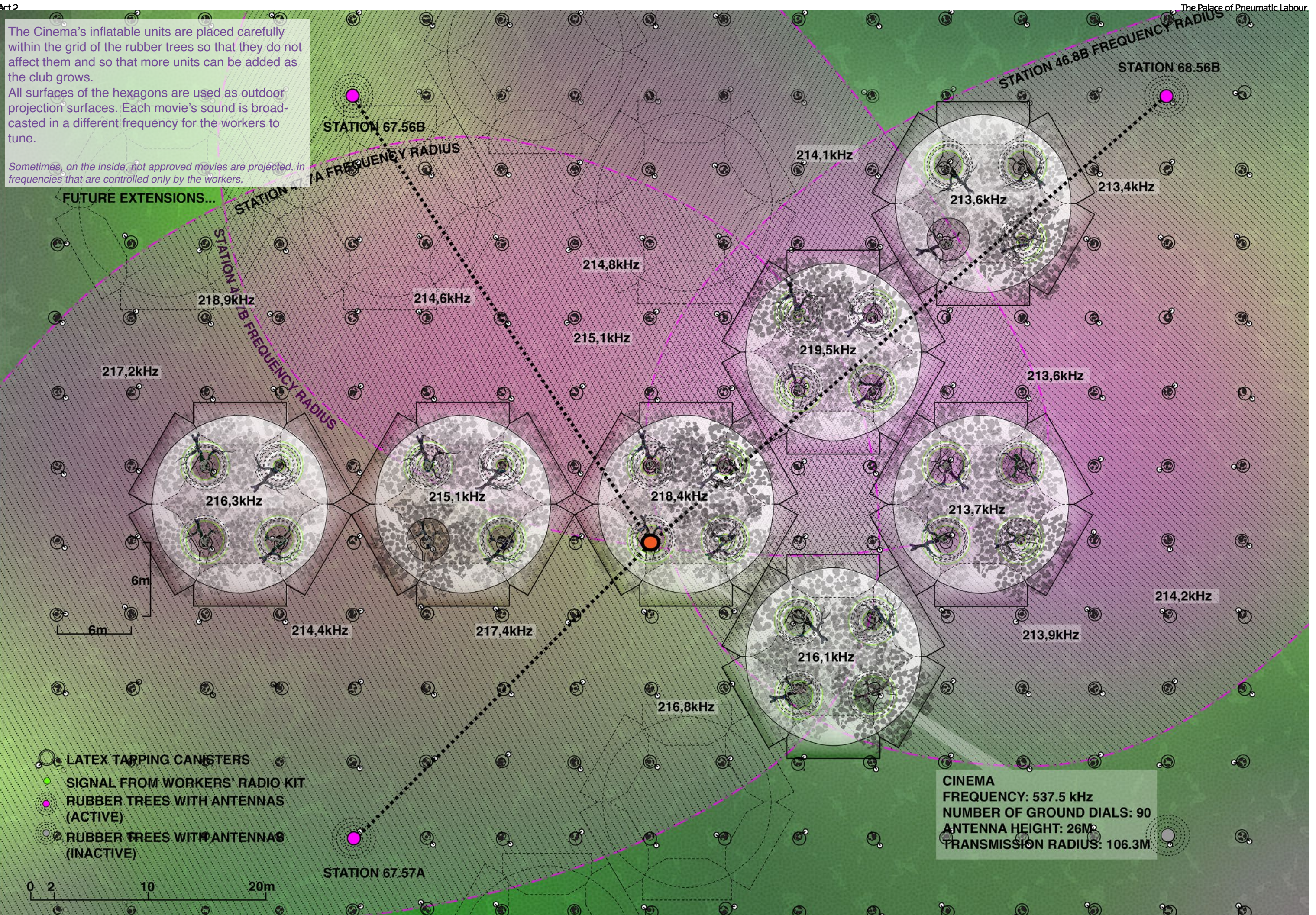


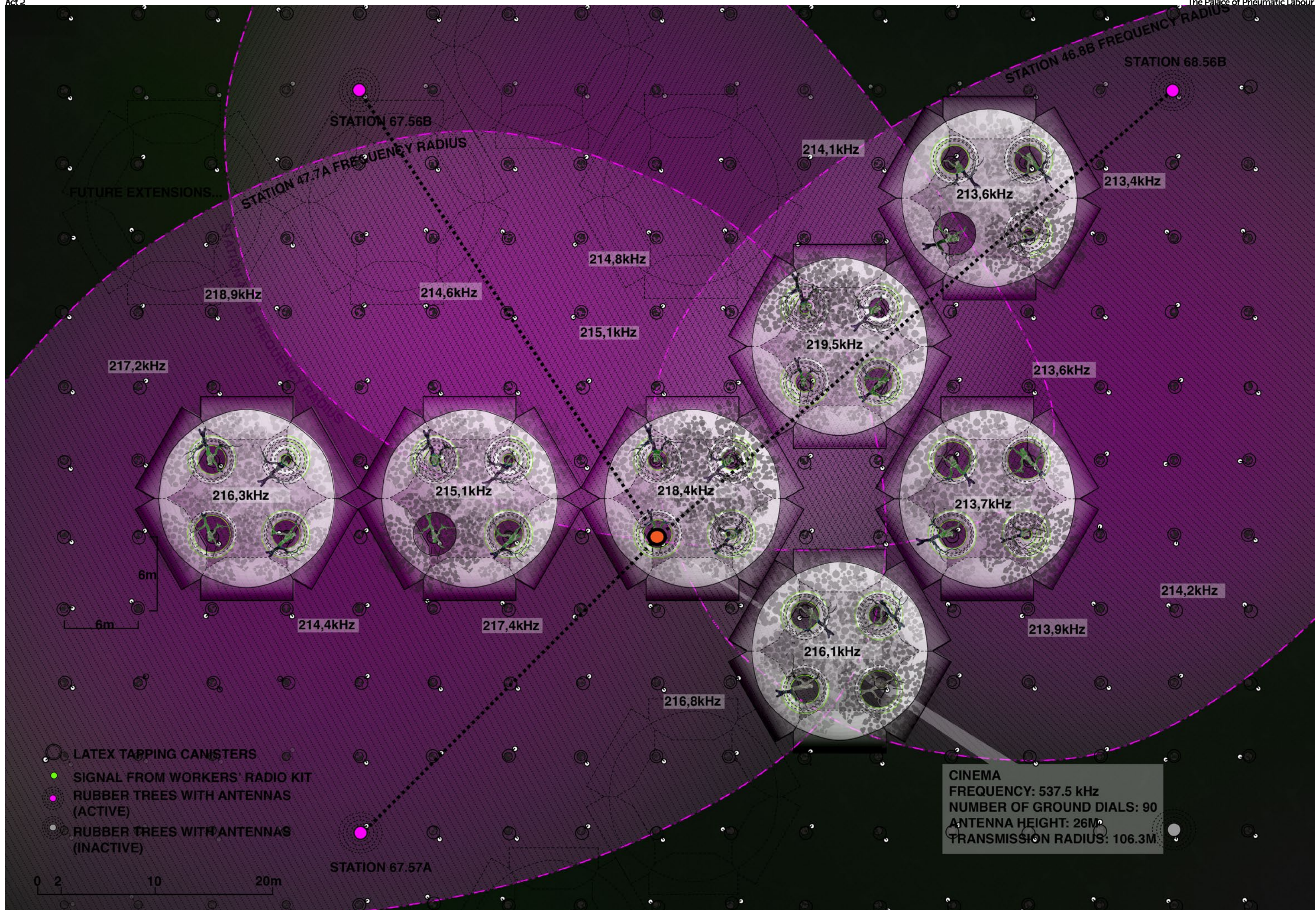
The Cinema's inflatable units are placed carefully within the grid of the rubber trees so that they do not affect them and so that more units can be added as the club grows.

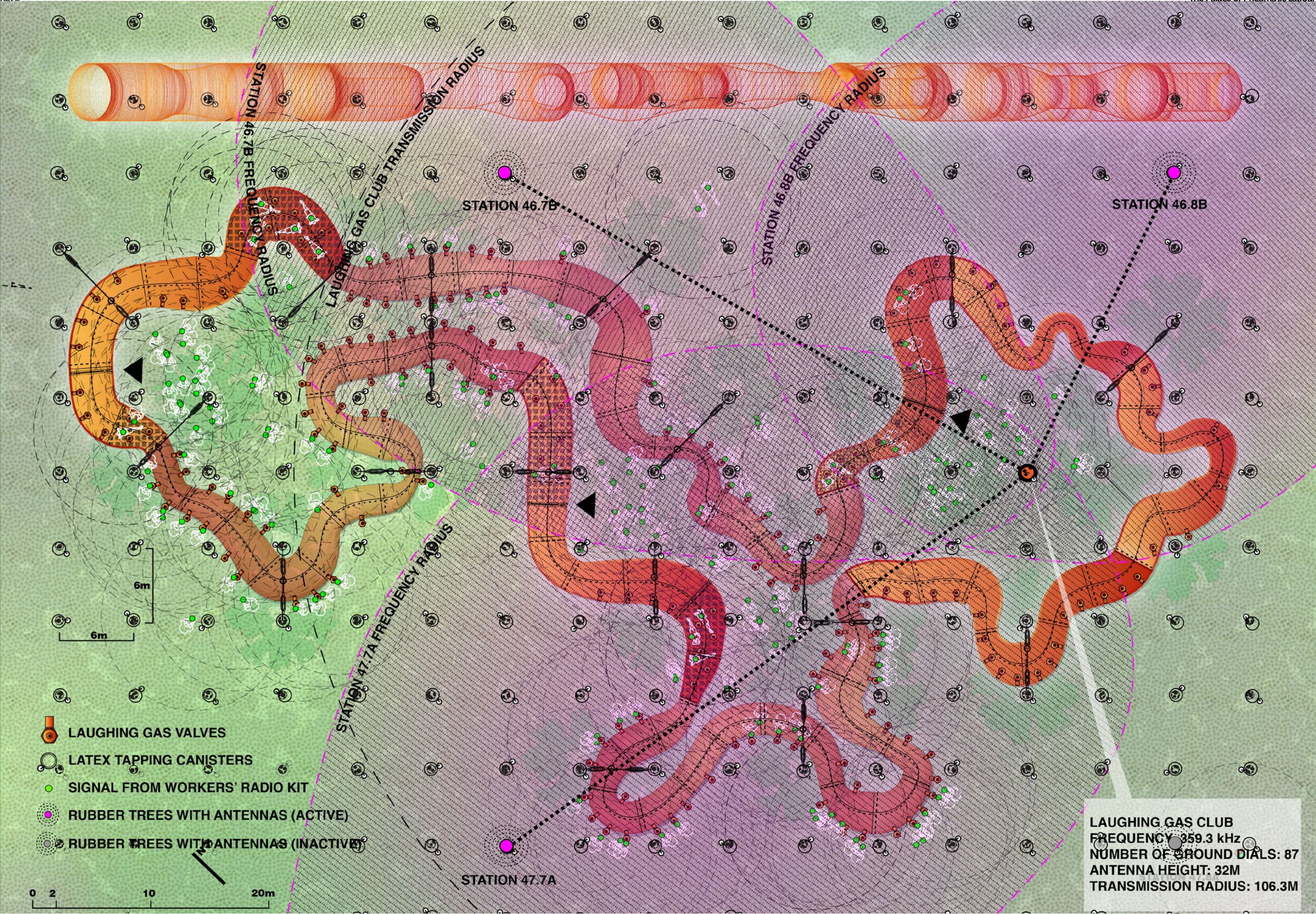
All surfaces of the hexagons are used as outdoor projection surfaces. Each movie's sound is broadcasted in a different frequency for the workers to tune.

