RARE EARTHS

STUDIO OUT OF TOWN

2024 - 2025

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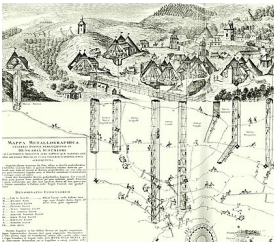

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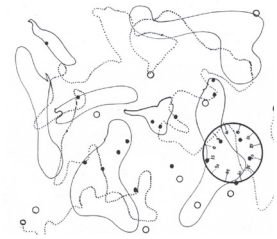

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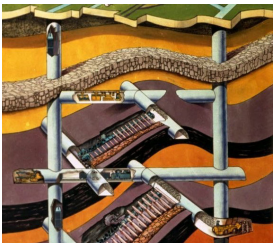


THE STUDIO

Cities are the homes and habitats of most people in the world today. They are rightly considered a built and artificial environment, which often seems withdrawn from nature. However, few cities escape the extreme conditions that nature imposes on them, whether it is dust storms in Dubai, snow in New York, or floods in Paris. Nature is adapting in cities, taking advantage of the available opportunities and seeking new possibilities to reproduce. In turn, cities modify the natural systems and change the biogeochemistry of their habitat. The extent of this modification of nature has increased over the last half-century. While cities initially relied on their immediate environment for food and supplies, today they depend on increasingly extensive territories and networks to meet their metabolic needs (i.e., cities concentrate 60% of the worldwide population and depend on rural hinterlands for 80-90% of their material and energy needs).

If cities are not the opposite of nature but are entangled with it, what to do with the age-old opposition between culture and nature? Likewise, what to do of the city and countryside dichotomy once the survival of cities depends on increasingly large and remote territories, linked by entwined, endlessly proliferating supply chains? Can we refer to these territories still as “rural”, in the traditional sense of a subordinated region, lagging progress-wise and mostly undertheorized by architects? Is this notion still valid to grasp the reality of those out-of-town territories, haunted by their pasts and shaken by contemporary dynamics of global interconnectedness?

The studio proposes reconceptualizing rural territories beyond the current opposition city-countryside, which we deem at the root of the current climate crisis. It does this as part of NeRu (newruralities.eu), an Erasmus+ Cooperation partnerships program (2022-25) gathering six design units within the universities of ULB, Politecnico di Torino in Italy, Universidade da Coruña in Spain, Universidade do Minho in Portugal and Universitet Po Architektura Stroitelstvo I Geodezija of Sofia in Bulgaria, and ETH Zürich in Switzerland.

Nadia Casabella, Benoît Burquel, Sofie Devriendt, François Vliebergh

Still from the film “Costa da Morte” (Lois Patinho, 2013)

RARE EARTHS

"How can we make the margins - the former periphery, the world we live from - the centre of attention, and how can we requalify the feelings associated with marginality by linking them to the search for power?" Latour & Schultz, Memo sur la nouvelle classe écologique, pp.75-76 (own translation)

Europe is pushing for the electrification and decarbonisation of our economy, and to do so it needs to ensure access to the raw materials that will make this transition possible, mostly metals and rare earths. To replace the hydrocarbons and reach the carbon-neutrality by 2050, the EU will need more than 26 times the quantity of rare earths of today (1). On the one hand, it negotiates with countries where these materials are abundant, and on the other it moves heaven to earth to find them within its borders, subsidizing geological and mining research that explores new deposits or supporting all kinds of initiatives related to "urban mining", that is, the exploitation of urban landfills in search of certain metals that today have become scarce (such as copper or gold) but essential (2). Moreover, it does not hesitate to remove environmental restrictions that could hinder the (re)opening of certain mines or to enact decrees warning of the environmental price we will have to pay if we want to keep climate change at bay (3).

The problem, as always, is that we do not all pay the price in the same proportion, giving rise to environmental injustices. For example, the mines are often located in rural areas afflicted by the gradual erosion of the State, and which suffer from a lack of services, a shortage of decent housing, the absence of public transport... And in this sense, the mining renaissance is seen by some critical voices as nothing more than another new wave of colonization, in which the abusive extraction and exploitation of the natural resources necessary for urban development goes hand in hand with the environmental deterioration of these places, **out of town**, out of sight (4). And when it comes to "urban mining", it tends to impact the already disadvantaged population, as is the case of the toxic relationship between Hoboken (a neighborhood south of Antwerp) and Umicore, which imports and treats electronic waste from half the world to extract new precious

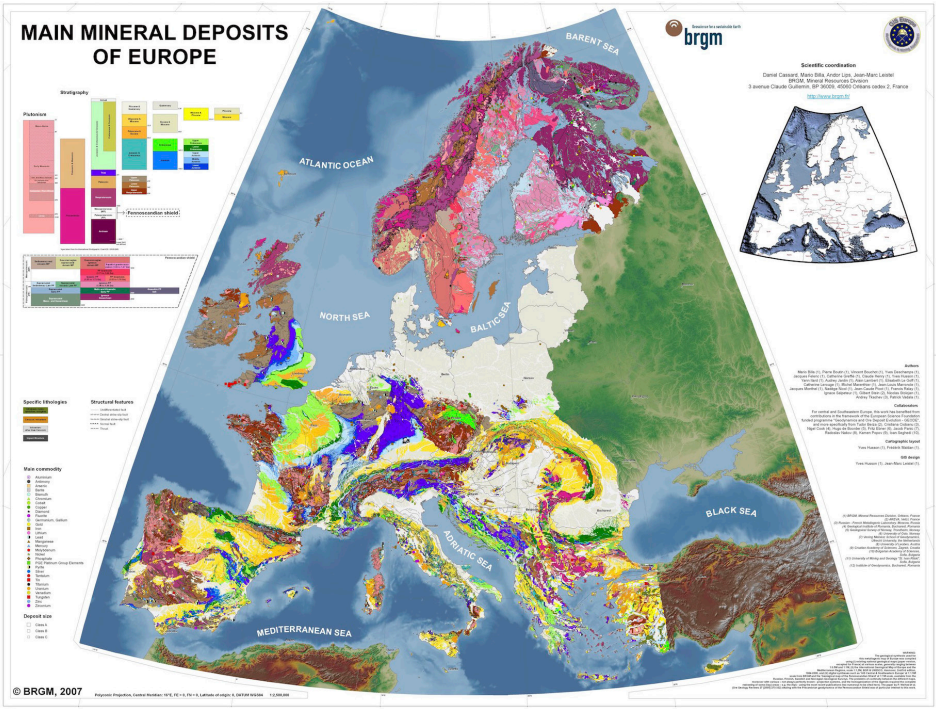
metals from it, or the Hoge Maey landfill, also in Antwerp, which despite its apparent localism does not stop getting entangled as Umicore does in long supply chains or pollutants such as PFAS whose influence is felt miles away (5).

THE NEW GREEN DEAL

In this context, the European Commission presented in March 2023 its proposal for a "European Critical Raw Materials Act" (6), which aims to "ensure a secure and sustainable supply of critical raw materials for European industry and significantly reduce dependence on the EU". The text was published as part of the "Green Deal Industrial Plan" (7), a regulatory package focused on increasing European production of "clean energy" and reducing dependence on powers such as China or Russia. Although the proposed Raw Materials Act is linked to the energy and digital transition, its objectives go beyond guaranteeing the decarbonisation of our economy. In fact, supported by the Industrial Plan for the Green Deal, the European Union seeks to position itself in a global context marked by a race for resources, geopolitical tensions, rising energy prices and inflation, all dynamics that have been accelerated by the pandemic and the war in Ukraine (8).

Nevertheless, both the publication of the Green New Deal for the United States in February 2019 and the approval of the European Green Deal in the EU at the end of the same year soon became the climate and energy transition policies' beacon during a time of strong social mobilizations for climate action (9). A year later, on March 11, 2020 the pandemic arrived. Just two months later, institutions such as the World Bank, the International Monetary Fund, the Organization for Economic Cooperation and Development (OECD), and the European Commission began emphasizing the need for a "green recovery" and "Build Back Better" (BBB). In other words, the goal was to recover from the negative impacts of COVID-19 on the economy by reinforcing the "green transition". One of its most prominent actors has been the European Union and its NextGenerationEU funds aka NGEU (10) with a potential of 806 billion euros in grants and loans for member states. These funds (11) are intended to accelerate the recovery and transformation of the European economy along the Green Deal. All are governed by the principle of "do no significant harm",

Maps of main mineral deposits of Europe, Bureau de Recherches Géologiques et Minières, France; https://www.researchgate.net/publication/309204348_Mineral_Deposits_of_Europe



Umicore site in Hoboken, Antwerp, Belgium

meaning that approved projects and reforms cannot support or carry out economic activities that cause significant harm to any environmental objective (12).

