DESIGN EARTH

is a research and speculative design practice founded by Rania Ghosn and El Hadi Jazairy in 2010. Having consistently interrogated the ability of architectural drawing to address and describe a worsening climate crisis, the practice has generated publications reputed for their sharp criticism in the present, erudite plumbing of the past, and beautiful – if disconcerting – images of the future. This rigorous graphic beauty is one of the bridges connecting architectural discourse to the public, a main concern of Design Earth, which aims to have agency outside of the strictly observational.



DAS Section, After Oil (2016)

In April of 2026, Ghosn and Jazairy joined a video call from their respective desks to give POOL a generous hour-long interview on the practice's history, methodologies, and evolving concerns. Design Earth and POOL collaborated to edit this interview for length and clarity.

POOL
As it relates to LAMINAR, POOL's interest in Design Earth's oeuvre stretches as far back as Rania's dissertation, including the work of *Territories of Oil,* where you take into concern the abstraction and destruction of geography that oil and its infrastructure have created. We see something akin to laminar flow in the modern relationship between image and oil, the project of making massive flows of energy, capital, violence, etc. appear still, effortless, and infinite. As architects and people concerned with the implications of image, how do you describe a world inundated with oil?

[on oil]

JAZAIRY
The larger question of how the world is transformed into resources, cultures, and landscapes is a central concern for Design Earth. If you look around, everything is a landscape of oil – Standard Oil Company and the Rockefeller Center and all the institutions that were built in relation to that enterprise – including his role on the MoMA board of trustees. And there are many other examples of research institutes, parks, performing arts centers, and cultural icons, including Mies van der Rohe's gas stations, Edward Hopper's oil paintings, or even the Plan Voisin for Algiers for an automobilist industrialist, all of which frame a broader cultural landscape of extractive oil culture. So much resonates with the extraction of oil and the transformation of this resource into the modern condition and into institutions.

GHOSN
We've come to our work on fossil fuels through both scholarly and creative research methods. For my doctoral dissertation, I embarked on an archival and fieldwork research on Tapline, a crude oil pipeline that connected wells in Eastern Saudi Arabia to a Mediterranean export terminal in Lebanon and operated between 1950 and 1975. I was captured at first sight and kept returning to a photographic image of the hovering steel pipe as well as narratives of the smooth flow of oil across the region. It was an image in which the space between point A and point B didn't matter, and all that did was the seamless flow of oil, without friction – what I would later relate to the 'space of flow' ideology that sociologist Manuel Castells coined to describe how modern globalization shifts power into fluid, placeless networks. My response was to describe not only the flow, but also the many frictions and disruptions, whether by design or by accident, strike, sabotage or decommissioning, or a mere broken pump.

The response was to counter the violence of abstraction with the biography of that infrastructure and the multiple chapters of its life – the planning and material negotiation that preceded its construction, through its operation, and after its decommissioning. And through that, to weave together not only a material, situated archive, but also the narrative and representational structures through which the oil system was established and reproduced, including many spatial promises of regional connectivity and economic prosperity. I guess that's the power of promissory technologies, to be the genie in the lamp before they are deployed – to promise that the abundant flow of oil will bring development across the world. Then after its shortcomings are realized, and following its decommissioning, its afterlives are dismissed and similar promises are bestowed on the next technology.

[early endeavors]

GHOSN
The shift there, from that earlier individual scholarly research project to the collaborative speculative practice of Design Earth, was at the same time when El Hadi and I co-founded the *New Geographies* journal with a group of four other colleagues from the Doctor of Design program at Harvard GSD. *New Geographies* was the editorial platform to connect systems, geography, and form. The issue I edited there was *New Geographies 2: Landscapes of Energy*, which expanded the question from that singular infrastructure case to an editorial-curatorial project that critically examined the promises of contemporary green infrastructures, which were then presented without their own externalities. They relegated all material challenges to the age of oil, so the green would reproduce similar technological promises, without the burdens of gravity, geography, embodiment. *Landscapes of Energy* situated these discourses and projects

within their geographies, and frontally addressed many of the related contestations and frictions.
In our first publication, *Geographies of Trash*, we identified the capping of the landfill as the closure or singularity of the representation of systems. In response, we opened the black box in a way that resonated with Bruno Latour's invitation following the explosion of the Columbia space shuttle: to make things public at the site of reassembly of pieces. To each issue, we proposed a response in the form of a speculative architectural project, then reassembled the five into one public installation to gather a provisional response and public around that.

