

MADE IN PLATFORM

Navigating the Depths: An Interview with Robertina Šebjanič by Ivana Borovnjak

1. SEA / WATER: Your practice is mostly informed by the matters of water. How did your fascination with water and underwater life start and what are your specific points of interest?

My fascination with underwater life started when I was very young. Each summer during family vacations at the shores of the Adriatic Sea, I would spend countless hours exploring the shoreline and getting to know different sea animals. As I grew older, I became even more interested in how water shapes the environment and how the human imprint (pollution) changes it. I would say that we are “*aquaforming*” it, both above and below the surface. I hope that in the future, we will find better ways to coexist with, and be able to protect and restore, aquatic habitats. In my artwork/research, I explore the biological, chemical, geopolitical and cultural realities of aquatic environments and the creatures living in them. I almost always collaborate with scientists, engineers and other artists when working on water imaginaries. In my work, I began to use the term “*aquatocene*”, a word that describes the status of waters in the age of the Anthropocene, during which humanity is changing the elemental composition of aquatic habitats, and “*aquaforming*”, primarily referring to underwater noise pollution. I coined both terms because I was missing more water-related terminology that goes beyond *the terraforming*. *Aquatocene* is also the title of one of my audio projects, in which I bring underwater sound recordings, which I made at various locations across the globe, into a composition.

2. COLLABORATION WITH SCIENTISTS / INTERDISCIPLINARY TEAMS: Your projects are specific in that they combine artistic and scientific approaches to research. How do you, as an artist collaborate with scientists? With what other specialists are you engaging with when conducting your projects?

My collaborations depend on the project and its research process, so the answer is quite complex. For some projects, for instance, I only need advisors, and for others – especially when working on location or in the laboratory – we collaborate more closely, I could say shoulder-to-shoulder. I think it is essential to allocate responsibilities within the interdisciplinary team and to establish a dialogue and a common understanding of the project's objectives. It's all about knowledge exchange. I use my artistic skills to bridge the gap between the scientific and artistic approaches to research, allowing for a more holistic and meaningful experience for all involved. I also seek to engage with specialists from other disciplines, such as marine science, anthropology, ecology, genetics, speleology and geology, to gain a broader understanding of the project context and to bring other perspectives to work.

When I collaborate with scientists, we discuss research topics from various viewpoints, and I do my best to incorporate these different perspectives into the final realization of my artworks. I collaborate with engineers and technologists to create works that use technology in innovative ways. Some of my projects also involve engaging closely with local communities, educators, policymakers and other stakeholders to ensure that the project is conducted ethically and responsibly and that my work is accessible and meaningful. An example of the latter is my recent project implemented on the Croatian coast in the south Adriatic, *Echinoidea future – Adriatic sensing*, which was part of the Zero Pollution Research fellowship, organised by UR Institute in Dubrovnik and supported by the European STARTS4water initiative. Finally, I also collaborate with fellow artists, but usually on a broader scale: within the theme of an exhibition or presentation.

3. ADRIATIC SEA: We are particularly interested in your work in the Adriatic as a resource in the widest sense of that word. Besides projects about (under)water sonic environments and the ones in which you engage with different biological entities in the sea such as jellyfish, in one of your recent artworks *Echinoidea future – Adriatic sensing*, you address “the current biogeological and morphological conditions in the sea urchin environment, which is aqua formed by anthropogenic liquid waste, resulting in low oxygen levels in the seawater”. Why and how did you start this project? Are you still working on it and is there a follow up on it in collaboration with UR institute?