Following the chronological timeline, on February 2022, the Russian Federation invaded Ukraine. Amid widespread panic about the price and continuity of the energy supply in Europe (13), the war acted as the second accelerator of the "green transition". The REPowerEU plan (14), designed to end energy dependency on the Russian Federation, acknowledges that "the rapid progressive elimination of fossil fuel imports from Russia will impact the transition trajectory" and could involve specific investments in gas and oil infrastructures as well as the use of coal and nuclear energy beyond what was initially planned. Finally, campaigns like "You are the EU", promoted by the European Commission at the beginning of 2023, are launched to gain legitimacy by promoting the European values of "Democracy, freedom, equality, tolerance, and solidarity" with energy independence and "clean, renewable energy produced in Europe" (15). It represents a form of energy and technological nationalism, urgently and massively advocating for "clean technologies".

ELECTRIFICATION, OF WHAT?

If indeed those metals and rare earths elements (REE's) constitute the ineluctable ingredients of our energy and digital transition (and for other sectors such as defence and the aerospace race), leading us to a post-oil world, it is surely better, following Latour's proposal (16), to geographically align those who need them with the places from which what they need is extracted or produced, and in a way stop exporting our environmental problems to countries outside Europe. Do we need lithium? Well, instead of continuing to destroy the Atacama Desert (17), considered a unique remnant of the first life forms on Earth (18), let's try to extract it in Extremadura (19) or in Slovakia, and above all let's try to explain to the inhabitants of those places that access to electricity for all depends on their cows or olive trees disappearing, let's try to explain to them for the umpteenth time that the well-being of a few depends on the massive destruction of the ways of life of many. In passing, let's take the opportunity to criticize them for their "nimbyism" (20), and their lack of generosity

towards the great ideals of Progress, with capital letters, without deigning to understand that those who win and those who lose are always the same, and that the rural, the countryside, has not stopped losing in the last 50 years or so.

Another way to approach the question might be to ask specifically what these highly coveted metals and rare earths are used for. According to the organization Friends of the Earth (21) or experts such as Celia Izoard (22), the vast majority would be directed towards the arms and automotive industries, more specifically, aimed at manufacturing the batteries of electric cars. Following the same sources, we do not really "need" to continue developing either of the two industries, and the scarcity of raw materials necessary for their manufacture could be used for modal change (23) or to limit military conflicts. Moreover, as the historian Jean-Baptiste Fressoz warns us (24), electrification will never be complete, as it has not been before, and it is rather emerging as a chimera. What will happen is that the mining industry will continue to resort to oil to run the engines that move the machines and robots in charge of such extraction, or the oil and other industries that are still highly polluting (as well as large CO2 emitters), such as steel? The energy production of the future also needs more raw materials, including steel, than the energy of the past. A gas plant or a nuclear power plant means 20 tons of steel per MW installed. A wind turbine is equivalent to 200 tons of steel per MW installed. We will need more steel to produce sustainable electricity (25).

RESOURCES ARE NOT, THEY BECOME

Gavin Bridge (2009:1220) explains that "[w]hether a material is classed by society as a resource or not depends on the way it is related to other things, to knowledge, to the opportunity to realize value by exchange, and to other materials that can fulfil the same function. Thus, the fact that something – whales, tar sands, genetic diversity – is regarded as a resource (or not) tells us rather more about a society than it does about the substance itself, and it further entails the imbrication of distant landscapes." (26) What is thus hidden behind the increase in interest in certain metals such as copper, lithium, cobalt, nickel, and rare earths (27)? The energy transition is the main

culprit. Research by the World Bank (28), the International Energy Agency (29) and the European Commission (30) confirms a sharp increase in its demand: between 2017 and 2022 the global demand for lithium has tripled, that of cobalt has increased by 70% and that of nickel by 40% (31).

The "European Fundamental Raw Materials Act" (European Commission, 2023) is entirely built around the awareness of its dependence on other actors, mainly China, for the supply of these resources. Its response, is focused on increasing mineral extraction within Europe while expanding and diversifying supply from third countries, and to provide financial support for projects considered "strategic" next to promote circularity in supply chains. The specific objectives set for 2030 are that 10% of European consumption will be covered by domestic extraction, 40% by transformation and 25% by recycling in the European Union. Multiple governments are subsidizing and reducing the economic risk of mining projects (32). This happens in addition to a reduction in the administrative burden and permitting procedures for projects. What this perspective ignores, as criticized by different organizations (33), is the adoption of measures that could reduce or mitigate the demand for minerals and, indeed, the need for primary extraction. As Bridge warns, "[f]rom dams to mines to plantations and conservation reserves, resources 'become' only through the triumph of one imaginary over others." (2009:1221) Additionally, it also assures the dominance of particular resource access institutions and their significant role in producing the geographies of enclosure and exclusion that characterize resource economies.

TOXIC AND INVISIBLE LEGACY

The excessive focus on reducing greenhouse gas emissions to stem climate change presents the intensification of mining as a lesser evil. However, it is becoming increasingly clear that the toxic legacy of industrial society, and its multiple manipulations of the earth's crust, is reaching unprecedented proportions. Recently we read that the amounts of PFAS in the water of the rivers and taps from which we drink are 20-50 times higher than the maximum authorized (34). Marine

Future lithium exploitation by Imerys in Echassières, Allier, France

biologists warn us that the sea no longer looks like it once was, and that between the spills (let's not forget that everything ends up in the sea) and the increase in its temperature, it is becoming an inert mass.

In the case of rare earths, a group of 17 chemical elements (including elements such as neodymium, dysprosium, lanthanum, and yttrium) that are relatively abundant in the Earth's crust but are difficult to mine and process economically because they rarely exist in concentrated forms, the extraction process is complex, involving mining, crushing, separating, and refining ores to obtain usable Rare Earth Elements (REEs). This process involves open-pit mining, destroying large swathes of soil and natural habitats. Moreover, it necessitates the use of acids, solvents, and other chemicals that can leach into groundwater or nearby water bodies, leading to contamination. The entire process generates large amounts of waste material called tailings, which often contain toxic substances, heavy metals, and radioactive elements. Moreover, the inadequate disposal of those wastes can lead to the contamination of rivers, lakes, and groundwater.

Not only mining, but recycling involves huge amounts of water and the emission of pollutants into the biosphere. There we have the case of Umicore, which for decades has contaminated with lead the drinking water reserves of the neighborhood where it is located, Hoboken, inhabited mostly by immigrants (35). Nor is recycling very proportional, as SystExt (36) explains, companies focus on the most lucrative and abundant materials, leaving mining with the responsibility of extracting most of the rare raw materials. Neither on the side of the companies' side nor on the localities and populations affected by it, leading to the exacerbation of environmental injustices as the ones we previously evoked, notably in rural, peripheral areas.

OUT OF TOWN, THE RURAL

The rural areas are increasingly becoming a contested zone where the most pressing issues of our time are playing out: environmental sustainability, global economics versus local economies, issues of food production and genetic modification, and cultural commodification. García-Dory wrote in 2020, "[i]n the process of adaptation to a shifting global order,

vast transformations are taking place in the biophysical, social and cultural realms – a situation which offers a lot of possibilities for artistic exploration and critical rethinking.” (37)

Rural dwellers are not standing idly by and are starting to mobilise and make their voices heard, demanding that potentially affected local communities be included early in the planning of mineral raw material extraction and not ignored as it is the case today. Their proclamations are very varied, and range from guaranteeing global justice for the places of extraction to avoid that always the same places would be forced to “swallow the brown” (38), entering a spiral of environmental decay that leads them to decline, without any possibility of recovery; to prioritizing some collective models that guarantee energy sovereignty in the energy transition, in addition to support energy literacy of the affected population and therefore efficient consumption, leading eventually to choose alternative models such as energy communities (39).

The unknown, as Emilio Santiago points out in a recent controversial book (40), is who is going to take charge of the scale of the tasks of the ecological transition, given that our survival (from global food supply to measures to reduce greenhouse gas emissions) “is mortgaged by a series of infrastructures that have an institutional stature that cannot be slimmed down” (p.138). And it goes on to invite environmentalism to combine community resilience strategies, much easier to organize, with state-scale government actions, even if the modern state is ill-equipped to answer those environmentalist demands, or ill-adapted to their mode of action. Latour & Schultz, in the book cited at the outset, insist on the same thing: “the ecological class cannot pretend to define politics by remaining on the margins or by being indifferent to the institutions and functioning of the current states. He should take care to occupy it in its entirety, resuming the tasks he performs.” (p.81) Neutrality isn’t tenable any longer. But faced to what Stengers (41) calls “infernal alternatives” (2015: 55), what to do or not do?