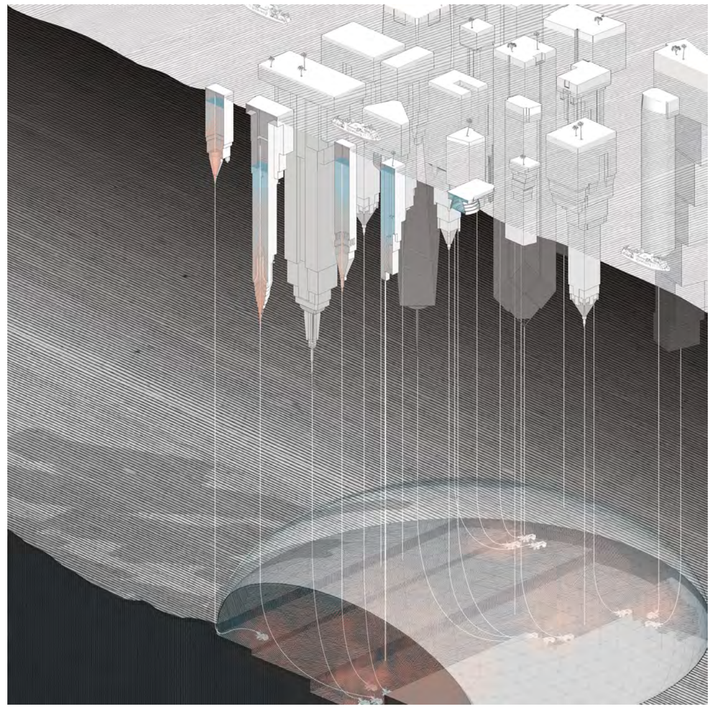
[after oil]

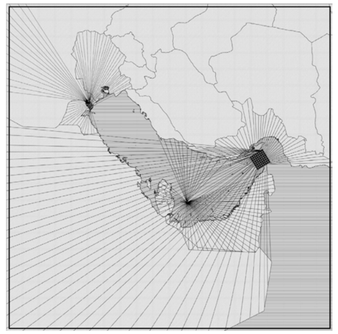
JAZAIRY
Indeed, following *Geographies of Trash*, the project *After Oil* was one of the earliest international commissions for Design Earth. In that project, we channeled our expertise on energy systems to propose a speculative future, one that stayed with externalities in the Gulf in the decades to come post-oil. The project was commissioned by the Kuwait Pavilion, titled Between East and West: a Gulf, for the 2016 at the Venice Biennale. And indeed, following the exhibition in Venice, the project and exhibition were set up in Kuwait City, to hold conversations with the larger public whose future is impacted by such concerns. There, these iconic images supported conversations about competing visions for Kuwait City and the region, and through which public forms could be debated.

GHOSN
Hard to believe it has been a decade since! *After Oil* was indeed a critical milestone for Design Earth, and one that explicitly established main principles, concerns, and strategies of our work: always geographically situated, grounding technological systems, and offering a speculative response to competing visions and values of the future. The specificity of the geography – possibly a lesson we've learned from the TAPLINE research – allows you to counter the abstraction of space and foreground a geo-historical, material imagination.