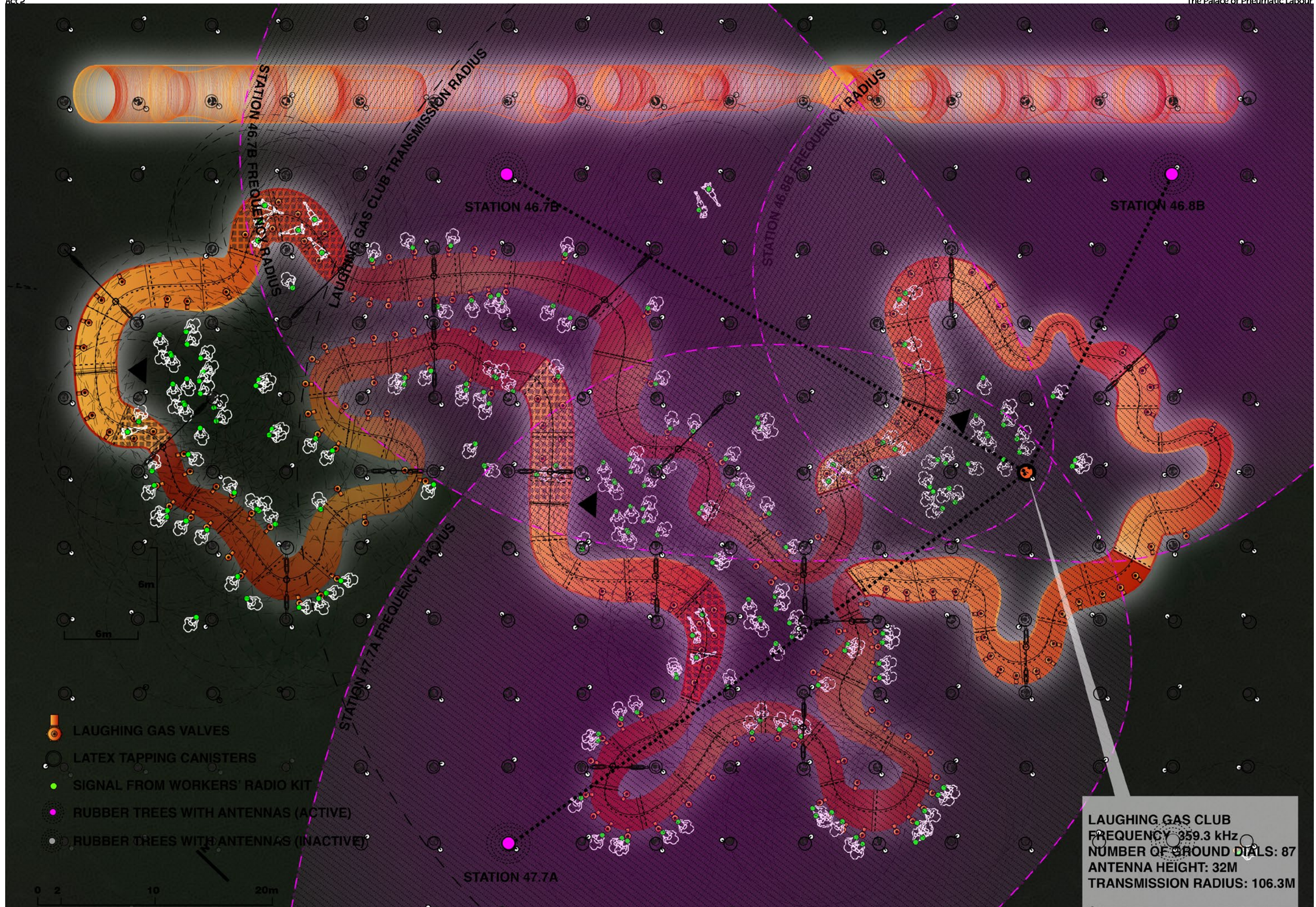
Sometimes, on the inside, not approved movies are projected, in frequencies that are controlled only by the workers.

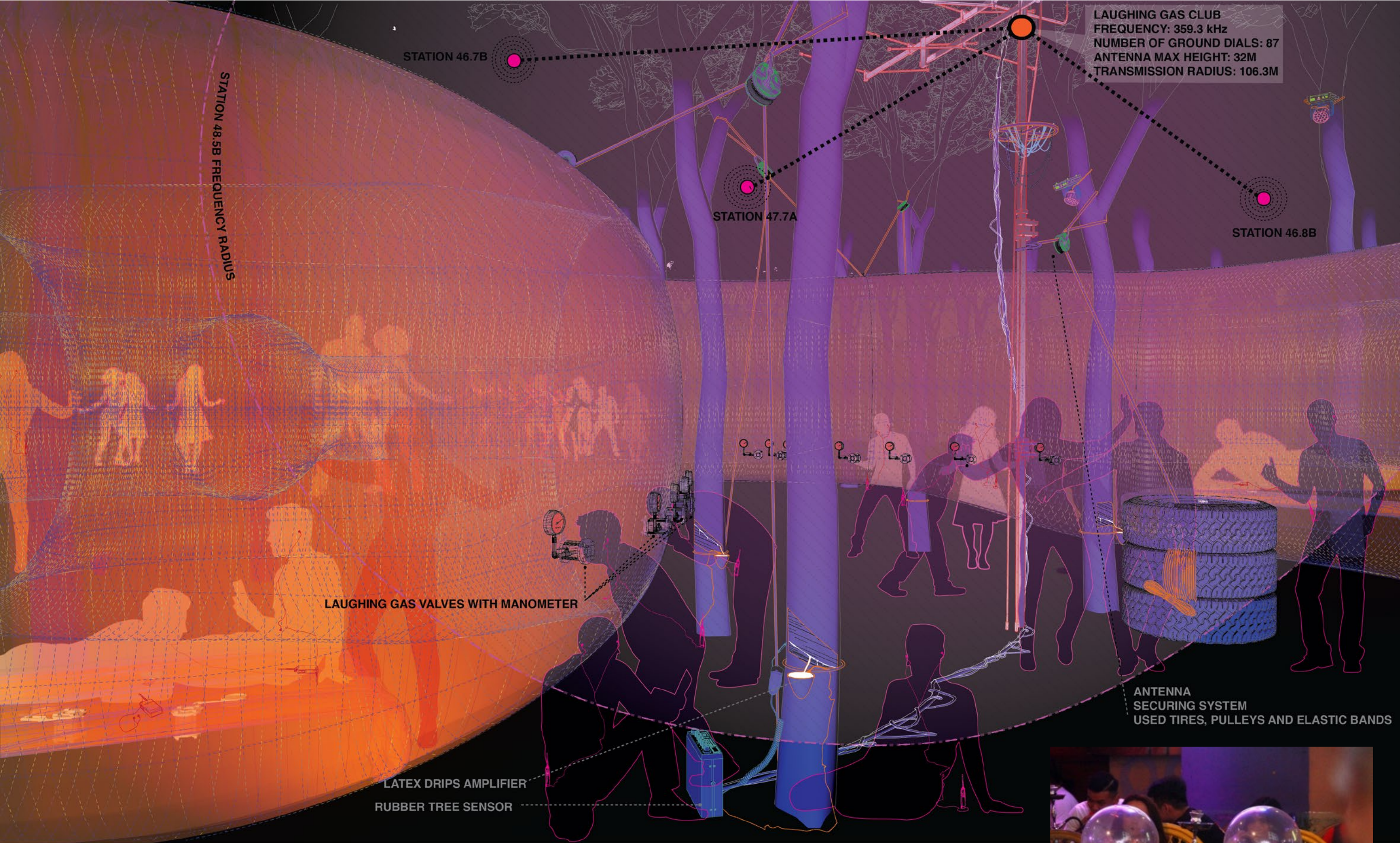
FUTURE EXTENSIONS...







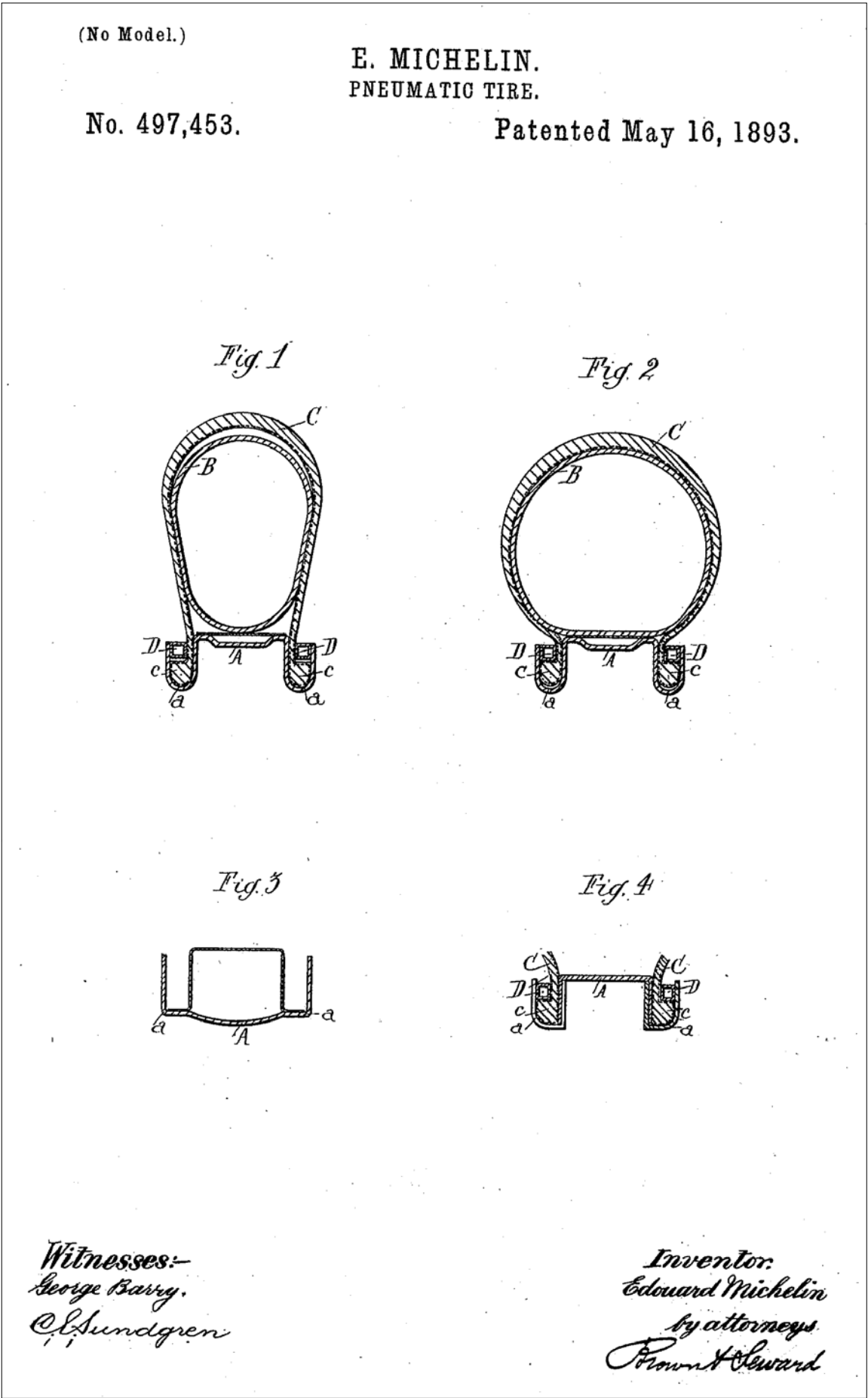




Building on a peculiar ontemporary Vietnamese relationship with rubber: to use balloons as illegal laughing gas containers, the Palace features a worker's laughing gas club.

The club is inspired by the literal meaning of the word pneumatic --to be breathed-- it is filled with laughing gas instead of air. The plantation becomes the only place in Vietnam where laughing gas is legal --once again a land of exception.





Keywords: Michelin rubber plantation, colonialism, pneumatics, cultural propaganda

This essay is closely connected to my spring semester’s studio and research on rubber plantations in Vietnam. Building upon the design experimentation of the studio, it establishes the historic and theoretical background of how colonial rubber plantations contributed to military research and cultural propaganda during the 1950s-1960s.

Inspired by the seminar’s brief it asks how small fabrication details are perceived as worlds that encapsulate social and political relations and affect multiple scales, geographies and temporalities.

On May 16, 1893, Édouard Michelin patented the first detachable and easily repairable pneumatic tire (see Fig.1), an invention that would become a milestone in the history of 20th-century automobility. The pneumatic tire was further developed and tested in Michelin’s rubber plantation near Saigon, in southern Vietnam, establishing a relationship of colonial extractivism in the Far East that supported innovations in –military– automobility in the West.

Extending beyond its initial purpose, Michelin’s patent detail for pneumatic tires evolved into architectural inspiration for inflatable structures, such as the furniture of the Aerolande group, representing emancipation, mobility, and the urge for social transformation in the 1960s. In this way, a “small” fabrication detail related to automobility, like the pneumatic tire patent detail, acts as a cosmological manifestation tying Michelin’s colonial extractivism and military research to the architectural and cultural production of the 1960s.

1. “US497453A - Edouard Michelin - Google Patents.” Google. com, 16 May 1893, patents.google.com/patent/US497453A/en. Accessed 2 May 2026.

2. Graveline, François. Des Hévées et Des Hommes. Nicolas Chaudun, 2006, p. 104.

3. Ibid, p. 21.

4. Ibid, p. 260.

5. Biggs, David A, and Paul Sutter. Footprints of War : Militarized Landscapes in Vietnam. Seattle, University Of Washington Press, 2018, p.235.

6. Sloterdijk, Peter. Terror from the Air. Semiotext(e), 2009, p.14.

7. Topham, Sean. Blowup : Inflatable Art, Architecture, and Design. Munich ; New York, Prestel, 2002, p. 71

The pneumatic tire patent as a colonial and military manifestation

The pneumatic tire, as described in the patent¹, consists of a structural rubber felly (A), an internal air chamber (B), an exterior protective rubber layer reinforced with cloth (C), and metallic hoops (D) that secure the structure through the pressure generated by inflation (Fig. 1).