UNCOMMONS, ARCHITECTURE

To start with, we need to learn to identify the many logics that coexist in every of those spiky issues. There is the emphatic logic of the urgency of an energy transition, the danger

of environmental destruction that ecologists identify, and at the same time the rejection of the inhabitants that these territories are mere resources, instead of the material with which the identity, the very being, of their inhabitants is built. Marisol de la Cadena speaks of this overlapping of epistemologies, when she refers to the case of a woman who refuses to sell her land for copper extraction in Peru: "The woman's refusal would thus enact locally an ecologized nature of interdependent entities that simultaneously coincides, differs, and even exceeds—also because it includes humans—the object that the state, the mining corporation, and environmentalists seek to translate into resources, whether for exploitation or to be defended. Thus seen, she is a-grammatical to the subject and object relation—or, she is not only an environmentalist." (42)

How to dispute about the partition of the sensible into universal nature and ecologized nature? The epistemological tradition that we have inherited makes us unable to identify new arguments of opposition to extractivism. Specially in architecture, since the processes that correspond to this massive destruction happen **out of town**, out of sight, have long been considered a necessary evil, without direct connection to the education and practice of the discipline. It is enough to look at the map of the Iberian Peninsula (43), where most of the dots correspond to clays and aggregates' quarries, and therefore dedicated to the extraction of raw materials for the construction industry, to realize that something is not working. One cannot help but wonder how the awareness on the part of architects and builders, reflected in movements such as low tech, frugality, etc. (44) will be able to put an end to this silent destruction, which makes holes, displaces inhabitants (human and non-human) and generates new mountains of toxic waste that in any case are difficult to make disappear (45). Now, there is no room for rejoicing. If the opening of mines for the extraction of metals sounds the alarm of citizens and some professional groups (46), the aggregates are still considered a lesser evil associated with well-being and the construction of infrastructures that sustain them (47).

The way in which architecture deals with the environmental and physical tear that all mining or quarries leaves behind is in most cases limited to its

"patrimonialization", as is the case of the C-Mine in Genk. The abusive exploitation of resources, human, mineral, landscape... becomes a valuable memory, a legacy, to be preserved. Sometimes, there is talk of "restoring" what has been destroyed, and the holes left in the surface are filled with new soil, finally repopulating it with new forest plantations to turn them into carbon sinks. The failed inheritance thus becomes a reparated future, for not only does it more than compensate for what was destroyed, but, through exchangeable carbon credits, it allows us to continue destroying elsewhere without having to be alarmed.

But what if, instead of "restoring" we tried a thousand other possible actions that would move us away from the "patrimonialization" of the ecological catastrophe and its ruins that industrial society bequeathed to us? Repair (48), dismantle (49), mend, overhaul, heal or requalify (instead of disaffecting), reflect (in the sense of impacting the assemblies in which these farms are entangled), etc. An essential question is whether it is possible to achieve a sustainable and socially just ecological transition through a mere substitution of energy sources and without changing our production and consumption model. It is necessary to move towards an energy transition, but is it possible to do so in the current terms, within the framework of an economy that does not contemplate planetary limits or the well-being of its societies? And above all, is it possible without the active involvement of architects in the exploration and exhaustive knowledge of the resources they use and the mechanisms to manage them in a different way? The criticisms are heard aloud: there is nothing innocent about building and implies a process of extraction propelled by voracious and impatient economic mechanisms (50).

Counterclockwise: informal cobalt mine, Democratic Republic of Congo; eviction of activists in a German coal mine; restoration of old mine in Brescia, Italy, “Parco diffuso delle cave di Brescia”; Cerro de Pasco silver mine, Peru; eviction of activists, Garzweiler lignite coal mine, Germany; acid mine drainage in a Bulgarian mine, https://en.wikipedia.org/wiki/Acid_mine_drainage

(1) As critically stated in https://www.moustique.be/actu/monde/2023/01/12/terres-rares-comment-le-gisement-geant-trouve-en-suede-va-beneficier-a-toute-leurope-254715
(2) An optimistic estimate calculates that the increase in the collection and recycling of metals from technological waste would cover 57% of the demand for minerals.
(3) Meaning not exceeding a global warming of 1.5ºC, as in Welsby, D., Price, J., Pye, S. et al. (2021) "Unextractable fossil fuels in a 1.5 °C world." Nature 597, 230–234. https://doi.org/10.1038/s41586-021-03821-8
(4) Kelly-Reif, Kaitlin, and Steve Wing. "Urban-Rural Exploitation: An Underappreciated Dimension of Environmental Injustice." Journal of rural studies 47 (2016): 350–358. Web.
(5) Climaxi, "Indaver: stortplaats Hooge Maey en schouw van verbrandingsoven blijven PFAS-pijnpunt", 30.11.2023, retrieved from https://www.climaxi.be/nieuws/indaver-stortplaats-hooge-maey-en-schouw-van-verbrandingsov-en-blijven-pfas-pijnpunt
(6) European Commission (2023), "Proposal for a Regulation of the European Parliament and of the Council establishing a framework to ensure the secure and sustainable supply of critical raw materials" and amending Regulations (EU) 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0160 Final text approved on 13 December: https://www.europarl.europa.eu/plenary/en/texts-adopted.html
(7) European Commission (2023) "A Green Deal Industrial Plan for the net zero era", COM(2023) 62 final. Available in: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023DC0062
(8) ODG - Debt Observatory in Globalization (2023) "The Mine, the Factory, the Store: Global dynamics in the 'green transition' and their consequences in the 'Lithium Triangle'", July 2023, retrieved from https://odg.cat/wp-content/uploads/2023/07/The-mine-the-factory-the-store.pdf
(9) The creation of international activist networks such as "Fridays for Future", "Extinction Rebellion", or "By2020 We Rise Up" increased pressure on institutions with both the content of their demands and their practices of civil disobedience.
(10) For a detailed explanation, see https://next-generation-eu.europa.eu/index_en
(11) Specifically, 37% of the funds were supposed to be directed towards projects and reforms that contribute to the Union's climate objectives, 20% towards digitalization, and 10% towards biodiversity.
(12) European Commission (August 30, 2021) "Do No Significant Harm", available at: https://knowledge4policy.ec.europa.eu/glossary-item/do-no-significant-harm_en
(13) Apparently, this panic was unfunded, since Russian oil keeps reaching Europe after being refined in India, in Mohi Narayan and Nidhi Verma, "Fuels from Russian oil gets backdoor entry into Europe via India", Reuters, April 6 2023, retrieved from https://www.reuters.com/business/energy/fuels-russian-oil-gets-backdoor-entry-into-europe-via-india-2023-04-05/
(14) More information available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-