The title *After Oil* refers to two things: one is the insatiable corporate quest to dig ever more oil; and then a promissory "after" as a hint to a future that follows the age of fossil fuels. We framed three sites in the regional Gulf oil system: Das Island, a site of extraction off the coast of Abu Dhabi in the United Arab Emirates; the Strait of Hormuz to address issues of circulation; and the coast of Kuwait, which was the site of a large oil spill during the first Gulf War – all in the midst of the *business-as-usual* slow violence of oil operations. The project addresses a systemic energy question that touches various

Pacific Aquarium , Geostories (2016)





Regional map showing projects at Das Island, Strait of Hormuz, and Bubiyan Island.

geographies around the world, albeit unfolding in differentiated ways. And so *After Oil* is a series of nine drawings; three sites each of which unfolds in a triptych. The methods of representations are the section, which for us is very grounded, relational, and the axonometric drawing that ties situated geography to a typological or systemic imagination that could resonate elsewhere in the world.

This project was a cornerstone for our book titled *Geostories: Another Architecture of the Environment,* in which 14 projects, of which *After Oil* is one, explore various domains and technologies of extraction and mediation, including the terrarium, aquarium, and planetarium. We've been calling through this book for a reform of the geographic imagination, to move away from promissory abstraction and to begin to actually situate sites and technologies within the thickness of their material histories.

POOL
Whether in terms of geography, temporality, or audience, Design Earth's body of work has expanded the boundaries of what architectural drawing can describe. What considerations have defined this pursuit?

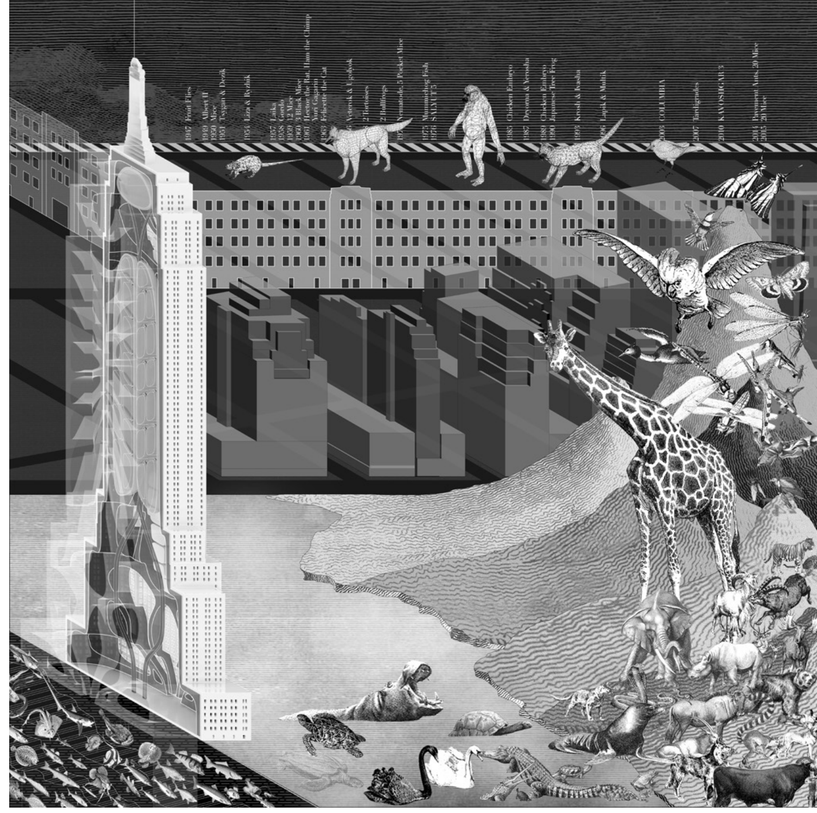
[on architectural representation]

JAZAIRY
Yeah, indeed, I think a main Design Earth contribution is in the representation – in the ways we translate abstract questions and various forms of knowledge into situated design representations in the form of spatial design proposals as well as ontological claims to the world to articulate clear positions and agencies of architecture. We have used the section- axonometry as a privileged mode of representation as it has the power to make visible the otherwise hidden. The work in the *Geostories* series has an economy of means rationale, of the clearest possible articulation of an idea into a spatial configuration. Those drawings barely used any Photoshop image collage. Maybe in part, as I was coming from a Dutch architectural training, I was rejecting the effects of widely-popular smoothing collages. We wanted metric drawings, instruments of measure that presented scalar relationships and that articulated relationships between things and the Earth in the clearest possible way.