The patent specifies the use of “simple Indochine rubber,” pointing directly to Southeast Asia as a source of raw material. Following the patent’s successful implementation, in 1926 Michelin acquired 23,000 hectares of land in southern Vietnam, establishing what would become the largest rubber plantation in East Asia—a colonial infrastructure centered on tire manufacturing. In the words of François Graveline, “the plantation covers the same area as Paris, and has as many rubber trees as there are Parisians. It is home to four or five thousand Indochinese and forty French. It has churches, a hospital, a factory.”² (Fig. 2) Its location was itself determined by the fewer demands of the French authorities in colonial Cochinchina regarding housing and treatment of laborers, as well as legislation granting tax exemptions on rubber exports.³

As Graveline argues, plantations were liminal spaces that brought together nature and culture, peace and violence, establishing rubber production as an important ideological and material battleground from 1963 to 1975.⁴ Within this framework of liminal relationships, Michelin developed the logic of “militant tropicality”—a mode of research and production focused on maximizing the durability and performance of rubber for pneumatic tires’ applications in colonial warfare operations. (Fig. 3, 4) The relevance of militant tropicality persisted throughout the Vietnam War, during which Michelin operated not only as a major supplier of pneumatic tires for American military vehicles, but also as a host of strategic infrastructure, with its plantations serving as bases for American and French forces⁵.

At the same time, pneumatic tires –and rubber production itself– were understood by the various actors of the Vietnam war as essential to post-war reconstruction, positioning tires as resources of both destruction and future recovery. Therefore, the Michelin plantation was largely protected from bombing campaigns and the aerial dispersal of Agent Orange. In an era that Peter Sloterdijk characterizes as one in which “the essential thought consisted in targeting no longer the body, but the enemy’s environment”⁶, the pneumatic tire patent and its material dependencies on rubber, effectively framed the Michelin plantation as a peculiar land of air exception within the logic of environmental warfare.

From the pneumatic tire patent to Aerolande

Speaking about air: in describing all of its elements and materiality, what the patent detail description neglects is to acknowledge the presence of air as the main structural substance of this detail. The detail of the patent marks the beginning of a technological and cultural lineage in which air becomes not only an industrial commodity but also a conceptual and cultural medium, that extends beyond its initial use in automobility technology. By demonstrating how air could function as a load-bearing element within a rubber enclosure, the pneumatic tires laid the groundwork for a new architectural paradigm of inflatable structures during the 1960s. These experiments reframed air as a primary building material, capable of producing lightweight, mobile, and ephemeral environments that responded at once to the era’s need for design, for fantasy, and for structural logic.⁷

A key example of this architectural shift is the inflatable furniture designed by the Paris-based group Aerolande, composed of Jean Aubert, Jean-Paul Jungmann (Fig. 5), and Antonio Stinco. Their inflatable sofa (Fig. 6), developed in the late 1960s, resembles the logic of the pneumatic tire in both its structure and assembly. It is composed of modular air-filled tubes, each approximately 21 centimeters in diameter and 1.90 meters in length, which can be easily attached, detached, and replaced. These tubes are connected through tabs sealed with plastic buttons, forming a flexible and reconfigurable seating system. Like the tire, the sofa relies on the containment of air within a synthetic membrane—in this case,

Fig. 3



Fig. 4



Fig. 2



8. Marc Dessauce (eds.) *The Inflatable Moment*. Edited by Princeton Architectural Press, 1 Sept. 1999, p. 122.

10. Andy Warhol's Silver Clouds (1966) featured in the Air Art show but was first exhibited at the Leo Castelli Gallery in New York, 1966. The release of Silver Clouds, a collection of helium-filled Mylar pillows, suggested an overturning of the idea that sculpture should be heavy, solid and permanent. Topham, Sean. Blowup, p.30.

11. "L'ecume Des Jours. 1968"
<https://www.imdb.com/Title/Tt015415/>. Accessed 3 May 2026.

12. Marc Dessauce (eds.) *The Inflatable Moment*, p. 17.

PVC fabric—to achieve structural stability. Interestingly enough, as noted in the detail, the PVC fabric is manufactured by Kleber, a company specialised until today in tire manufacturing. Using stretchable materials, inflatable structures challenged conventional notions of permanence and solidity in architecture, proposing instead dynamic and adaptable environments capable of responding to changing needs and conditions.⁸

This responsiveness to change positions the Aerolande sofa as a political artifact embedded within the social and artistic context of the 1960s. It participates in a broader architectural discourse associated with ideas of freedom, mobility, and social transformation. The group situates its work within the French context of Algerian decolonization, Gaullism, the reforms of the École des Beaux-Arts, and the events of May '68, noting that "these factors were for us an unavoidable context that infiltrated our drawings and concepts."⁹ Yet, while the inflatable experiments of the 1960s expressed a clear political sensitivity and a critique of dominant systems, they ultimately failed to fully recognize the colonial and military infrastructures upon which pneumatic technologies were historically built.

Pneumatics as cultural and political propaganda

The Aerolande sofa appears prominently in the 1968 surrealist film *The Froth of the Days*, directed by Charles Belmont. In the film, the protagonist Chloe suffers from a rare imaginary illness—a water lily growing in her lung—and must reside in a room filled with flowers as part of her treatment. This space (Fig. 7), furnished with the Aerolande sofa and other inflatable elements—such as cushions inspired by Andy Warhol's *Silver Clouds*¹⁰—creates a cultural propaganda in favor of pneumatics introducing them as objects of the new 'modern' life.

This connection between pneumatic innovation and cultural production extends beyond aesthetic experimentation to the strategic involvement of industrial actors in shaping the 1960s cultural narratives. Notably, the producer of *The Froth of the Days* was André Michelin¹¹, circling the film back to the company responsible for the original pneumatic tire patent. This involvement adds to Michelin's intense engagement in various forms of cultural production, including films, posters, and the widely recognized Michelin Guides (Fig. 8-9). Through these media, the company promoted a vision of modern life centered on mobility, innovation, and technological progress, revolving around pneumatic tires. As stated in the *Inflatable Moment*, the new lifestyles might be imagined for which continuous transport cannot be avoided, where one cannot be without a pneumatic high, whether it means inhaling substances, drinking carbonated soda or living in your car, [...]12.

The appearance of the Michelin Man itself in the 1968 film *Mr. Freedom* highlights another aspect of cultural propaganda, this time with geopolitical connotations; *Mr Freedom* is a superhero that destroys everyone who even remotely disagrees with imperialism. In this case the film accounts his latest assignment to save France from being taken over by the communists, and the Michelin Man appears to congratulate him for his success (Fig. 10). Noting that the film was also produced in 1968 – with the Vietnam War in one of its most intense moments, and the Michelin sovereignty on its plantation's in jeopardy– this scene is understood as an underlying political propaganda of sovereignty, linking the pneumatic cultural experimentations in France in the 1960s, back to their colonial and military roots in Southeast Asia.

Fig. 5

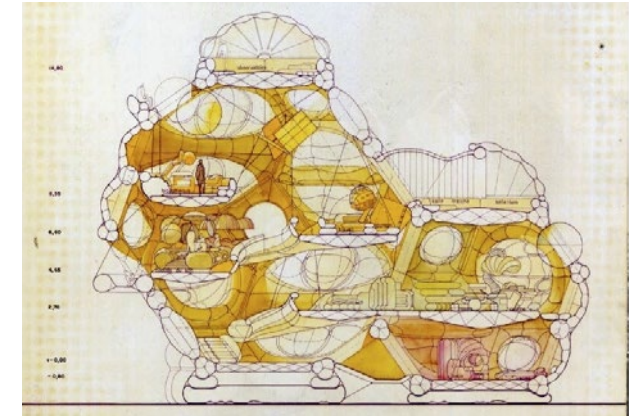
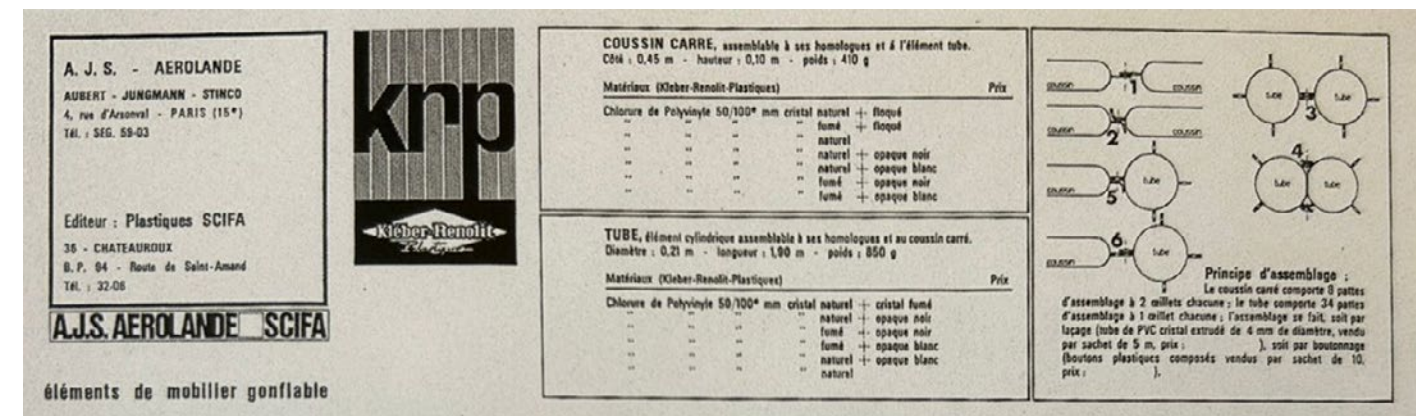


Fig. 7



Fig. 6



Figures

5. DYODON – UNE HABITATION PNEUMATIQUE EXPERIMENTALE juin 1967, Jean-Paul Jungmann. Source: <https://cup2013.wordpress.com/tag/jean-paul-jungmann/>

6. Fabrication detail for the Aerolande sofa. Source: Topham, Sean. Blowup, p.66.

7. Chloe's chamber, *The Froth of the Days*, dir. Charles Belmont (1968) Source: "L'ecume Des Jours. 1968" <https://www.imdb.com/Title/Tt0155415/>. Accessed 3 May 2026.

Interlude 3
Figures

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Source: Dessauce, Marc, ed. The Inflatable Moment : Pneumatics and Protest in ’68. New York: Princeton Architectural Press, 1999

9. Guide dela chambre a Air Michelin: Bretagne, George Hagnet, 1963
Source: Dessauce, Marc, ed. The Inflatable Moment : Pneumatics and Protest in ’68. New York: Princeton Architectural Press, 1999

10. Apparition of the Michelin Man in the final scene of Mr Freedom, dir. by Will. Klein, 1968
Source: Dessauce, Marc, ed. The Inflatable Moment : Pneumatics and Protest in ’68. New York: Princeton Architectural Press, 1999

Conclusion

In tracing the trajectory of the pneumatic tire from Michelin’s 1893 patent fabrication detail to the inflatable designs of the 1960s, this essay reveals how a seemingly minor technical detail unfolds into a complex cosmogram of colonial, military, and cultural entanglements. The tire’s material dependence on Southeast Asian rubber—secured through Michelin’s plantation system in Vietnam—ties it directly to regimes of extractivism, labor control, and wartime logistics, particularly during the Vietnam War, when Michelin operated as both supplier and territorial actor. At the same time, the structural logic of the pneumatic tire—air contained within a flexible membrane—inspired the development of inflatable architectures such as those of the Aerolande group in France, translating automobility technology into objects of ephemerality, and social transformation. Inflatable architectures participated in emancipatory narratives and were culturally broadcasted –often by Michelin itself– as objects of a new life built with air and enclosed in stretched, synthetic materials. These narratives often obscure their origins, demonstrating in this way how technological innovation can simultaneously produce new imaginaries of freedom while concealing the colonial and military infrastructures that sustain them.

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Fig. 8



Fig. 9

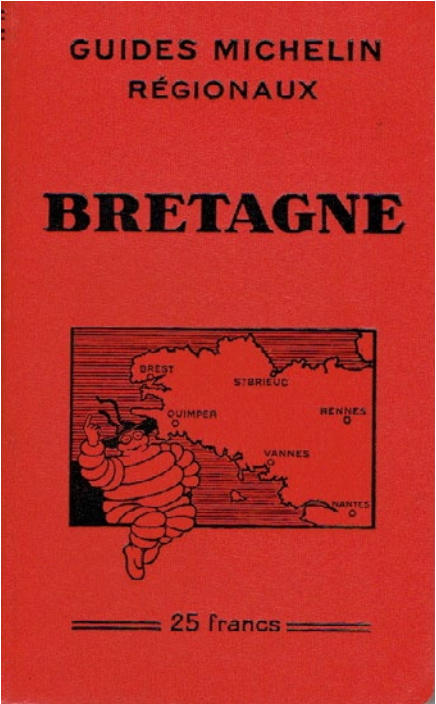


Fig. 10



The Powers of Manganese Nodules

An investigation of deep sea mining in International Waters, that led to a minerals', sharks' and humans' solidarity.