europe_en
(15) European Union, "You are Europe" [website], available at: https://you-are-eu.europa.eu/index_en
(16) Latour, Bruno (2017) Où atterrir ? : comment s'orienter en politique. Paris: La Découverte.
(17) Chile holds the world's largest lithium reserves, 90% of which are in the Atacama desert, in Alexander Villegas (2023) "How Chile's progressive new plan to mine lithium faces Indigenous hurdles", Reuters, July 20, 2023, retrieved from https://www.reuters.com/world/americas/how-chiles-progressive-new-plan-mine-lithium-faces-indigenous-hurdles-2023-07-20/#:~:text=Chile%20holds%20the%20world's%20largest,well%20as%20renewable%20energy%20companies.
(18) In December 2023, scientists, for the first time, reported that some parts may have similarities to Earth during the Archean eon and thus to the environment of the first life forms on Earth, and even be similar to conceivably hospitable conditions on the planet Mars during earlier Martian times, https://en.wikipedia.org/wiki/Atacama_Desert
(19) As explained here, https://www.energias-renovables.com/panorama/renovables-el-subsuelo-de-extremadura-contiene-13-20211201
(20) NIMBY stands for 'not-in-my-backyard' which is seen as a denigratory way of referring to the socio-environmental conflicts triggered by the mining renaissance Europe is promoting. See for instance Paulo Pena, "'Nothing will be the same': the locals on Europe's new mining frontiers", Investigate Europe, November 8 2023, https://www.investigate-europe.eu/posts/local-communities-europe-new-mines-critical-raw-materials. Equally interesting, the debate that took place on March 27, 2024, after the screening of a new documentary entitled "Europe's Mining Renaissance" in Leuven at the DOCVILLE film festival, featuring Ia Modin, Julia Poliscanova, Nick Meynen, Peter Tom Jones and John Vandaele, https://kuleuven.sim2.be/europes-mining-renaissance-a-catalyst-for-climate-neutrality-the-debate/
(21) Friends of the Earth & European Environmental Bureau (2021), "Green mining is a myth", https://eeb.org/wp-content/uploads/2021/10/Green-mining-report_EEB-FoEE-2021.pdf
(22) Izoard, Celia (2024) La Ruée minière au XXIe siècle : Enquête sur les métaux à l'ère de la transition, Seuil, Collection Écocène
(23) Reducing the fleet of private vehicles in circulation (reaching a fleet of passenger cars three times smaller than the current one by 2050) and betting on buses would reduce the need for primary extraction by between 5 and 35% depending on the metal analysed
(24) Jean-Baptiste Fressoz (2014) Sans transition : Une nouvelle histoire de l'énergie, Seuil, Collection Écocène
(25) Bernard Padoan (2023) « Industrie - A Gand, ArcelorMittal veut réduire d'un tiers ses colossales émissions d'ici à 2030 », Le Soir, December 2 2023, https://www.lesoir.be/552871/article/2023-12-01/industrie-gand-arcelormittal-veut-reduire-dun-tiers-ses-colossales-emissions
(26) Gavin Bridge (2009) "Material Worlds: Natural Resources, Resource Geography and the Material Economy", in Geography Compass, Vol 3, Issue 3, May 2009, pp.1217–1244, https://doi.org/10.1111/j.1749-8198.2009.00233.x
(27) The complete list would be, for the metals, aluminium (Al), copper (Cu), cobalt (Co), lithium (Li), manganese (Mn), nickel (Ni), gold (Au), silver (Ag), PGM (platinum (Pt) and palladium (Pd), and

Sc. Y. La. Ce. Pr. Ne. Pm. Sm. Eu.

Sc - Scandium
Y - Yttrium
La - Lanthanum
Ce - Cerium
Pr - Praseodymium
Ne - Neodymium
Pm - Promethium
Sm - Samarium
Eu - Europium

for the rare earths, neodymium (Nd), praseodymium (Pr), dysprosium (Dy), and terbium (Tb).
(28) World Bank (2020), "Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition", World Bank, Washington, DC. Available in: https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate- Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition
(29) IEA (2021), "The Role of Critical Minerals in Clean Energy Transitions", IEA, Paris. Available in: https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions
(30) Carrara, S., Bobba, S., Blagoeva, D., Alves Dias, P., Cavalli, A., Georgitzikis, K., Grohol, M., Itul, A., Kuzov, T., Latunussa, C., Lyons, L., Malano, G., Maury, T., Prior Arce, A., Somers, J., Telsnig, T., Veeh, C., Wittmer, D., Black, C., Pennington, D. and Christou, M. (2023) "Supply chain analysis and material demand forecast in strategic technologies and sectors in the EU – A foresight study", Publications Office of the European Union, Luxembourg, JRC132889. https://dx.doi.org/10.2760/386650
(31) IEA (2023), "Critical Minerals Market Review 2023", IEA, Paris https://www.iea.org/reports/critical-minerals-market-review-2023
(32) "Thea Riofrancos; The Security–Sustainability Nexus: Lithium Onshoring in the Global North", Global Environmental Politics 2023; 23 (1): 20–41. doi: https://doi.org/10.1162/glep_a_00668
(33) "A Turning Point: The Critical Raw Material Act's needs for a Social and Just Green Transition", Raw Materials Coalition, available here: https://eurmc.org/publication/a-turning-point-the-critical-raw-material-acts-needs-for- a-social-and-just-green-transition/
(34) Brussels Times, April 17 2024, "Flemish drinking water highly polluted with PFAS, but purifying costs millions", retrieved from https://www.brusselstimes.com/1009591/flemish-drinking-water-highly-polluted-with-pfas-but-purifying-costs-millions
(35) As warned in the medical magazine OncoHemato, "Opnieuw hogere loodwaarden vastgesteld bij kinderen rond Umicore in Hoboken", December 6 2023, https://www.oncohemato.be/nl/nieuws/opnieuw-hogere-loodwaarden-vastgesteld-bij-kinderen-rond-umicore-in-hoboken.html
(36) SystExt is the acronym "Systèmes Extractifs et Environnements" and is an association bringing together active professionals with a common interest in extractive systems, particularly mining, and with the skills to address the technical issues associated with these activities. See https://www.systext.org/node/2, as well as the interview with Aurore Stéphant, researcher at SystExt, https://www.youtube.com/watch?v=FkiMqLD3_YQ
(37) Retrieved from https://culture-actioneurope.org/wp-content/uploads/2020/03/IETM_Art-in-Rural.pdf
(38) See the short note by Greenpeace, "Altri, un monstruo de celulosa en el corazón de Galicia" (14-06-2024), https://es.greenpeace.org/es/en-profundidad/altri-un-monstruo-de-celulosa-en-el-corazon-de-galicia/, as well as the EU Parliamentary question - E-001038/2024 by Idoia Villanueva Ruiz concerning Altri's public financing, https://www.europarl.europa.eu/doceo/document/E-9-2024-001038_EN.html
(39) See, for example, in Wallonia, the initiative "For an immediate democratization of the mining question", https://www.leslignesbougent.org/petitions/pour-que-la-question-miniere-en-wallonie-soit-democratiquement-dura-

ble-11259/
(40) Emilio Santiago (2023), Contra el mito del colapso ecológico, ARPA eds. An interesting counterpoint, Carlos Taibo (2021) Iberia vaciada: Despoblación, decrecimiento, colapso, Los Libros de La Catarata.
(41) Isabelle Stengers (2015) In Catastrophic Times: Resisting the Coming Barbarism. Translated by Andrew Goffey; Open Humanities Press/Meson Press. Infernal alternatives are the mechanisms that maintain political realism. They are a series of non-choices presented as choices by Guardians to their various 'publics'; the choice between doing nothing about climate change or geo-engineering the climate; the choice to do nothing about deforestation or the choice to trade forests as commodities in order to preserve their 'value'. This production of two bad alternatives, where one is 'less bad' than the other, is a means by which Guardians make problems inaccessible to anyone other than Guardians and produce at the same time a "cold panic" (2015: 32) where an impotent fear of the future sets in, functionally demobilising people.
(42) Marisol de la Cadena (2015), "Uncommoning Nature", published in e-flux journal, Issue #65, https://www.e-flux.com/journal/65/336365/uncommoning-nature/
(43) GoERA - Raw Materials; ap of European mineral resources, https://data.geus.dk/egdi/?mapname=egdi_geo-era_mintell4eu#baslay=baseMapGEUS&extent=2093897.805087733,1580666.0701467404,3776961.719663826,2451417.887062844&layers=egdi_mines,mintell4eu_touristic_mine_sites07sept2021&filter_0=name.part%3D%26mined_commodity%3D%26commodity.part%3D%26status.multi%3D%26miningactivity.part%3D
(44) Among the plenty references, Edmund Fowles (2021) "Make low-tech our mantra and design clean and simple", RIBA architects' journal, https://www.ribaj.com/intelligence/low-tech-reset-climate-emergency-feilden-fowles; and Philippe Madec (2022) "La frugalité n'est pas la sobriété", topophile, https://topophile.net/savoir/la-frugalite-nest-pas-la-sobriete/
(45) Patrick O'Hare (2019), "Waste", the Open Encyclopedia of Anthropology, https://www.anthroencyclopedia.com/entry/waste
(46) ARCH+, "The Great Repair", https://archplus.net/en/the-great-repair/
(47) Metabolism of Cities (2022), "La face cachée de l'économie Française - Un extractivisme ordinaire ? (Podcast avec Nelo Magalhães), https://www.youtube.com/watch?v=Qm3PQMJdLIA
(48) Ibídem (46)
(49) Emmanuel Bonnet, Diego Landivar, Alexandre Monnin (2021) Héritage et fermeture. Une écologie du démantèlement, éditions divergences.
(50) Charlotte Malterre-Barthes, "A Global Moratorium on New Construction", https://www.charlottemalterrebarthes.com/practice/research-practice/a-global-moratorium-on-new-construction/, next to the design studio materials, available here, https://www.charlottemalterrebarthes.com/research/tu-berlin/a-moratorium-on-new-construction/


25km
25km
Malpica
Caión
Niñons
Razo Da Costa
Buño
Corme
Pazos
Xornes
Cances Grande
Ponteceso
Neaño
Laxe
Berdillo
Carballo
Cereo
Soesto
A Revolta
Valencia
AC-55
Coristanco
Traba
Traba
Ardaña
AC-552
Nantón
AC-552
AC-552
Rus
BAIO GRANDE
Entrecruces
AC-552
AC-400
Carreira
Vimianzo
Anxeriz
Zas
AC-400
Padreiro
Castrelo

THE SITE

Mines in rural areas or “urban mining”? To do what? And how can we prevent the environment, and our living conditions more generally, from becoming the price to pay for the energy and digital transition? What step backwards do we need to take to avoid the “infernal alternative” (1) between a transition that aims to ensure our life on earth but at the same time needs to worsen it in order to prolong it?