GHOSN
And, the drawings bring to attention design issues that might have been peripheral or niche to the mainstream architectural agenda, whether energy infrastructure, trash bags, or seabed and outer space mining. And that might be related to my training as an architect and geographer, eventually working on questions of systems and territories. So, 'following the oil' – you mentioned Timothy Mitchell earlier – was essentially part of that method early on, but also later, so was 'Staying with the Trouble' by Donna Haraway, and the feminist engagement with speculative fabulation. We are interested in technological systems beyond a narrow scope on solutioneering for the future. We rather propose for design to stay with, and work with their externalities, which we begin to make visible and imagine in the drawing. Also, our approach to representation is not only merely descriptive or cartographic. We understand the agency of drawing in speculation, in imagining the world otherwise. This is not a tabula-rasa or promissory project, one that overlooks or dismisses inheritance – however toxic or extractive this might be. Rather, this world is haunted by the ghosts of externalities, relics and traces, all of which are the matter with which futures are imagined. It is not a parallel world, it is science fiction that is fabulation with string figures of externalities – and towards another assembly of stuff and value. So, the power of speculation, the power of "what if," is to redraw connections of things that are here and there in the world, to collapse futures and pasts into the space of the drawing.

POOL
What expansion have Design Earth's roots in pedagogy allowed?

GHOSN
For us, one of the most significant rewards and praises of the work is to hear that it circulates widely in schools and design studios, that faculty members use our books to teach with, that students find the drawings inviting visually, but also an invitation to an agenda of research on the world. We sometimes refer to the drawing as the cough medicine strategy: it tastes sweet, which allows you to swallow something that may otherwise be very difficult to ingest. So, the speculative drawing expands the reach within the student body, beyond those that might be immediately interested in environmental history and futures. That initial project to develop a design research pedagogy has since expanded into the question of how to reach an audience beyond the discipline.



Cosmorama, Geostories (2018)