Architectures of Solidarity
Instructor: Imani Brown, Andre Santos
Teaching Associate: Khloe Swanson
ADV V Studio
Fall '25

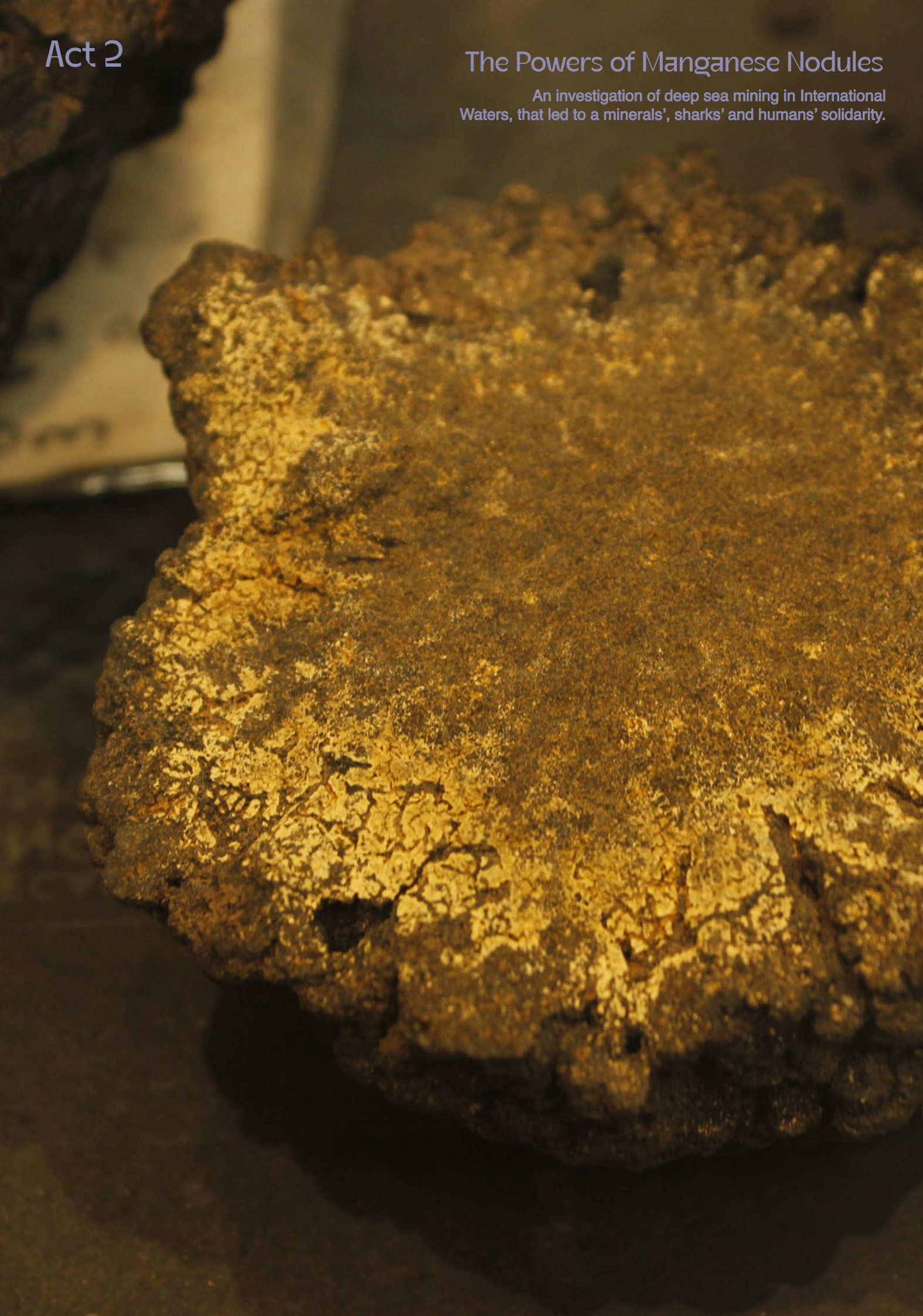
Keywords: deep-sea mining, manganese nodules, clean energy, Law of the Sea, sharks, solidarity

Manganese nodules are **highly valuable metal formations** found in deep-ocean seabeds around the world.

Precipitating around **sharks' teeth** via bacterial metabolic processes, the nodules are formed in slow, geological rhythms of millions of years.

They are found in abundance in international waters like the **Clarion-Clipperton zone (CCZ)** in the Pacific Ocean, which is currently framed by mining companies, a consortium of states, and university research teams as the next target of deep-sea mining in humanity's search for post-oil, 'clean' energy resources.

This project explores how manganese nodules operate in different **scales**, or to put it more precisely, how different scales are projected on them to be perceived as **geological archives**, **bacteria environments**, **sharks natural habitat**, or materials of invaluable **geo-political importance** in post-oil energy research.



[Left]: A manganese Nodule seen in Lamont Geological Observatory's collection. (personal archive)

[Right]: Manganese Nodules with sharks' teeth, seen in Lamont Geological Observatory's collection. (personal archive)



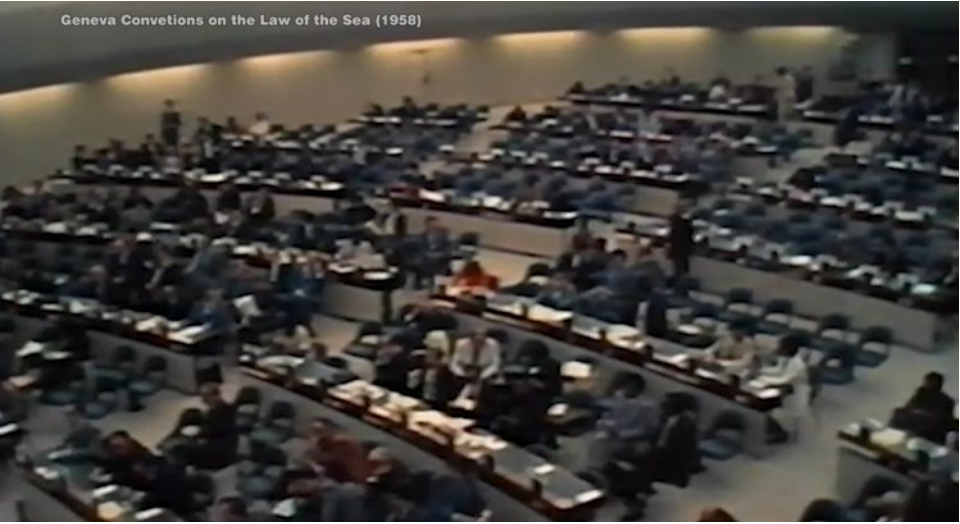
The Nodules in Lamont's Geological Archive.



The Nodules in Lamont's Geological Archive.



US government order to start deep-sea mining exploration by tresspassing the Law of the Sea, 25 April 2025



Geneva Conventions on the Law of the Sea, 1958

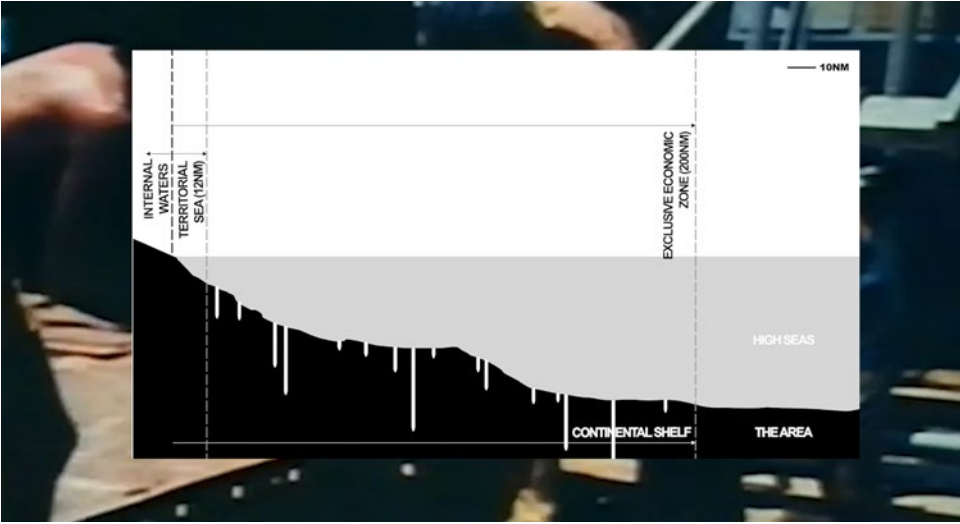
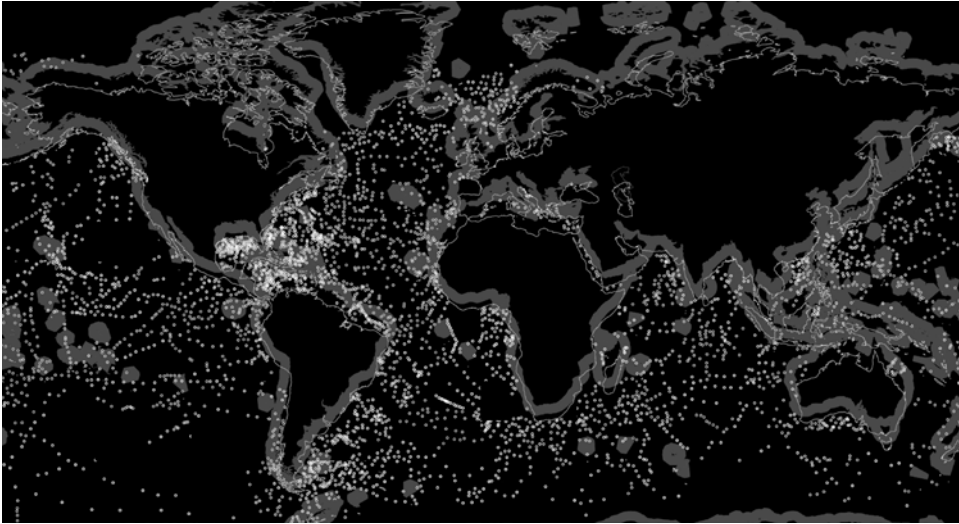
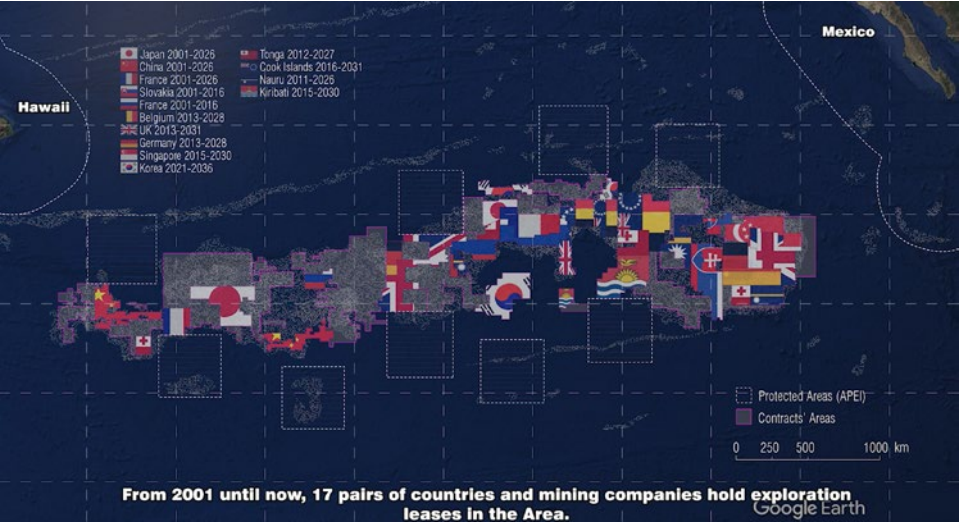


Diagram on the area permitted for mining, according to the Law of the Sea.



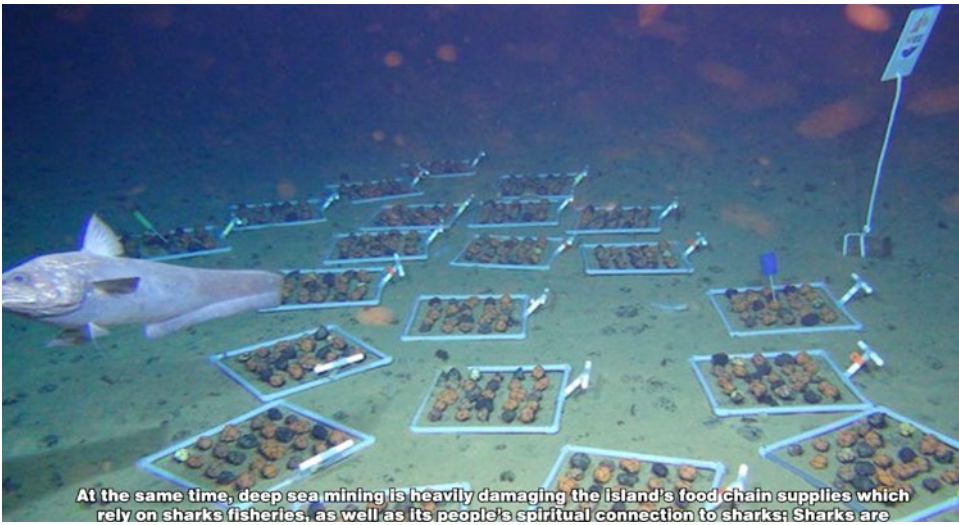
Map of drilling spots of Lamont Observatory oil expeditions from the 1950s onwards.