This year we have chosen an abandoned mine in Galicia, Monte Neme (2), as the place of our concerns. There is no place that is not intertwined with broader territories, with which they establish relationships of interdependence. In the case of Monte Neme, it can be the municipality of Malpica, the land of Bergantiños (3), or the symbolic area of the “Costa da Morte” (4), in which it is inserted, or even the territory governed by the Xunta, the regional government of Galicia (5). Physical as well as symbolic territories that the participants in the workshop will have to explore.

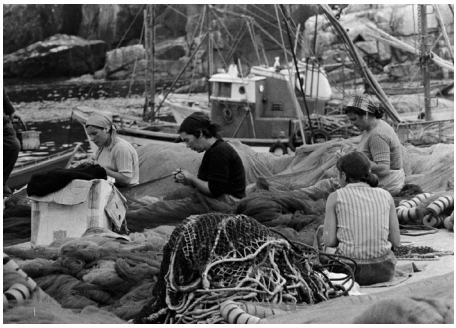
For example, what could be linking the conversion of Mont Neme into a carbon reserve and the Echassières mine in the Auvergne, a former kaolin/tungsten mine where lithium has been discovered in sufficient quantities to justify its commercial exploitation from 2025 partly thanks to the unconditional support of Europe through the EMILI (6) project? What have to do the green hill that Hoge Maey has become, a former landfill that is currently exploited for the use of methane released by the decomposition of its waste and the production of algae for distillation as biofuel, today imposing itself on the industrial landscape of the port of Antwerp, and the replanted green hill of Mount Neme with each other?

The invitation is therefore to develop projects that relate Monte Neme with the broader physical and symbolic territory in which it is inserted. Last year, we were able to experiment with this format thanks to the work of one of the groups of students who followed the design unit: their first idea was to renature the Schelde estuary that gives access to the port of Antwerp, avoiding its continuous dredging

“Percebeiro” (“percebes” or barnacles’ hunter) in action in “Costa da Morte” or the Death Coast, the name of the seashore between Malpica and Finisterre, Spain

and returning to a self-regulated system of circulation and sediment deposit. But before they could do a project in the estuary, they needed to think pragmatically about how to reduce maritime traffic in the estuary, so they proposed diverting container ships to Zeebrugge and strengthening the railway line between this port and Antwerp. Finally, his project consisted of a series of large multi-storey barns to store the cargo of the Roll-on Roll-off terminal, structures that also became the switches between the energy that arrives from the offshore turbine platforms and its national distribution on land. In the second half of the year, the question was how to "irrigate" the intermediate territories with this wind energy gained at sea, while exploring how to "downscaling" energy generation and "communalize" it through local energy communities (7).

The possibilities for entanglement are endless and may even be less complicated than the previous example. But it is imperative that there be this "entwining" ("mise en relation") between sites, themes, temporalities... In any way that the student considers appropriate, justifying its adequacy. Above all, it will be a question of caring for



"Redeiras" or net makers in Malpica

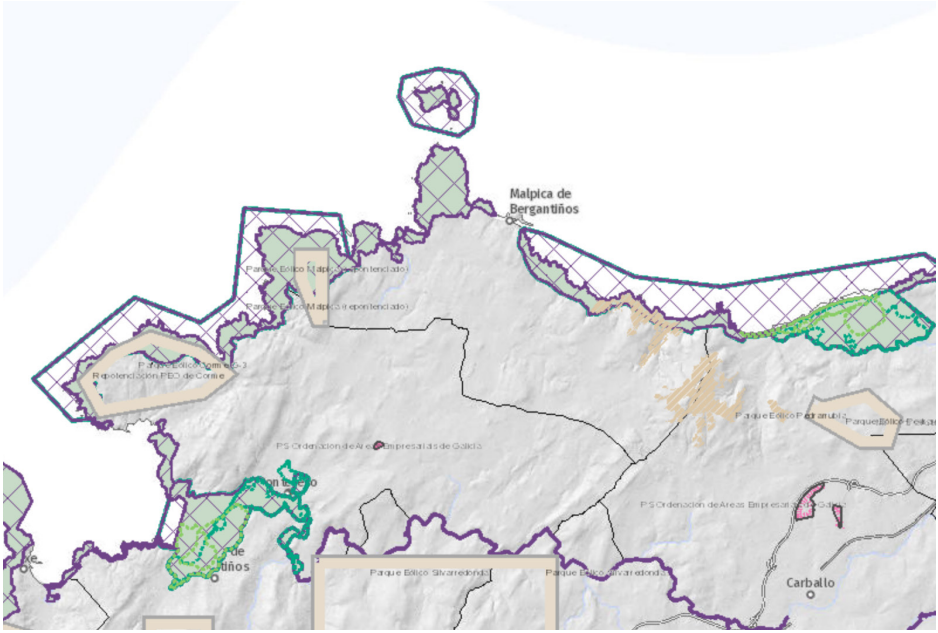
Fernando Alvarez de Sotomayor (1916), "Wedding banquet in Bergantiños"

the territories we will investigate, connect, and interact with. To facilitate the task, we propose to limit the scope of study to a square of 25 km on each side, including half (or a third?) of sea and half of dry land, as depicted on the opposite page. Despite the vastness of the area, the center of gravity will be Mount Neme, and in the next chapter we propose a working method to make landing easier for you. But first, the short story of this mine named after the pre-Christian deity Nemet (8).

Mount Neme is a magical space because of its outlook position, overviewing the Bergantiños landscape. The mountain was already inhabited in the Neolithic period, most likely with settlements on its slopes in the Metal Age. It is also believed that there was a fort, which could have been associated with the mining works, since it is from this place that the famous "arracada de cances" comes from, a piece of fort goldsmithing found in 1950 in the Rego de Bandeira during the works in the mine, and which is now in the Museo De Pontevedra (9). Near the summit, on the south-east slope, facing east of the mountain, there is a small cromlech, the "Eira Das Meigas" (10) or "Circo Dos Xogos", a stone complex made up of circular slabs, one of the few examples of these structures that have survived to this day in present-day Galicia. Legend has it that witches held their covens here on St. John's Day, although little can be seen today due to its destruction in the 1960s. Before climbing Mount Neme, the witches washed and prepared themselves at the Fountain of the Meigas, in Rabo de Lobo, in Tordoia, or at the Fountain of Amen Jesus, in San Paio da Devesa (near the fervenza de entrecruces). Later, the place was Christianised with the construction of a chapel under the patronage of Santa Cristina, today destructed (11).

The mountain is also notable for its mineral wealth, since, unlike the rest of western Galicia, gneiss predominates more than granite (12). It is quite possible that the tin deposits in the mountain were already exploited in Roman times, a highly valued element in that period. During the years of the First World War, the extraction of tungsten (13) began. According to online sources, the first concession of the mine to extract tungsten and kaolin dates to 1923, although it seems that the origin is at least

Below, topographic and planning cartographies, available at https://mapas.xunta.gal/es (rich map base, counting on historical maps and aereal pictures) and https://siotuga.xunta.gal/siotuga/carto



before the first great war, being extended on successive occasions until 2012, the year in which the mine was abandoned. Since then, a large part of the mountain was used as a quarry, and when the mining company went bankrupt and its managers disappeared, the Cotino firm left behind a lunar landscape, six ponds of disturbing turquoise mud (14), and the remains of a rusty infrastructure.

The area once exploited occupies a surface of 70,000 square meters. In addition to the ecological damage and the loss of historical heritage, the exploitation has a strong visual impact. The concern about the abandonment of the place led several entities to create the "Platform in Defense of Monte Neme" (15). It is made up of neighborhood, cultural, environmental and sports associations of Carballo and Malpica. One of its objectives is to enhance, promote and protect the heritage, the natural and scenic environment and, above all, the rich heritage and its legends.