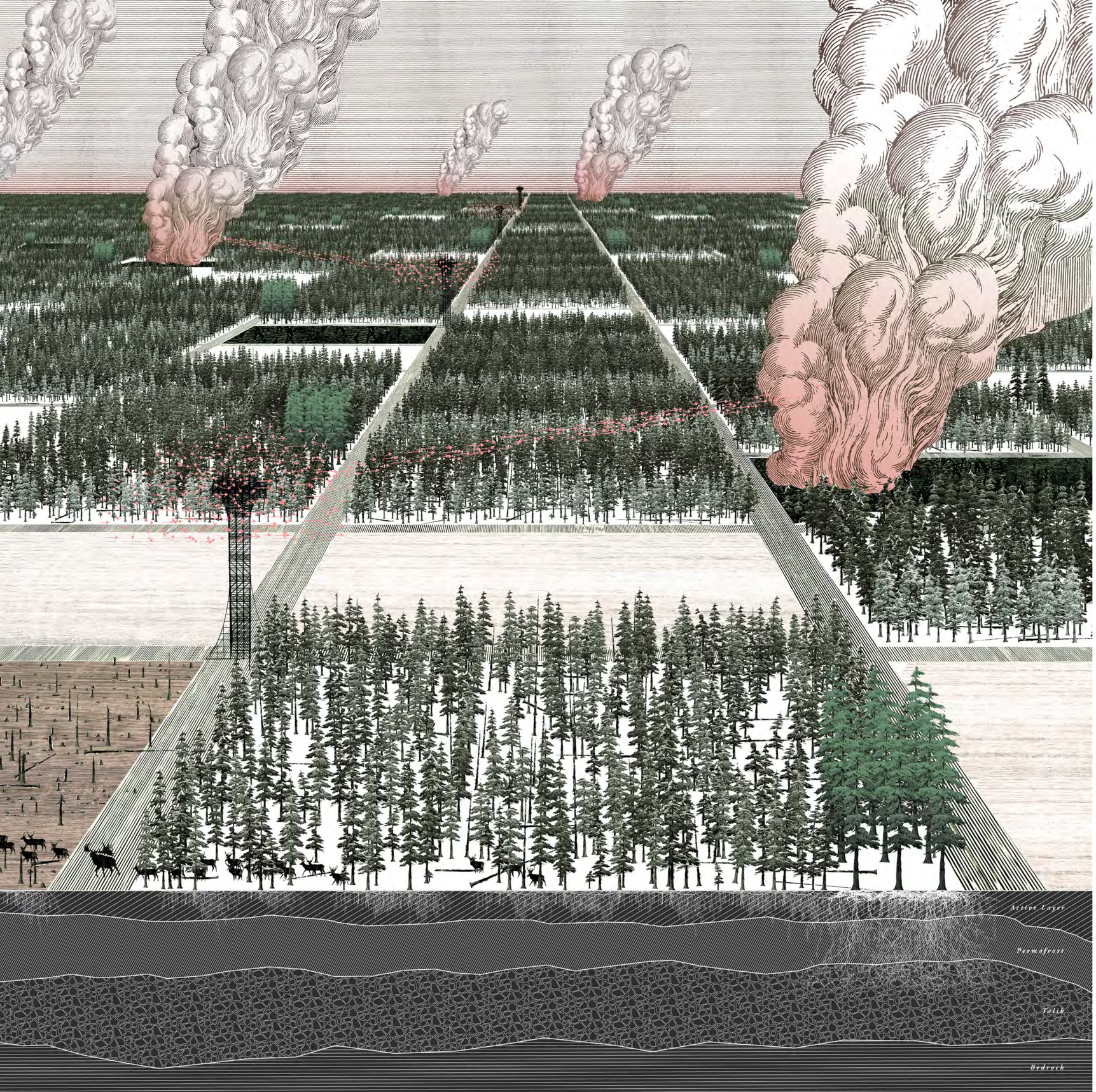
JAZAIRY
In 2010, when we launched Design Earth, we were really fascinated by the work of monks and scientists, such as Athanasius Kircher or Alexander von Humboldt, and the ways in which they captured the world on a sheet of paper. And we similarly asked: how can we register the world through architectural representation? And, how might we articulate an agency and propose a transformation of the geographic relationships that are established by the representation?

So, *Geostories* started as a pedagogical model. We were also keen that publication be printed in black and white, so students could afford to have their own reference copy. The goal was to develop a methodology that invited designers to incorporate matter that had been overlooked by representations of the technocratic globe – the negative externalities, the trailing ponds, the dirty pools, the rusty infrastructure. And rather than dismissing them, we articulated how design might learn to love them, as Latour would invite us to do: to love these technologies as you love your children. The drawing was quite instrumental in capturing significant issues and also in manipulating the status quo and ways of having an impact on these particular questions.

POOL
Staying close to the idea of drawing, I'm interested in a sort of progression that I'm seeing throughout the work, following *Geostories* and its style of representation: as you were saying, it's resistant to the visual language of collage; but, it's also taking on the material of the world, the material of speculation, and taking it into the architectural line drawing tradition. I'm particularly interested in the progression in representation of non-human beings and of "nature" and/or living things. In *Geostories*, you see entourage of whales and fish in the deep sea; in *Climate Inheritance*, you begin to see more insects and an increase in the smattering of beings throughout here, and yet because of the nature of the line drawing, these are all sort of insistently flat and repeated and stamped; and through to *Elephant in the Room*, the natural life and the internality of beings becomes a central factor, and yet still the drawing has remained insistently architectural. What have you found at the limits of architectural representation, particularly of beings?