The Adriatic Sea has been a site of exploration for me since 2012. I am fascinated by its unique geology, ecosystems and geography. My research in the Adriatic has enabled me to explore how human interventions can affect marine life and our relationship with the environment. The *Echinoidea Future – Adriatic Sensing* project was born out of my interest in marine biology and environmental issues. The project focused on documenting the effects of increased pollution on sea urchin habitats in the Adriatic Sea due to human activities such as fishing, shipping and industrial waste disposal. Through this work, I aimed to raise awareness about these issues while also exploring aquatic environments through underwater recordings that highlight changes in marine ecosystems over time. The project was conducted under the research residency Zero Pollution Adriatic, which was led by UR Institute in Dubrovnik within the frame of the European initiative STARTS4Water. They provided financial support for fieldwork, equipment rental and development of creative materials for visual data presentation. Many collaborators were working on this project: multimedia artist Tanja Minarik helped me with AI technology, artisan Ivanka Pašalić made unique glass-blown sculptures that represent the results of laboratory work I did with the Ur Institute team in Dubrovnik. In Ljubljana, in my studio, colleagues David Drolc and Miha Godec did the technical production. I also received significant support from scientists like Dr. Alenka Malej, an expert on marine ecology, and Dr. Matjaž Ličer, who helped gather data from the EU Copernicus website (years that show changes in data of oxygen, temperature, salinity and TDS at Southern Adriatic). There was also a group of colleagues who joined the field trips and helped with their expertise in the laboratory (in vitro experimentation support), such as Gjino Šutić, Filip Grgurević in UR Institute and then with excellent advisory we did get support from dr. Marijana Hure and dr. Valter Kozul - the scientific team from the Institute for Marine and Coastal Research University of Dubrovnik. We held several presentations of the project, organized by UR Institute, involving local collaborators like Marjan Žitnik, who focused on developing technical solutions for pollutant detection with the city municipality of Dubrovnik and other interested people. These collaborators and advisors were crucial in developing the artistic work with a strong narrative based on factual data, representing stories of resilience, persistence, and fragility of our marine ecosystems. The *Echinoidea Future – Adriatic Sensing* premiered at the Ars Electronica Festival and **was recently exhibited at the gallery Drugo More in Rijeka.**

4. ADRIATIC SEA: What other projects have you been conducting in the Adriatic and with which organisations? Are there any new topics and places you would like to explore in the near future at the Adriatic sea?

One of my recent projects is the work *Line +1233m –1233m*, which recently premiered during the event organized by Cona Institute at Kino Šiška in Ljubljana. The sound work and the installation combine a slice of the sea, affected by human intervention, in a vertical zone deep below and above the horizon. Visitors are invited to explore this “vertical space” through their ears as they move around it—experiencing its ever-changing sonic environment and physical presence. The work aims to open up new ways for visitors to interact with their surroundings by focusing on sound rather than sight.

Another research project I have done at Adriatic Sea is *aqua_forensic*, collaborating with Croatian researcher Gjino Šutić. We have conducted it within Ars Electronica Residency (Linz) in cooperation with Ur Institute in Dubrovnik. With *aqua_forensic*, we decided to open up a discussion about invisible anthropogenic pollution in the world's water habitats, focusing on pharmaceutical pollution.

I should also mention the project *Aqua(l)formings*, conducted in 2021 with HEKA Art & Science laboratory in Koper, Slovenia. It was a collaboration with excellent artists Sofia Crespo and Feileacan McCormick, with whom we decided to work on a case study of the extinction of the noble pen shell (*Pinna nobilis*). On the technical end, we combined remote sensing data from the last 30 years that show changes in temperature, salinity, and TDS at Northern Adriatic with real-time research data gathered in the summer of 2021. We produced a multi-layered installation that combined physical (biomaterial) sculpture with digital (audio, video AI) models to form a tangible experience for a viewer. With the project, we wanted to present the large-scale changes in the marine environment caused by human presence and try to imagine how the new conditions (rising sea levels and water temperatures, new chemical composition ...) are reflected in its inhabitants. We have used technology as a tool for effective and immersive storytelling. But there are many stories still to be explored in relation to the seas and oceans, and many stories that aquatic creatures can tell us. We just need to be more alert to understand them.