Today there is a restoration project subsidized by European funds to turn it into a carbon sink, eliminating the holes that remain on the site and that are filled with rainwater and sometimes overflow into the nearby plots, causing problems due to the extreme acidity of the water. The environmental regeneration of the area requires an investment of 1.5 million euros, according to calculations by the Chamber of Mines of Galicia.

Geologically, Monte Neme is located inside the Galicia-Trás-os-Montes Zone, on the Littoral Zone or the strip between the Atlantic Ocean and the "Central Sierras", or "Dorsal Gallega", with altitudes between 750 and 1,200 m. The present relief of this zone is mainly due to the action of its fluvial network that form the drainage system of the entire area and is characterized by the presence of wide valleys called "rías" (similar to fjords), in most of the mouths of the rivers. The origin and evolution of these forms is a mainly erosive process associated with the dynamic of the fluvial network over the Cenozoic era in response to relative descents of the base level, and in which the adaptation of the fluvial network to the network of Tardi-Hercynian fracturing has played an important role. After the last Maximum Glacial, already in the Holocene, the elevation of the sea level implied the flooding of the littoral zones, transforming the mouths of the rivers in estuary-type "rías" and its slow sedimentary

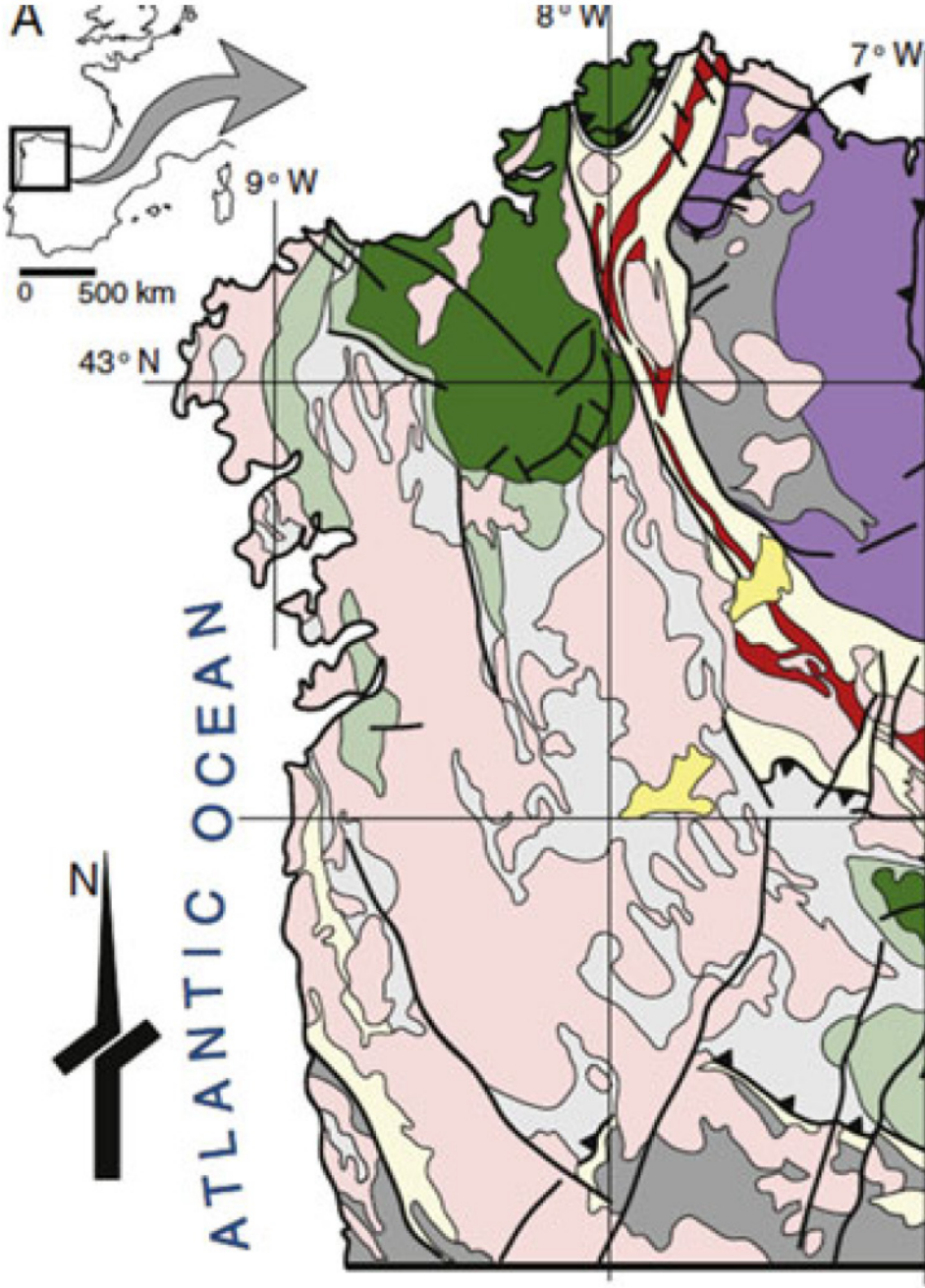
filling (16). As for the base level, is made of prevariscan plutonic rocks with the highest degrees of metamorphism and plutonism. They are interpreted as fragments of oceanic crust (ophiolites) and volcanic arcs, perhaps originating from a suture of the closure of the Rheic Ocean and accretion of materials during continental collision (17). The Rheic Ocean was located between the supercontinent Gondwana and the small continents of the North (17). The area can be divided into two main domains and several complexes, including the Malpica-Tuy Band, also formerly known as the Blastomylonitic Trench or "Complexo Antigo" (aka Ancient Complex). This unit is a narrow strip from Malpica to Tuy, the remains of a Hercynian settlement. It contains highly mylonitized schists, gneisses, amphibolites and eclogites, which underwent high-pressure metamorphism.

Sea festivities in Malpica, before the Civil War (1936-39), on top of the beach where boats used to moor (below).

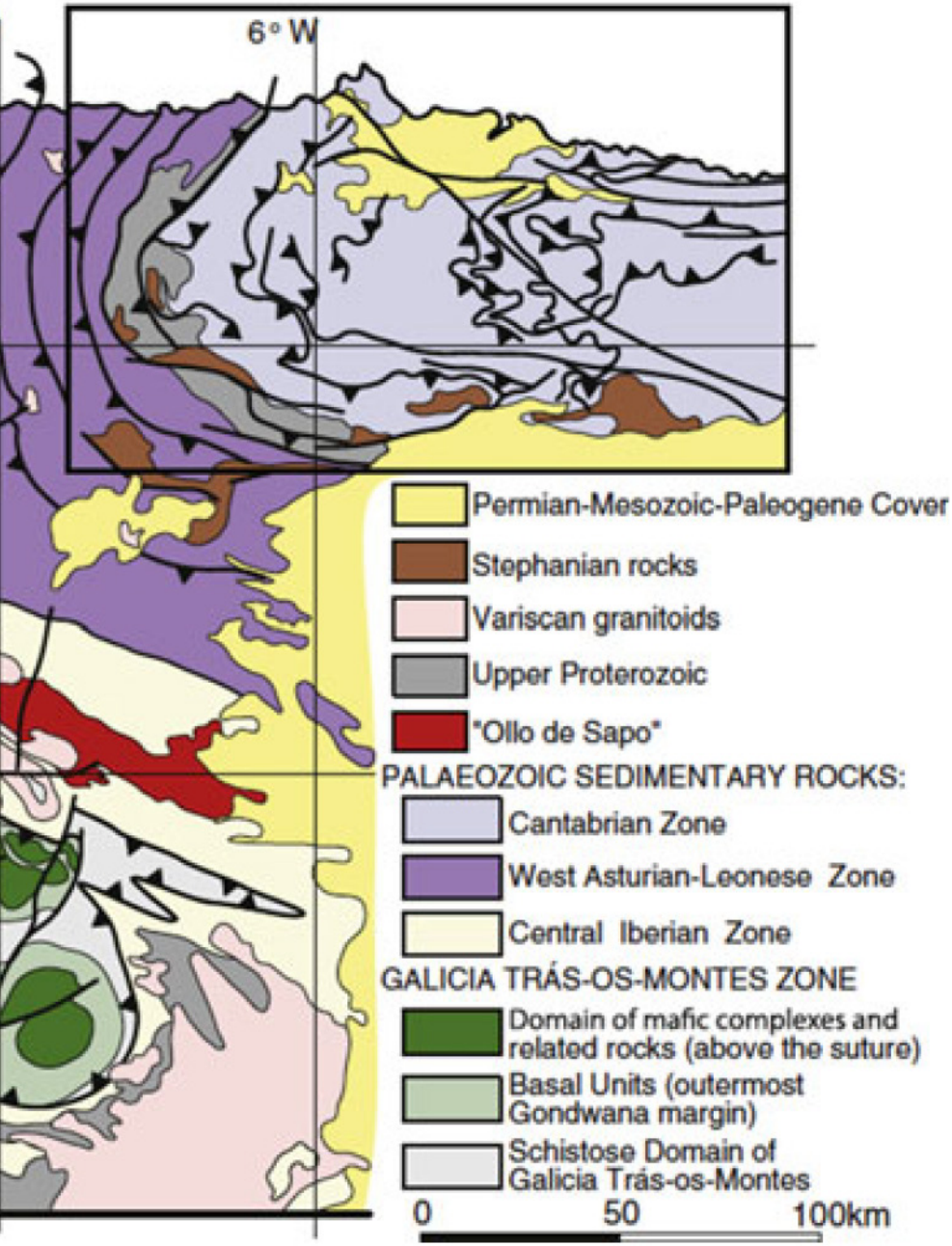
New floating offshore wind turbines along the Malpica coast.