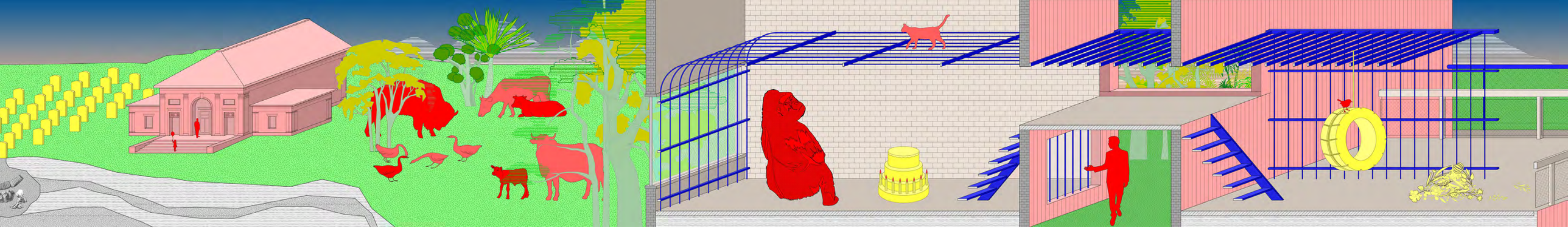
[on performance and the image]

GHOSN
You're pointing to an important aspect of our work and our long-standing interest in the agency of performative images, the power of theater and storytelling machines, of dioramas, aquaria, fables, animation, and more. Our early work already had the two important elements of image and text; although they were mostly presented in a juxtaposition, as an extended caption. You can look at any spread in *Geostories* and hear these two separate voices. In Climate



"We've been calling for a reform of the geographic imagination, to move away from promissory abstraction and to begin to actually situate sites and technologies within the thickness of their material histories."

Planet After Geoengineering (2021)



(Top, Left, Right)
"800-Pound Gorilla" (2025)
Still from "Elephant in the Room" (2021)
Still from "The Way of the Dinosaurs" (2025)

Inheritance, we try to actually engage the image much more on its own terms by zooming in to details to allow a transition in the triptych from within the space of the image. The major leap was with *Planet After Geoengineering* – in part maybe circumstantially, because it was COVID lockdown, we had a few more months to develop with the uncertainty of whether visitors would be able to travel to Venice and see the drawings in-person. So, we tried something we've always wanted to do, to experiment with time-based media. In the animation, the overlay of the narrator voice, and of the soundscore of Earth sounds developed by our collaborator Ivan Zipporun, brought the drawings to life, and invited us to consider more explicitly questions of sequence, timing, and the broader atmosphere of these worlds.

JAZAIRY

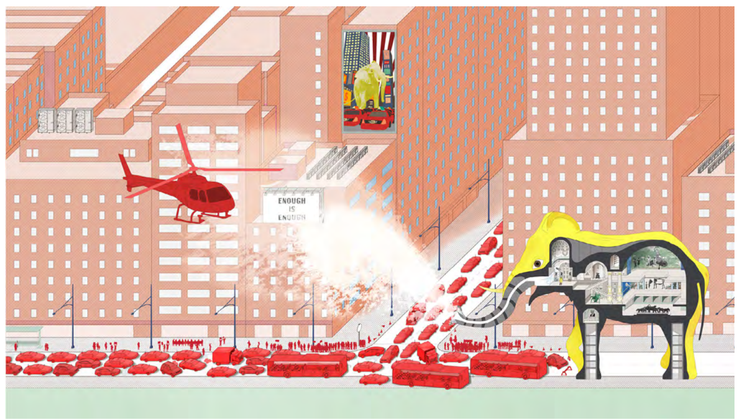
Around the same time, Greta Thunberg delivered her famous speech "Your House is on Fire" at the World Economic Forum in Davos in 2019, and later travelled by boat across the Atlantic for her climate emergency speech at the UN as we were reckoning with the tone of our work a decade into our collaboration. We asked ourselves: what is the agency of the work of Design Earth? How can we be even more explicit and public? Around that time, we were commissioned by Cornell Architecture to celebrate the anniversary of a milestone Earthworks exhibition. Our response was to organize a campus climate-emergency declaration with concerned activists and student divestment groups, with a mascot, and flag-raising ceremony, and a procession across campus. At that moment, it felt that a single voice could channel its poetic tools and be more explicitly embedded in a political register.

