

"We can no longer afford to think nature and human nature as differentiated ecologies."

Berta Morata

*PhD Candidate, Division of Architecture and Water
Department of Civil, Environmental and Natural Resources Engineering
Luleå University of Technology (LTU), Luleå, Sweden
berta.morata@ltu.se*



As an interdisciplinary architect and urbanist working at the intersection of urban theory, geospatial analysis, design and ecology, I am primarily interested in the spatiality and representation of urbanization processes. I am currently researching the extreme territories of urbanization in Northern Sweden and Norway in the Arctic.

My research interest focuses on the exploration of the remote Northern spaces commonly understood as untouched, empty or pristine. Through the lenses of the notion that Henri Lefebvre anticipated in the early 1970s of “a complete urbanization of society”. The main focus is to study urbanization as a process, instead of urbanism traditionally understood as mere static concentrated forms (cities), but the extended operational landscapes that support the worldwide urban network. The enquiry is to investigate how the processes of urbanization are transforming the apparent most remote places of the planet, and specifically the Arctic regions - where environmental disruptions and climate change are taking place two times the speed of anywhere else.

Added to this is the contradiction of being one of the most sparsely populated regions on earth with a wealth of natural resources. Going beyond and step by step, I am becoming more and more of an enthusiast explorer deciphering and appreciating the complex structures and flux syntaxes of the Arctic!

The first territory I am now studying is the one stretching from Luleå to Narvik. With a special interest in the trans-border condition, working with the bioregion, in the large technological systems of resource extraction. From here, two actual provocations to common understanding figures prominently: *approximately 97% of the forestry under the alpine mountains boundary is productive in Norrbotten county, also 90% of Europe's extracted iron ore comes from the mines of Malmberget and Kiruna.* Such a system is thus a very good example of how the modern visions led to the large built infrastructure networks by the state to extract high quality resources, which in turn helped the building of the welfare state. They are very much inserted in the global systems, and since late 1970s and after 2008, play new key roles in the worldwide urban fabric.

If for a newcomer it might seem that this northern territory is “empty”, it is clearly not, the Sami people have been living here for more than 9000 years between the countries of Sweden, Norway, Finland and Russia. One's discovery is another's

dispossession, and as inequalities keep increasing, so do environmental disruptions. I try to describe it with cartographies that move through scales, and using the landscape urbanism approach. While we expand the worldwide urban fabric always to the next resource extraction frontier, we urgently need to rethink the socio-environmental metabolisms linked to it. That is, the technical systems historically overlapped to the biophysical systems cannot be understood conventionally anymore. The human ecology model has to be thought of within the ecological model, and not apart. We can no longer afford to think nature and human nature as differentiated ecologies.

I have had by now the opportunity to present some investigations at the Urbanism & Urbanization in Ghent in 2018, as well as at the Arctic Circle conference in Reykjavík. Being part of the ARCUM and APECS research networks, as well as joining interdisciplinary groups like REXSAC is further enriching discussions and perspectives. Research and pedagogy merge at LTU University, where we aim to collectively reinterpret and advance understanding in shaping the contemporary processes of urbanization with the 5th year students in the design studio course. Furthermore, I have started to complement the line of investigation with extra-academic environments, collaborating with artistic practices (see, for example, the participation in the Luleå Biennial 2018 “Tidal Ground”, with Anja Örn). This sphere provides the freedom of experimentation and discussion sometimes difficult to locate in the university environment.