The Prestige oil spill (for an overview of shipwrecks, https://hub.arcgis.com/maps/IGME::mapa-de-patrimonio-minero-de-galicia-map-of-mining-heritage-of-galicia-/explore?location=43.137750%2C-8.234149%2C8.81)

(1) Ibídem note 41 on previous section.
(2) As a first approximation, we suggest you to visit the URL, https://galiciapuebloapueblo.blogspot.com/2018/11/monte-neme-carballo-y-malpica.html
(3) https://es.wikipedia.org/wiki/Comarca_de_Berganti%C3%B1os
(4) https://en.wikipedia.org/wiki/Costa_da_Morte
(5) https://en.wikipedia.org/wiki/Xunta_de_Galicia
(6) https://fr.wikipedia.org/wiki/Emili_(projet_minier)
(7) By Quentin Michel, Pedro Van Acken and Clément Piazza.
(8) Nemetos in latin means “sacred forest”, https://dialnet.unirioja.es/descarga/articulo/2507489.pdf
(9) https://www.artehistoria.com/obras/arracadas-castrenas
(10) https://galicianomeada.xunta.gal/sixtop/visor
(11) https://www.visitacostadamorte.com/archivos/pdf/EXP_2_ESP.pdf
(12) For an overview of the minerals in Galicia, https://info.igme.es/SidPDF/166000/585/166585_0000001.pdf. A related map is available here, https://hub.arcgis.com/maps/IGME::mapa-de-patrimonio-minero-de-galicia-map-of-mining-heritage-of-galicia-/explore?location=43.137750%2C-8.234149%2C8.81
(13) A material of special importance at the beginning of the 20th century for its use as a conductor of electricity, and especially for its use in the military industry for hardening steel
(14) An acid mine deposit of silica, the mineral that forms quartz.
(15) https://www.monteneme.org/
(16) Gallardo, Juan F. (2015) The Soils of Spain. 1st ed. 2016. Cham: Springer International Publishing AG.
(17) https://es.wikipedia.org/wiki/Geolog%C3%ADa_de_Galicia
(18) https://es.wikipedia.org/wiki/Oc%C3%A9ano_Reico


A
0
500 km
9° W
8° W
7° W
43° N
ATLANTIC OCEAN
N

Synthesis of the geology in Galicia, Introduction to the Geology of Galicia
Juan Ramón Vidal Romaní, in A. Núñez-Delgado et al. (eds.) (2023) The Environment in Galicia: A Book of Images, pp.21-34, Springer Nature Switzerland.



A FORM OF ATTENTION FROM THE MARGINS

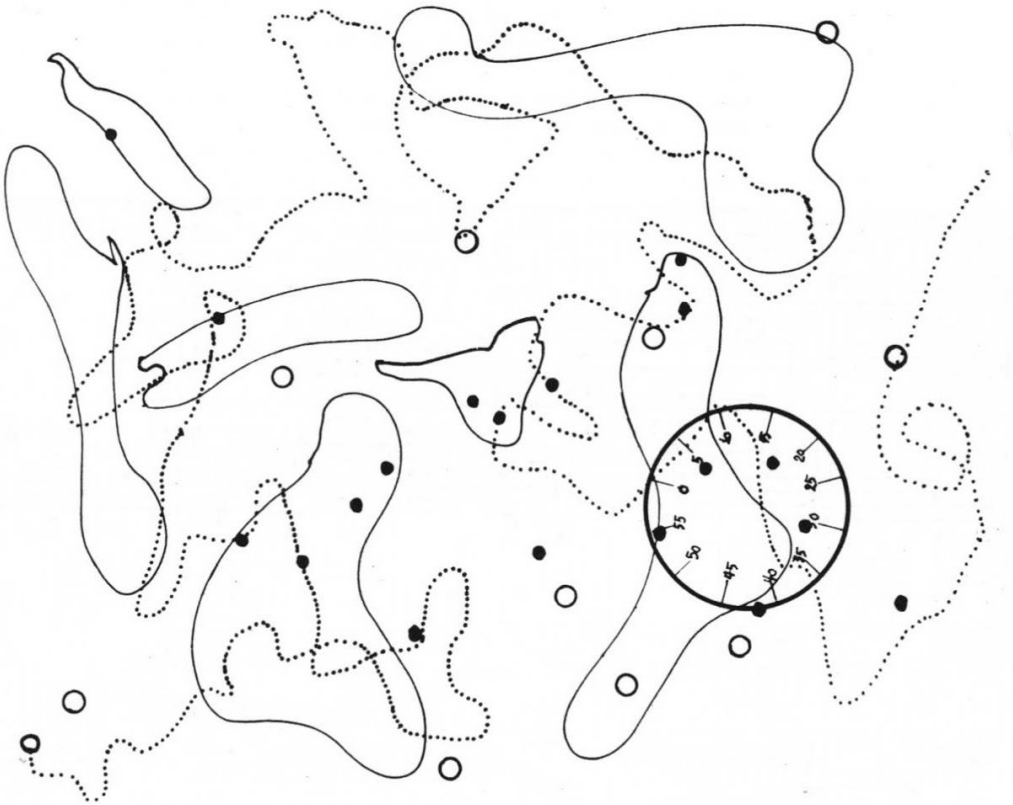
Monte Neme and the land of Bergantiños is far away, about 1,800 Km from here. We won't be able to visit the place together before the special week, planned between 21-27.10.2024. During the month before, between the 16.09, first day of the studio, and the moment of our departure to Galicia (still to be confirmed), we will use our time diligently. Not because we ignore everything about Monte Neme or Galicia now, we can afford to disattended what might be at stake there. But how to grab in such a short time what is there, what has been or will be? Additionally, how a studio that proposes to "learn in situation" (rather than of situations), that states the importance of the contact with reality and its multiplexity as a condition for any meaningful spatial intervention, can be credible if the only bound we can develop for now to such place will be virtual?

We took these two "disadvantages" as an opportunity to reflect on the fact that there is no project that does not come without its world, that we as designers need to create the conditions of existence for every project to exist, we need to create the "world" that "needs" our project. We literally "conceive" it, and we need to take responsibility for this action of "world-creation". Yet, how to create a world out of nothing? The anthropologist Tim Ingold states in his book "Lines: a brief history" (2007) that human beings generate lines wherever they go, and he develops it further, spatially, when he says that "To be a place, every somewhere must lie on one or several paths of movement to and from places elsewhere. (...) It is along paths, too, that people grow into a knowledge of the world around them and describe this world in the stories they tell." (1) We will also draw "lines" to get to know, and to give birth to new worlds.

SCHEDULE

16.09 Introduction to the studio. We will ask you the reasons for choosing the design unit OOT, so please,

John Cage music score of from Cartridge Music (1960), https://soundcloud.com/schellsburg/cage-cartridge-music-performed-by-michael-schell



come prepared! On our side, we will have uploaded the most important information (cartographic, sectoral, academic) in a Teams that will be created specifically for the studio work.

20.09 We will start the day with a short task, intended to identify some topics that could intrigue the studio participants. The goal is easy: select a picture of "something", about/in/towards/... Monte Neme, or Bergantiños, or the Death Coast. Explain what intrigues you in what we see.

It will be like the first stone you throw into the water, aimed to measure how deep the bottom is, following the waves that get formed. Is it a tree species (e.g. Eucalyptus nitens), a plague (e.g. Rhinochophorus ferrugineus), a mineral (e.g. tungstate), a dish (e.g. barnacles), a belief in the after world (like the "Santa Compaña") or the will to reawaken the witches (or "meigas"), the landscape formation as result from the long interaction between the water and the granite stone, or even the proposal to demolish the wind turbines that are currently erected everywhere on the Galician landscape? How many people are interested in the same subject? Which representation they choose to capture it? Curious about what your peers know already about this part of the world, or exactly about what do they not yet know?