GHOSN

For the past six years since, we have been working on the *Elephant in the Room*, and *Other Fables* animation series. After our experiment in protest in physical space, we asked what an activist tradition might be from within, or maybe against, the grains of representation? What might be the role of paper architecture in that respect? At the same time, we were growing increasingly dissatisfied from paradigms of data, information, analytical knowledge and forensic evidence because, and in spite of widespread information knowledge about the climate crisis and even very explicit documentation of environmental destruction, there was still significant political paralysis. So the question for us was: how can creative practice hold such forms of rage, even absurdity as we carry on, and through grief? The series started as a response to the Reimagining Museums for Climate Action competition. In that first fable, the Elephant from the American Museum of Natural History in New York City refused to remain silent or speak the institutional language of a taxidermied creature in the museum. Rather, the Trojan-elephant broke away to protest other possible forms of speech. The tone of this series is more playful than our earlier work – more vibrant and colorful, with rhyming verses. It's probably, in any indirect way, related to reading aloud some Dr. Seuss to our child around the same time. Parenting may have indeed brought a humbling and more ludic relation to the work.

JAZAIRY

We've been looking at these two agencies of architectural representation. A drawing on one end is a representation of physical space, of measures and dimensions; and on the other, representation can be cinematic, an affective space, a space of emotions, sound, and movement – a time of emotional connection. Our early projects relied heavily on the analytical and metric, although often situated from within a mythological tradition as well. The drawing captured many dense elements and almost sedimented figures, often quite complex. We were influenced by the work of Godard, and a visual structure with conflict of images, conflict between text and image, between sound and voice. With *Elephant in the Room*, we were interested in more legible and immediate narratives. Rather than the hyper-dense, we pulled apart these various sedimented layers so that they might be more broadly accessed and circulated. The idea was to move towards the cinematic space, not as collage, but with montage in mind. Thinking with the work of Tarkovsky, we were interested in the long durée, in single scenes that were as long as possible in order to give priority to the space as opposed to anything else. And so far, we have developed a few animations, *Elephant in the Room, Whale Song, Dippy the Dinosaur, 800-Pound Gorilla, À Pas de Loup*, and we are working on two additional stories – the flamingoes in Camargue and the crocodiles in Singapore, all while we explore how to move from the animation format back to print for our next book. For some of these animations, the text and sound become so important that we even discussed the possibility of a stand-alone audio version, which you can imagine is a long arc for a practice that carries a passion for visual representation.



GHOSN

And sometimes we imagine a version of the fables as a performance set: how the drawings may be assembled in a box as a storytelling device. So the storyteller travels with that valise, and for the time of a lecture-performance, the flatness of the drawings unfold in a three-dimensional pop-up set, and some of the sheet material serves to produce live sound effects. And so she carries these counter-narratives, closes her suitcase and travels to another place to break open the spell of dominant historical narratives.

POOL

The introduction of poetry and the decision to rhyme create a really direct and urgent tone, one more set in the present, in a moment, than almost any other works. How has changing rhetoric and modes of communication reflected the conditions of the environmental crisis?

GHOSN

The pleasure of this work also is that you listen to a polyphonic voice of the team members, with their many viewpoints from the world, including those of El Hadi, our long-term collaborator **Monica Hutton [pg. 4-7]**, and myself. It's almost like Cubism – you're looking at things from different perspectives, and the composition is holding it all together as one form, while you can still distinguish the geometries and outlines of these different voices. So for the fables, the desire was to move towards a text format that is no longer compliant with scholarly, peer-reviewed publication, and instead be more playful and more direct. How might we speak truth to power without always being liable to retaliation? The fables are an oblique way by which we can critically describe violent structures and yet get away from the censorship implications of such speech. You infuse life, agency, power in things that may seem not to hold any. It probably comes from a recognition of one's own position within systems that are racialized, quite violent, and not always willing to listen. And yet, we persist. And in part, we persist through the pleasure of doing that. That very compulsive act of making rhymes work has guaranteed endless hours of pleasure and sustained a safe-harbor bubble from the onslaught of the world.