Clarion Clipperton Zone in the Pacific is framed as the next 'unexplored' frontier in deep-ocean.



For the Nodules extraction, oil vessels are replaced by deep-sea rovers and drilling wells is replaced by dredging the deep-ocean seabed.



The impacts of deep-sea mining to different species (including white sharks) natural habitat is yet unknown.

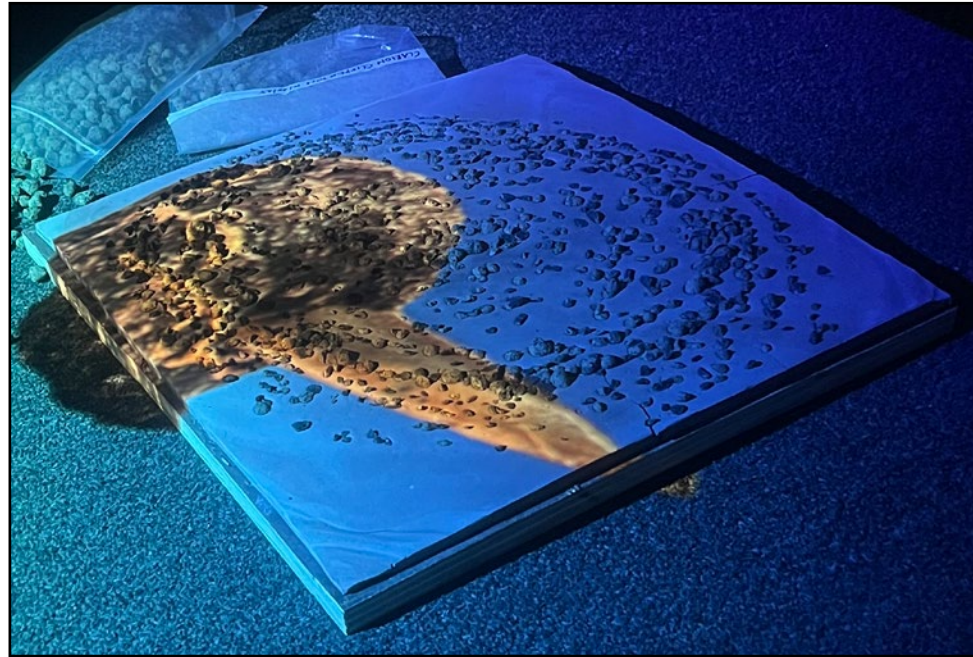


Exploring the relations between **space, time, matter and life**, the installation uses live projections on the square of the nodules, to investigate how they operate in different scales.

[Left]: The square of nodules used for the projection. Model size 15"x15", red and gray clay, different rocks, wood.

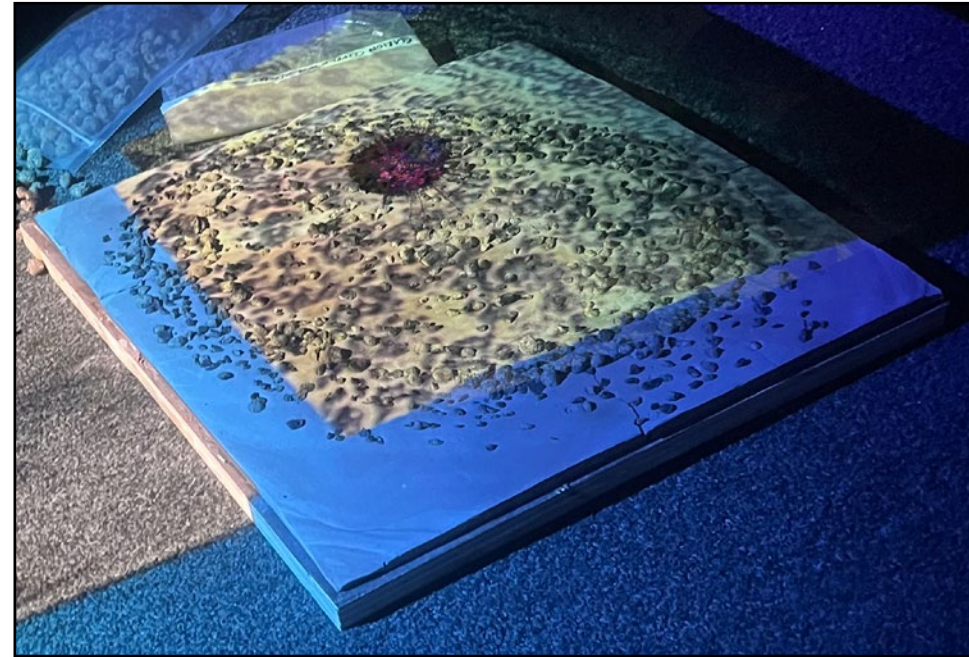
[Right, top]: The installation of live projection of the different scales on the nodules' square.

[Right, bottom]: New deep-sea creatures were discovered in the process



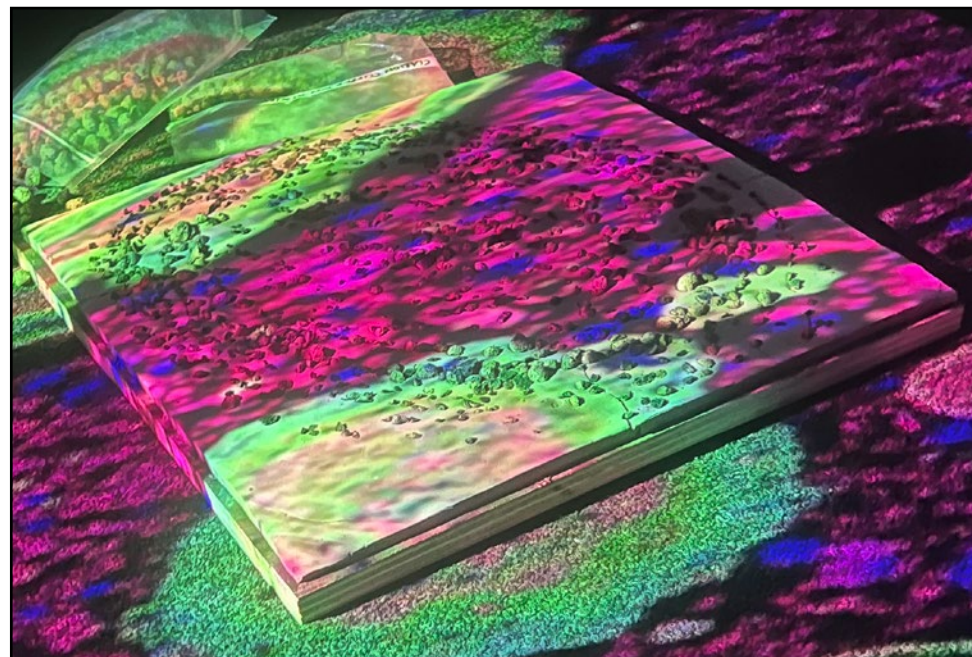
1 NODULE:

Bacterial metabolic processes precipitate minerals around sharks' teeth, forming a manganese nodule, in slow, geological rhythms of millions of years. The nodules are the only mineral coming from organic life.



10^4 NODULES:

The nodules constitute a deep-sea ecological agent and a natural habitat for numerous species, including sharks, the species from whose teeth the nodules came from, million years ago.



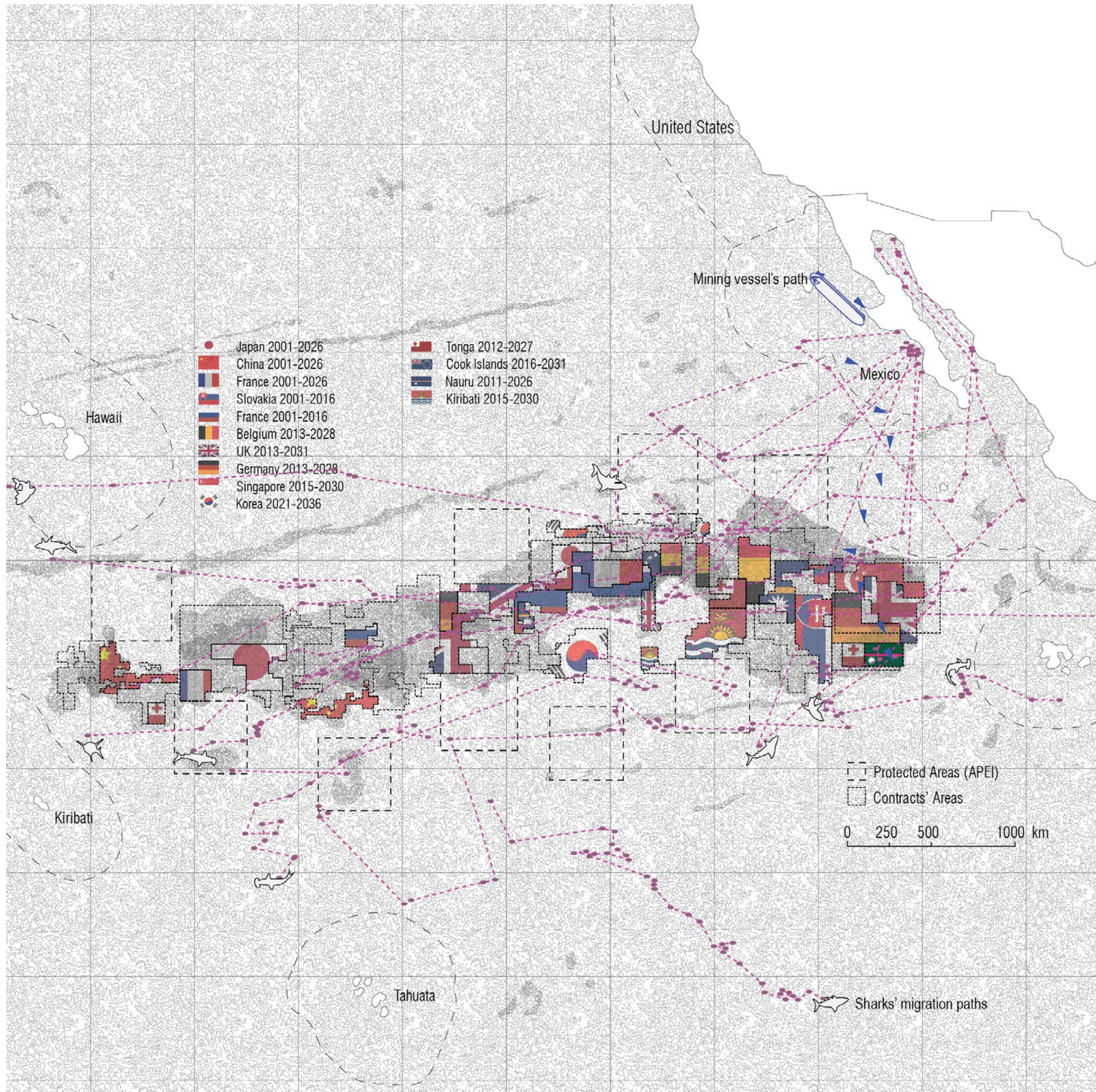
10^{-4} NODULES:

X-ray examinations allow looking at bacterial life and minerals stratification into the nodules [10-4 nodules] In this scale, they serve both as a geolocal archive as well as a tool for scientific observation of deep ocean life processes.



10^6 NODULES:

This is approximately the amount of nodules in Clarion Clipperton Zone in the Pacific Ocean. In this scale, the nodules participate in the oxygenation of the ocean. More than that, they shape geo-political zones of interest as deep-sea mining emerges as a solution to post-oil energy resources.