A collective discussion will follow, intended to cluster the input you individually brought in, whether fascinations or first hypothesis, into overarching topics, or "core questions" that will be used to guide your group work (up to three people).

In the afternoon, groups should be formed, preferably based on thematic affinities. The diversity of "core questions" is immense: let's imagine that someone is interested on water and its territorial management. They could start by mapping the natural fountains that exist around an area, or the streams that are visible through the vegetation, or even the bridges crossing them or the old washing places, the "lavadeiros".

23.09 Inspired by Ingold's viewpoint referred to above, we ask you to "draw a line", up to 5 Km long. The line can be continuous or discontinuous, and can follow different shapes (a loop, a zigzag, a vector). It can be inspired by your "core question" or be derived in an aleatory way, like throwing the dice on a map. In any case, you

are supposed, as a group, to start "stuffing" this line with stories, knots, twists and turns, witnesses, alternative futures... This is what you will start doing on this date, and till the 18.10, first deadline.

27.09 Next to "stuffing" the line, making it more tangible in your mind, you will need to re-enact it spatially, re-enact as much as possible what is there, through the bits and pieces of information you will find or retrieve from online sources. Like what it happens in a crime scene, you don't only reconstruct it physically but try to set the actors therein involved into the same mood. The goal, to identify the possible clues that will lead to the crime solution, even if one will be taken upon a route with many twists and turns, until the "problem", if not resolved, is illuminated from a completely different perspective. In our case, the clues we will be looking for are those guiding us to the choice of spatial intervention we will develop in the rest of the semester. By spatial intervention we mean the design of a building or a public space.

30.09 Next to tracing, stuffing, and re-enacting, we will think of possible futures for the "line" or specific places along it. This is a task that should be developed individually even though it will be presented with the rest of the collective work, in a unitary submission.

On **18.10**, there will be a display and sharing moment. Every group should come with the material so far produced and discuss it with their peers. The documents should be made at diverse spatial scales, from 1:10 000 for the overall line to 1:2 000 for some chosen spots along it, to any other scale that might be useful to zoom into an intriguing fragment of each territory.

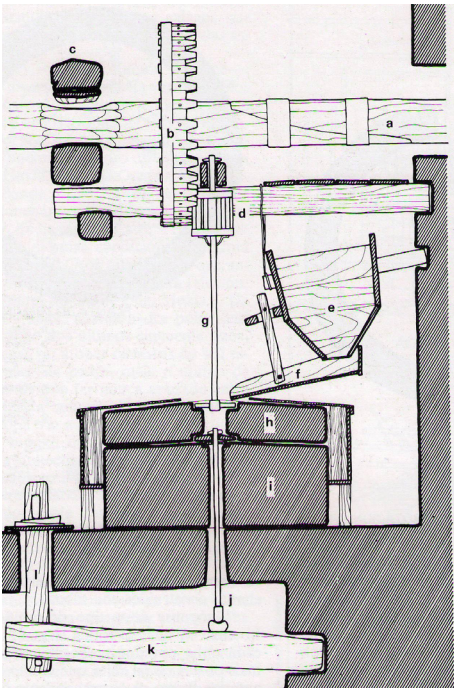
Every week, the studio participants are encouraged to hang part of their ongoing work on the walls, with the goal of collectivizing the knowledge that is being generated.

During the **study trip**, planned right after the first intermediate deadline, every group will "walk the line" as they defined it, on site. It is a kind of "verification": contrast what you imagine at a distance with what happens in real life. This process of confrontation and verification should be properly documented by every group, and their conclusions shared once back in Brussels.

Once there, we will use our time to have a direct, without filters, experience, taking everything

Counterclockwise: Malpic port; the palm weevil Rhynchophorus ferrugineus, https://en.wikipedia.org/wiki/Rhynchophorus_ferrugineus, and for the Spanish explanation, https://sergal.es/actualidad/picudo-rojo-amenaza-palmeras/; mudflats in Belarés; forest of Eucalyptus nitens; open air washroom, Taraio; barnacles.

Counterclockwie: Dolmen “da Arca”, Malpica; milkmaids in Costa da Morte, pictured by Ruth Matilda Anderson (1924); “Celtic Path” sign, https://derutasysendas.com/2023/11/16/malpica-castrobo/; section through a wind mill engine; volunteers cleaning up the Prestige oil spill in 2002.



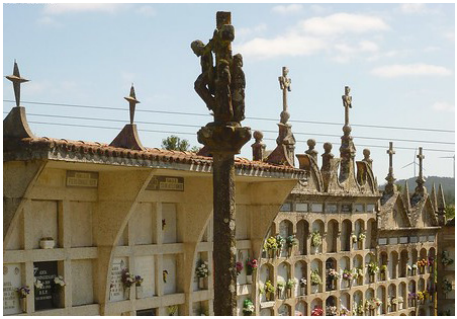
seriously and cultivating a form of attention that refuses to disqualify anything we encounter.

For this design unit, if adequately disentangled, every humble trace can become the seed of a fascinating project instead of an irrelevant bit. Anything goes, from enquiring, gleaning, walking, reading to speculative cartography (2), "what if" questions, leading to speculation (3), or participant observation... Anything that will help us relearn multiple forms of curiosity and attunement to the complexity that shimmers around us and to capture the intricacies of the way the world really is.

After this phase and based on your first intuitions for the choice of project, the groups for designing a project till the final jury, foreseen on **20.12** will be limited to two people. There will be an intermediary jury for this second phase on **22.11**.

(1) Tim Ingold (2007) Lines : A Brief History. London ; Routledge.
(2) https://drawingmatter.org/
(3) Didier Debaise & Isabelle Stengers (2017), "The Insistence of Possibles: Towards a Speculative Pragmatism", Parse Journal, pp. 14-19, available at https://www.academia.edu/36385115/D_Debaise_and_I_Stengers_The_Insistence_of_Possibles_Towards_a_Speculative_Pragmatism

Left: “Horreo” in Xordes, https://en.wikipedia.org/wiki/H%C3%B3rreo; Malpica’s outline. Below, counterclockwise: Coast crossing Sisargas- Malpica, https://www.travesiacosta.com/prueba/sisargas--malpica-PRB000043/inicio; cemetery in Ponteceso; Mens fortifications, nearby Malpica; “castro” or celtic settlement in Borneiro, https://en.wikipedia.org/wiki/Castro_culture; San Tirso de Vilanova chapel, nearby Malpica; streets in Xornes.



WAYFARING

The work will therefore be organized in a strict sequence that intends to articulate the different phases of the design work (see previous page for the exact sequence):

CORE QUESTION or probing a place

LINE MAKING or representing a place

WORLD CREATION or getting hold of a place

FIELD WORK or diving into a place

ASSEMBLING the diverse knowledges about a place

LANDING those knowledges into a project for a specific place

REFINING the project (the conditions the spatial projects need to exist and the situations it will generate in terms of use, temporality, etc.).

Because many of the topics the studio addresses need the support of other disciplines (biology, oceanography, environmental sciences, agronomy...), a series of lectures have been planned to inspire and inform your work (announced through Teams). A personal outline of every lecture will be demanded as a contribution to the "fascination notebook" that we warmly invite students to assemble, helping them to keep track of the learning process. Such notebook will be submitted with the rest of the work during each semester jury, two in total, planned at the end of every semestrial group project. This type of production, next to other individual exercises that will be proposed throughout the academic year, will help to assess your individual skills. In any case, as explained in the course syllabus, the first semester will weight 40% while the second semester will weight 60% on the overall note.

For a precise understanding of how the semester will be organized, we invite you to peer in the materials that are or will be published online, as well as the next page calendar. The phases that are mentioned in it are self-explanatory. Yet, if something sounds obstruse to you, do not hesitate to ask for additional clarifications during the studio sessions.

Good work!

W1: 16/09	PROBING PLACES
W2: 23/09	DRAWING LINES
W3: 30/10	DRAWING LINES
W4: 07/10	CREATING WORLDS
W5: 14/10	CREATING WORLDS
W6: 21/10	FIELD WORK
W7: 28/10	AUTUMN BREAK
W8: 04/11	ASSEMBLING
W9: 11/11	ASSEMBLING
W10: 18/11	LANDING
W11: 25/11	REFINING
W12: 02/12	REFINING
W13: 09/12	REFINING
W14: 16/12	JURY