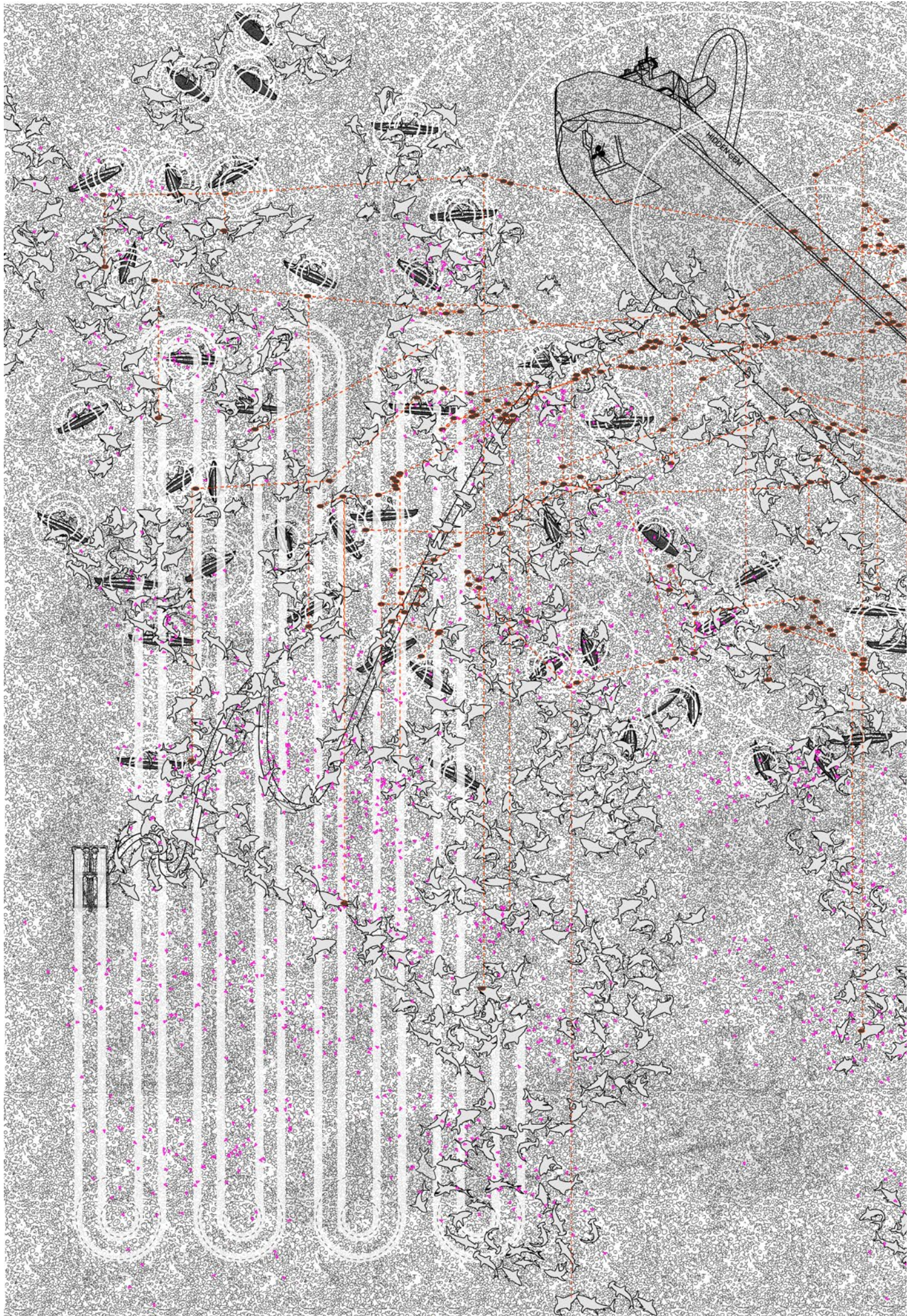
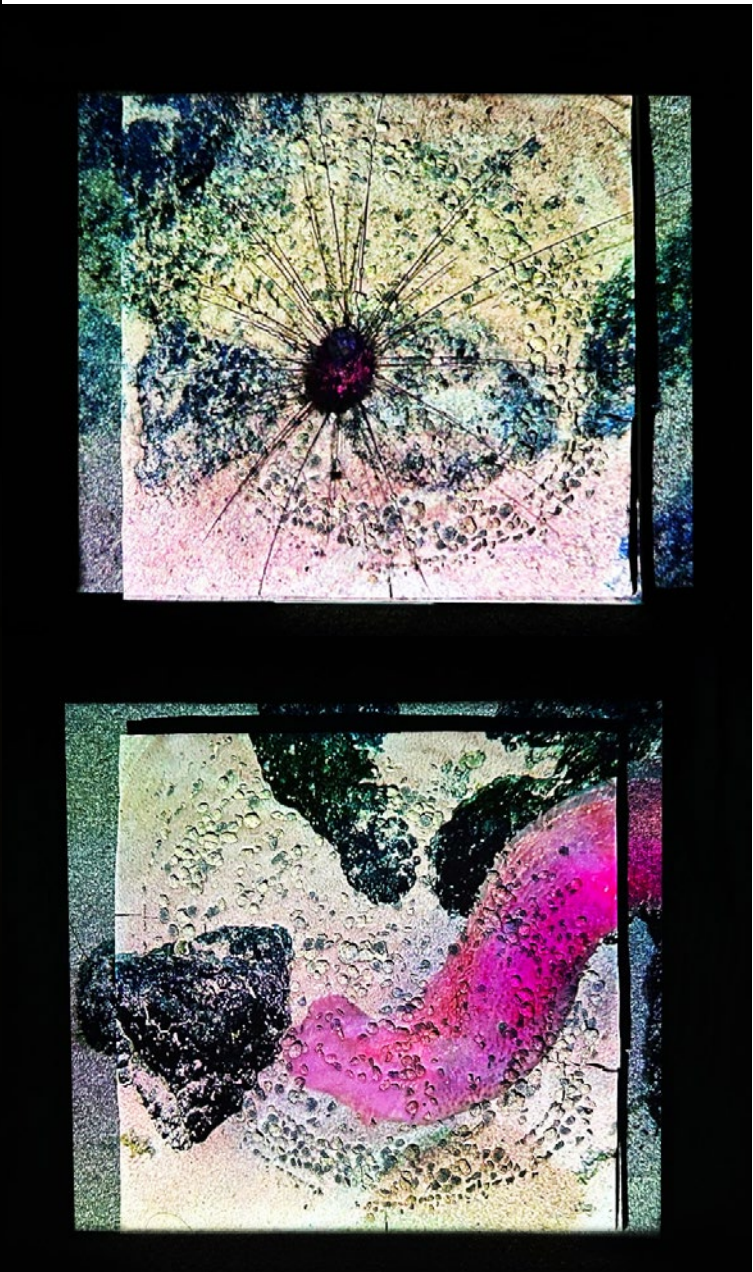
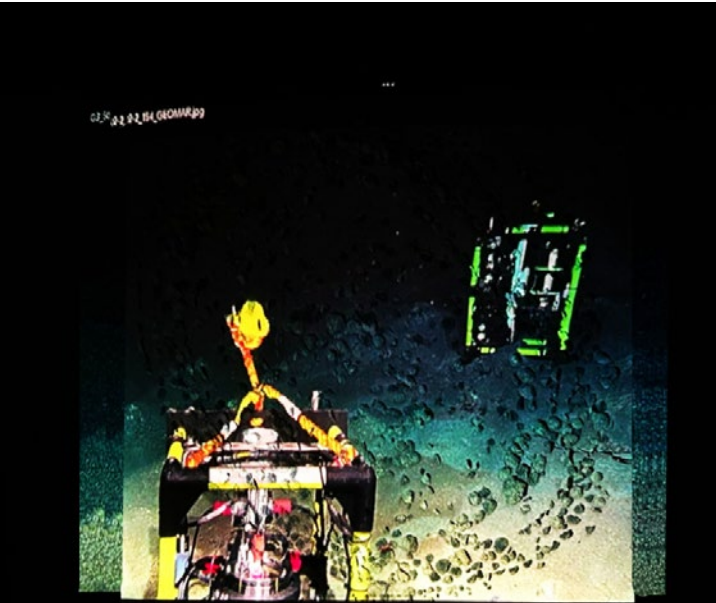
The project maps the areas of countries that hold **contracts** in the area of **Clarrion Clipperton Zone International Waters**.
(Source of data: The International Seabed Authority)

Playing with the idea of technolegal 'windows' of different countries trying to trespass the Law of the Sea, it overlaps the CCZ map with data of **endangered white sharks** paths that cross the area.

Sharks are chosen as the species closely related to the Manganese Nodules (**that are formed around their teeth in million years**) imagining constellations of a **multi-species solidarity**, that travels in deep geological time between humans, sharks and nodules.

This solidarity derives from **embodied forms of knowing and seeing**, other than scientific and economic models of measurement, and can exist where states, institutions and legislations apparently fail to provide it.

*In a world that International Laws are applied, proving the Zone as an endangered species **migratory corridor**, would be enough to cause the deep-sea mining operations to pause.*



Interlude 4 Material Libraries or Cataloguing the irregular

Instructor: Lola Ben Alon
Teaching Associate: Cherry Zhan
Technology Elective
Spring '26

Keywords: material research, kelp, marine biomass, exhibition design, microscopy

The material library is perceived as both a spatial and intellectual infrastructure. Libraries, in this sense, are not static repositories. They are living archives for artifacts and fragments that are constantly being selected, handled, interpreted, withdrawn, loaned, used, experimented with, and recirculated.



Agoprene algae foam

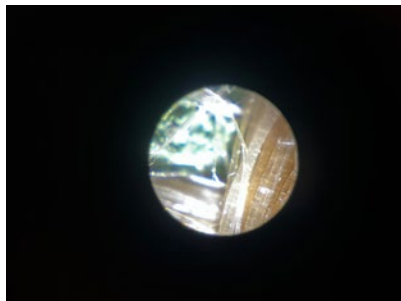
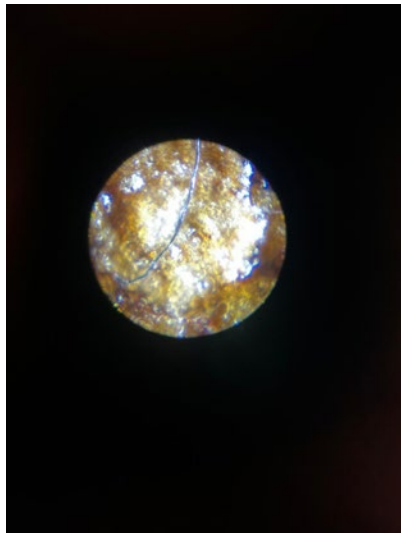
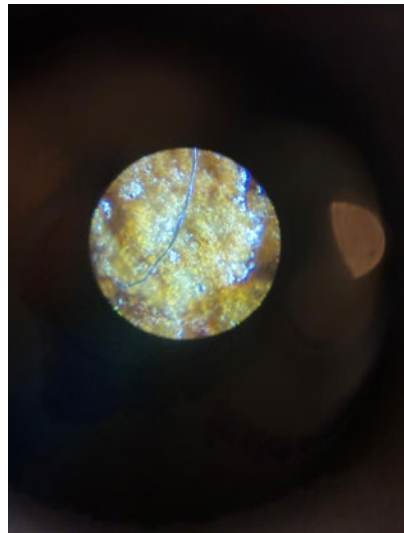
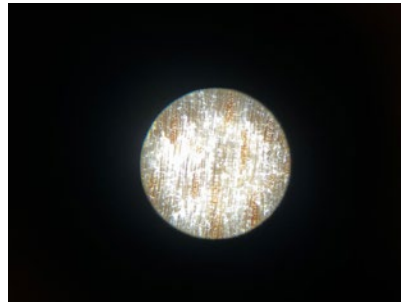
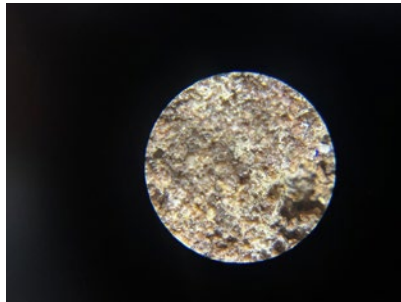
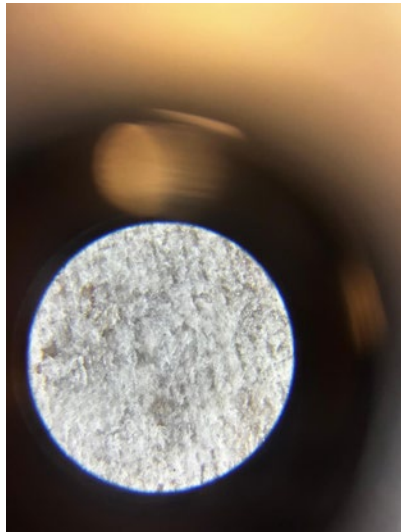


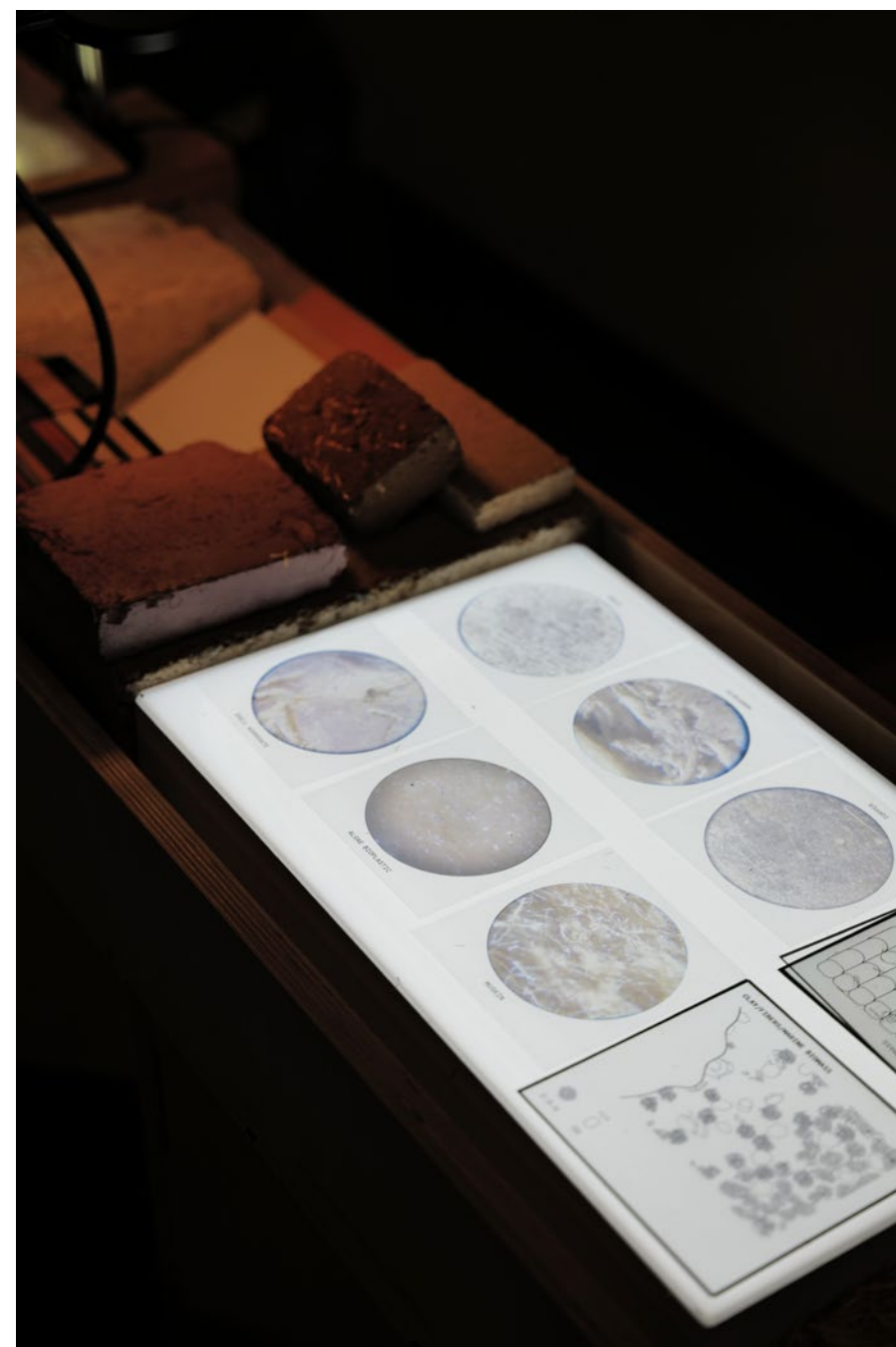
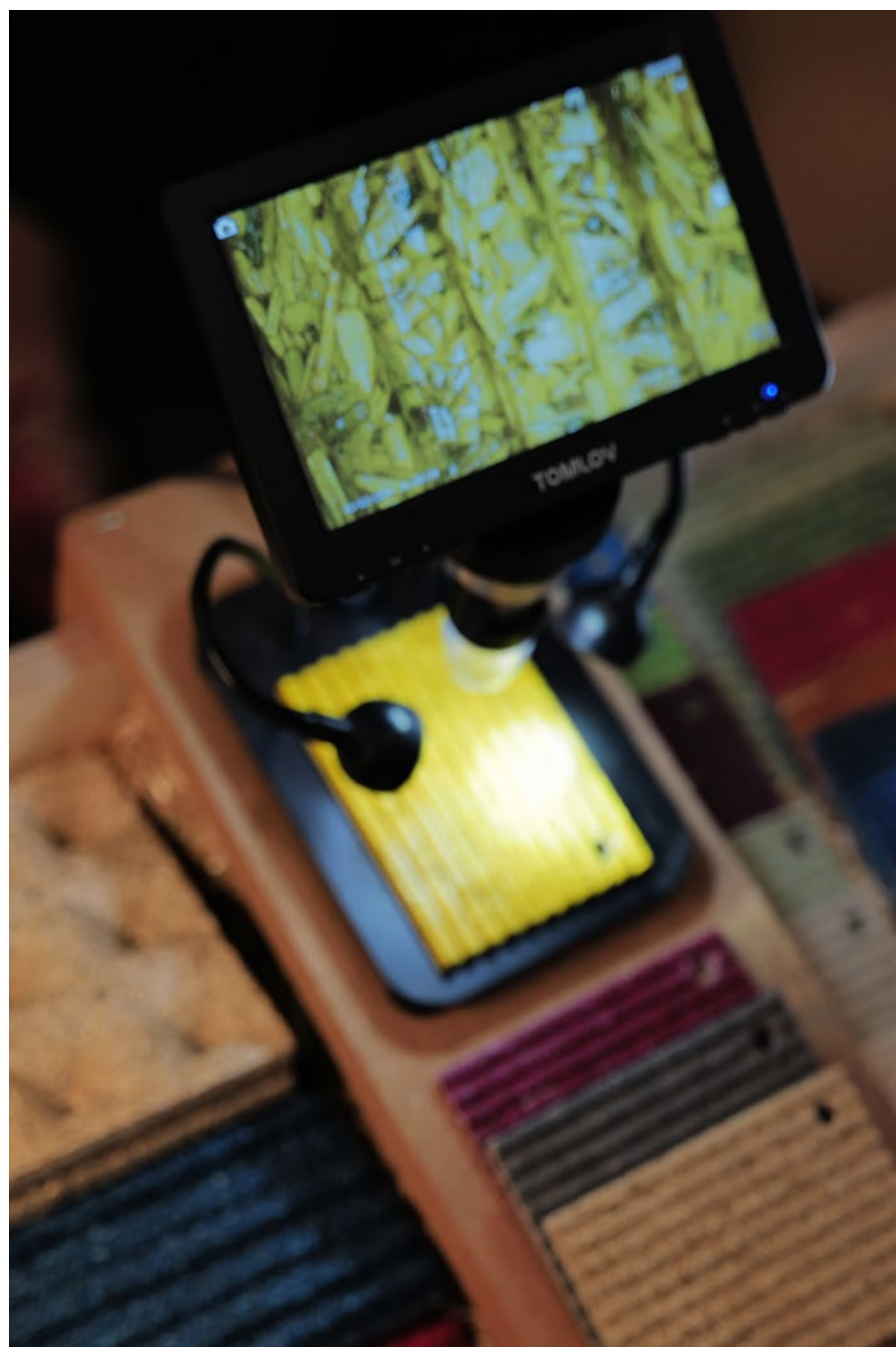
Ecologic studio Algae curtain



Prometheus algae concrete

[Left]: Kelp is explored as part of the exhibition design, Avery Wood Auditorium





Exhibition design for the collective class exhibition
Team: Valeria Ramirez, Angela Hung, Yuhang Qiu

Keywords: salt, structural/edible, installation, material reseach

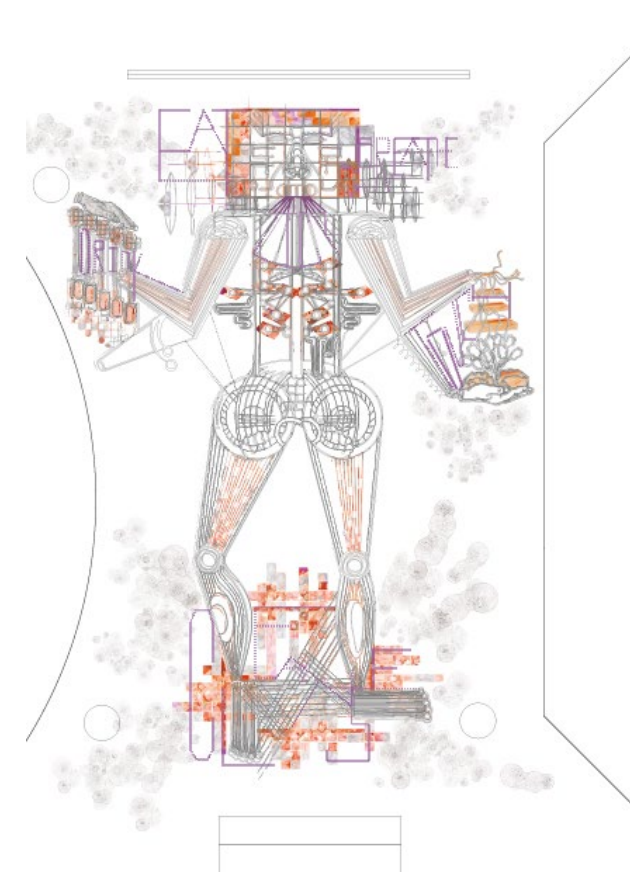
Salt Archaeologies is an edible installation that stages dining as an intimate bodily experience tied to the only rock we eat: salt. Salt runs through air, soil, and water. It is the substance of our tears, our blood, and our sweat.

The climate crisis, along with industrial and extractivist processes, is redistributing it where it shouldn't be. The world is getting saltier, and it's happening very fast. The installation creates the experience of the purple Earth; a saltier world abundant with halophil organisms, like the one that existed billions of years ago: like the one humans are slowly recreating, the one we will have to survive in.

In this --not so-- imagined world, food and shelter are made of the same substance. Structure's demolition is seasoning; seasoning is a structural material. We ask how far does salt travel in space and in time—from body to air, from mineral to wall, from ocean to table—to reach our tongues. What kinds of labour are involved in the process? How do sodium chloride's properties blend with salt's cultural and spiritual connotations? Salt archaeologies invites to taste, to drink, to touch, to inhale.

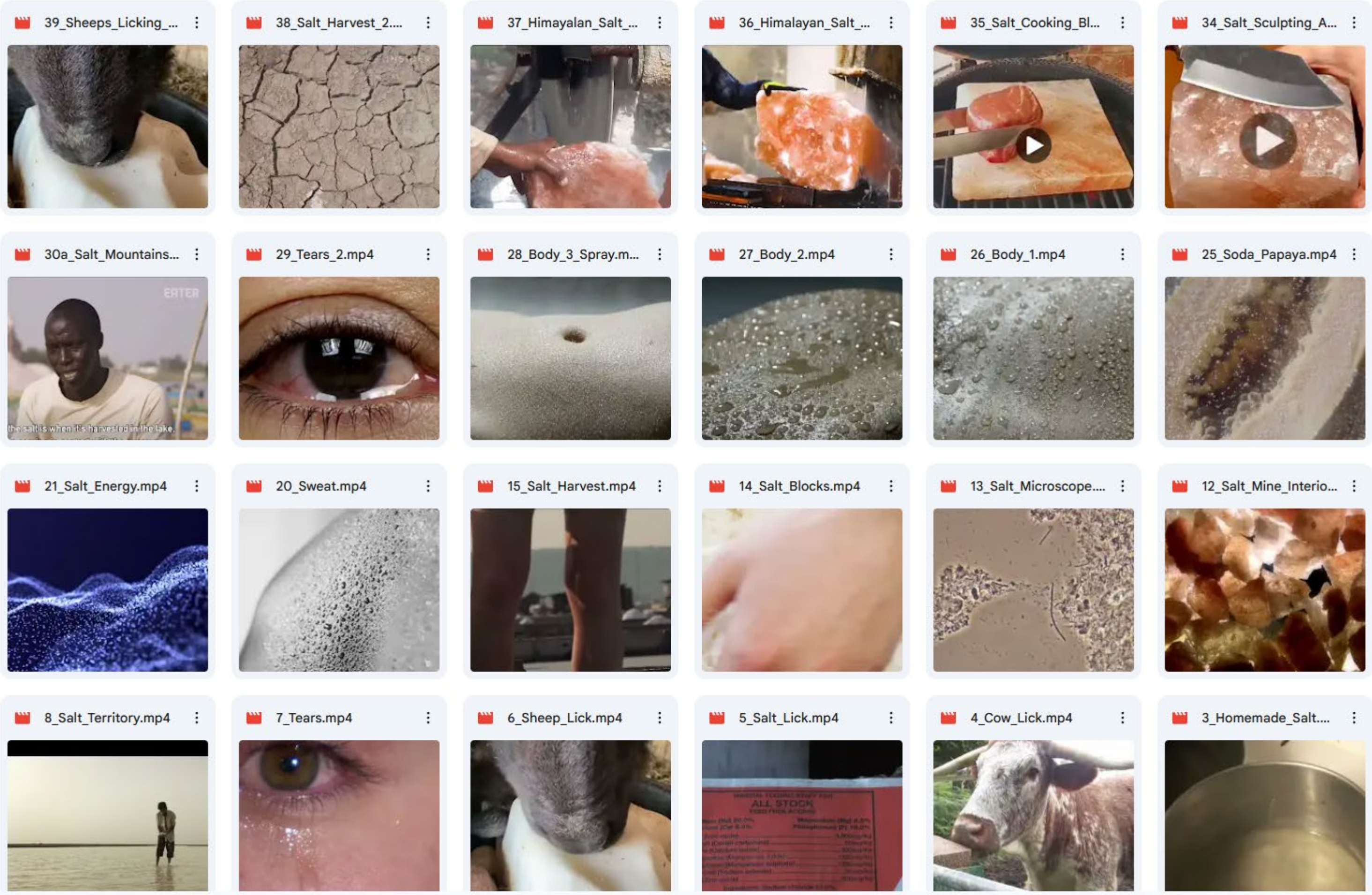
What kinds of food, species and architecture would survive in a saltier world?

*Photography credits: Alex Liu and Vincent Zhang

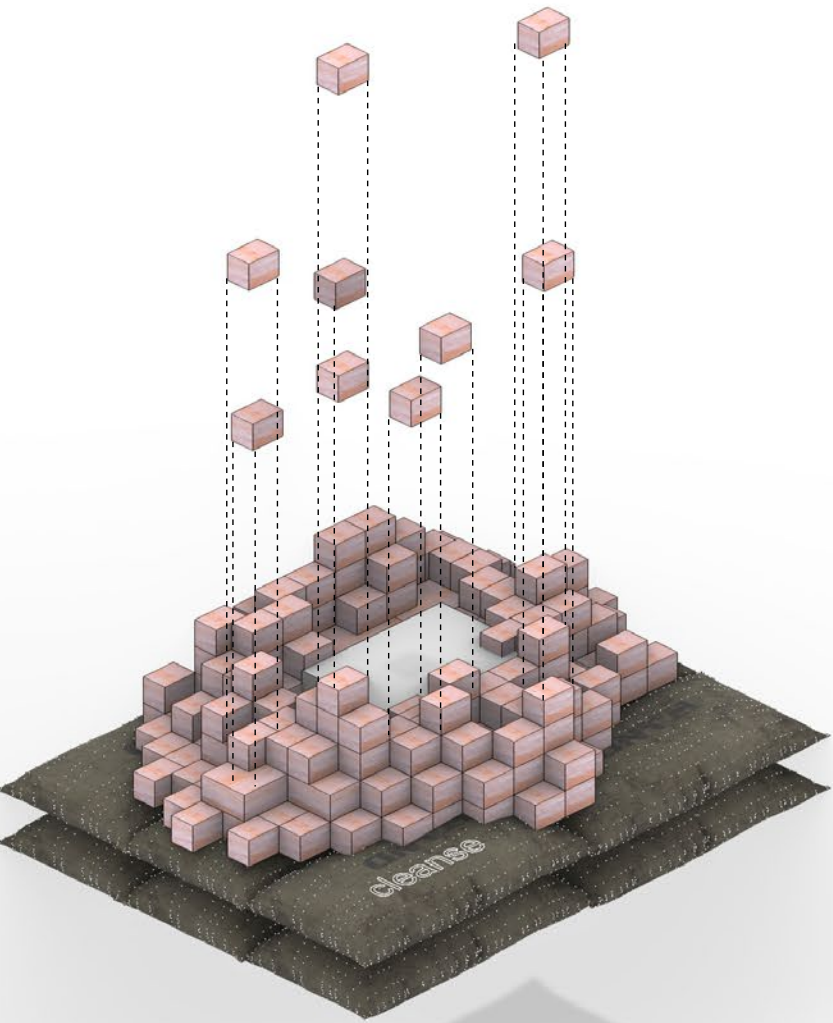


[Left]: The dinning station.

[Right]: Concept drawing of the stations placed in Avery 100.

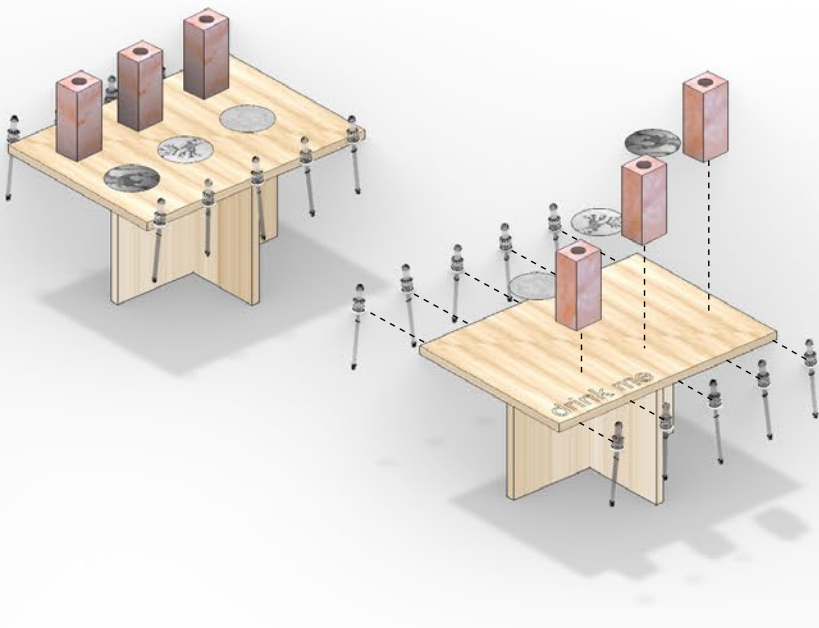


Extracts from the video of the installation, exploring salt’s uses and connotations entangled in different scales, territories and timeframes,



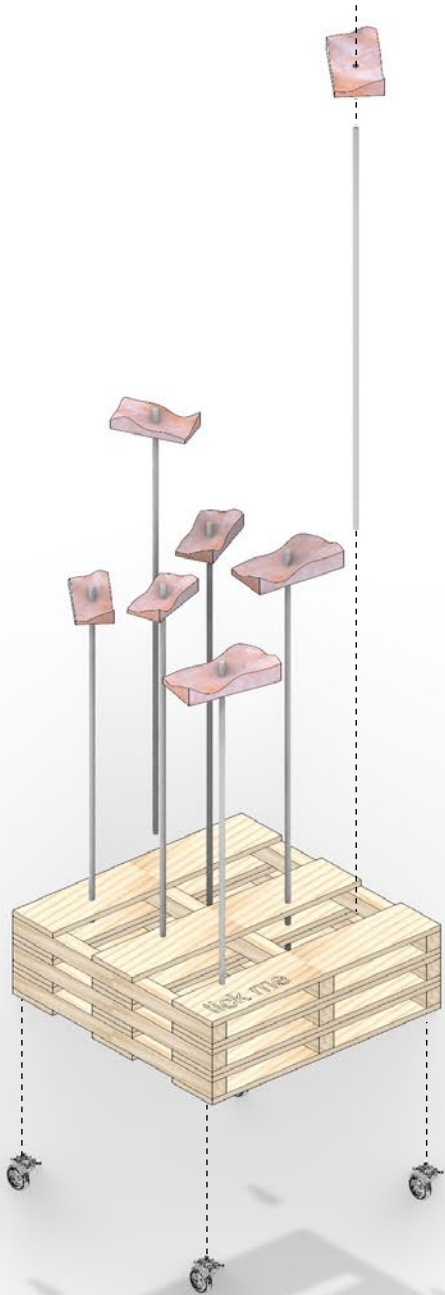
1. The cleansing station

The scale of this first station can be one of a salt mine or one of a toy to stack, to assembly and disassembly a hundred times, depending on your imagination. We have put our own small part of labour to the material, cut it, carry it here and assembly it, adding to a long chain of labour it takes to be extracted from Khewra mines in Pakistan, be shipped and stored in Baltimore, before finally arriving at Avery Hall. We invite you to soak your hands in this landscape made of salt, and feel it on your skin; a mineral coming from evaporation of ancient seas, that has shaped territories, not in the fast extraction timeframes but rather in slow, geological time processes. Cleansing hands with salt water is sacred for many cultures, symbolising loyalty and promise; a ritual that will prepare you for the next stations.



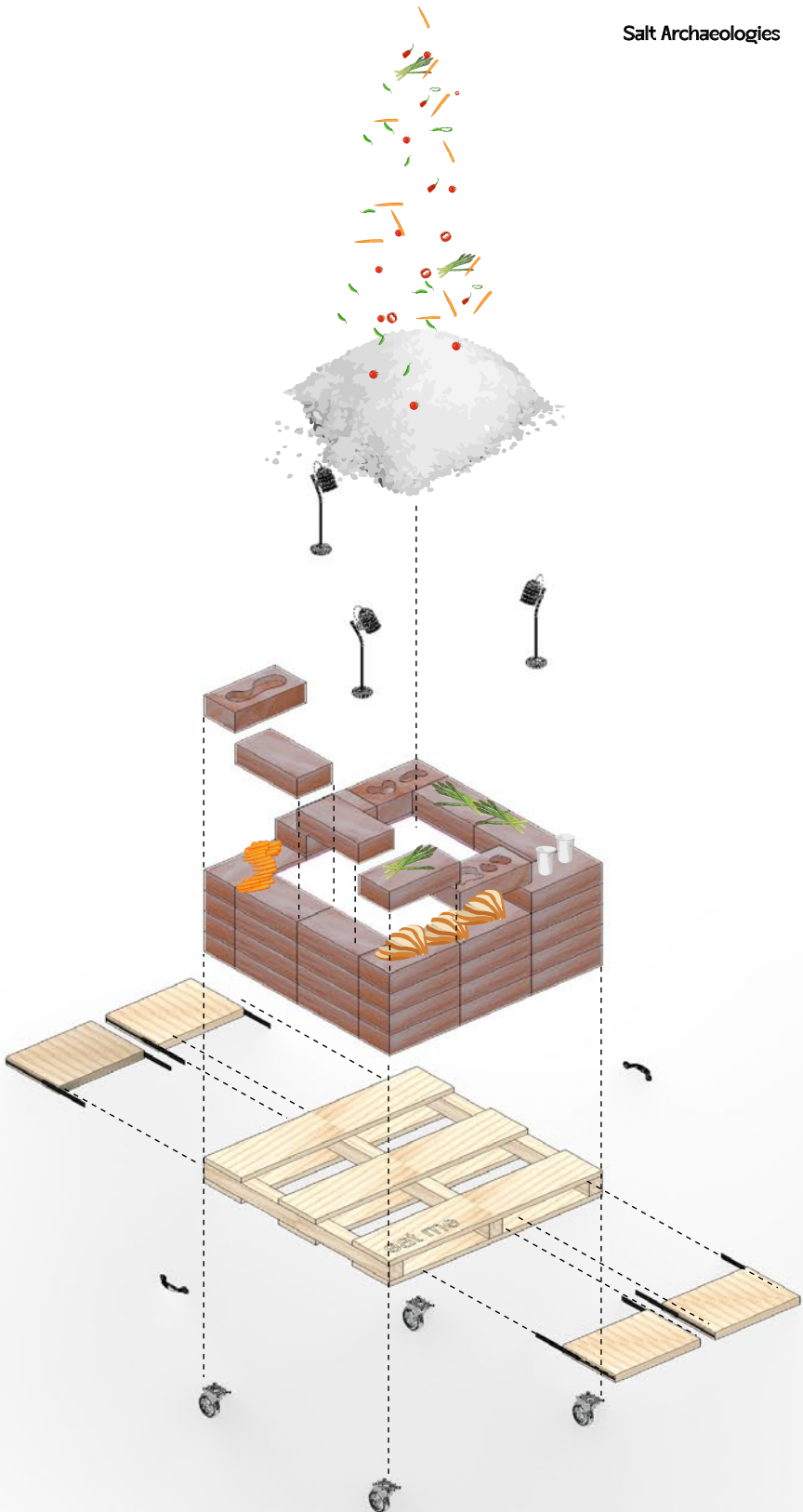
2. The multi-species labrymatory bottles

Salt, or sodium chloride is a chemical term of a substance produced by the reaction of an acid with a base. It is what triggers our nerve impulses and makes our hearts beat, it is the substance of our blood, our sweat and our tears. All living species have different pattens of tears, and your tears' patterns are different depending on your reason for crying. Humans used to collect their beloved ones' tears in vessels called lachrymatory bottles. In a saltier world, your tears could be someone else's sodium chloride source. In these lachrymatory bottles, we have collected tears of different species, which we invite you to taste and drink in drops.



3. The licking sculptures

The history of the world as written by salt is simple: animals first traced paths to salt licks; humans followed; trails became roads, settlements and salt networks grew beside them. Here, we invite you to trace with your fingers the tongue patterns of cows and horses over time, and to lick the sculptures yourselves in order to obtain the sodium chloride you need, and to create new patterns of halophile traces.



4. The dining table

Salt has been used as a payment, being one of the first human currencies, or as an offering to guests, being a sign of hospitality. It has also been a carefully designed part in colonization menus; slaves' foods were always prepared saltier because they were losing their bodies' salt with their intense physical labour and sweating. Here, salt is again a precious refrigerator without power to preserve goods and give them special flavours. Food and its dining table are made of the same substance. The structure's demolition is seasoning; seasoning is a structural material. At this last station, we have built a dining shelter for you, and we invite you to sit around it, search and collect your food and taste it as it is flavoured by the very table it sits on.





Documentation of the making process and of experimentation with the material.





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Thank you <3

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