5. ART AS A POLITICAL PRACTICE: You are focused both on the artistic and aesthetic qualities of the projects, as well as on the collaborative and knowledge-sharing processes surrounding them. What kind of workshops and other programs are you conducting in order to engage the wider public with the topics you are exploring? Do you think these methods, and artistic projects such as yours can act as generators of good practices in sustaining and preserving marine waters, biotopes, restoring biodiversity, enhancing our relationships and connections with non-humans?

When working with **complex topics like these**, I think it is important to present the research done beyond the artworks to the broader audience. I regularly give lectures, workshops and masterclasses and engage in public debates. To reach out to the audience and raise public awareness about themes that motivate me as an artist, I think it is important to present all the work, time and devotion behind the artistic idea. The main goal is to create an environment where people can learn more about marine life, ocean conservation, and sustainable practices.

Next to the collaborative and knowledge-sharing processes, the artistic and aesthetic qualities of the projects are essential. I think about this all the time: exploring how art can be used as a tool to explore issues related to anthropogenic presence in the world's waters.

I believe it is crucial to engage with communities and inspire them through artistic expression. These projects can act as generators of good practices in sustaining our oceans/water resources. By involving younger generations and promoting intergenerational cooperation, we can foster a more empathetic relationship towards the environment.

6. PRESENTATION: What are the challenges of (visually) representing complex topics surrounding our environmental reality, how do you involve alternative and sustainable narratives when visualizing data, and to what extent is that important and even possible in the gallery or museum context?

The challenge of visually representing complex environmental realities is that it can be difficult to convey the complexity and urgency of these issues in a single image or work. I take time to think

through all the impressions I have gained from working on field trips and in laboratories, before I go to the studio or start working with engineers and craftsmen. I want to re-adapt the knowledge I have gained from research, and I do this many times. I often rethink how to interpret it as a work of art. It is a long process. It is also important for me that the art-science practice is not just about scientific communication or used as a didactic presentation of a problem, but that it involves a combination of thinking and presenting a topic from multiple angles and encouraging people to explore further. For me it is important to stimulate the viewer on a sensory and empathetic level, and I think that visual immersion in a particular topic helps us to feel and experience it. In this way, we gain insight beyond our human limits and are able to reconnect with other species or the environment.

7. NEW TECHNOLOGIES: Your work is informed by new technologies. Could you tell us more about the *Co_Sonic 1884 km²* and usage of AI in that project? Related to that, how can artificial intelligence contribute to a healthier coexistence with our environment in the future?

In *Co_Sonic 1884 km²* I used artificial intelligence to create an interactive audio-visual experience that tells the story of (co)existence of river environments and their inhabitants. Designed as a visual-poetic reflection, the project brings us closer to the life of river flora and fauna, while drawing attention to the problematic nature of human control over the aquatic environment. The project reflects the 1884 km² of the Ljubljanica river basin in Slovenia, which includes rivers, forests, caves, fields, and villages way of looking at the “seven names of Ljubljana” that we often overlook. This is a perception of the body of water – that has been given seven different names because the same river cuts a route through the underground karst and, therefore, in some places, eludes our view, which is limited to the surface where it appears as separate bodies of water – as an integral whole. When working in the field, I had been in close collaboration with photographer Miha Godec, and the project was a commission by Cukrarna Gallery, which was just received in a time of covid restrictions when international activities had been a bit less present. So, it was a good moment to have lots more time to devote to the project and spend many days on different points of this basin to record with a hydrophone, video, photo and just being there in different points from caves to springs.

The use of artificial intelligence in this project has helped us to understand the river ecosystem better, it has also enabled us to experience it. I invited AI sound expert Moisés Horta Valenzuela to help me to transform human voices and immerse them in the sounds of my recordings of the river, allowing the viewer to experience the unique soundscape of the area. Throughout history, the Ljubljanica river has wormed below and above the surface. *Co_Sonic 1884 km²* shows its water body through the prism of its integrity.

Co_Sonic 1884 km² is a document of the current times in which rivers are becoming powerless due to human intervention. It calls on us to build empathy for 'non-human' entities and to adopt strategies for ecological development for a time when our generation will be long gone. In this sense, artificial intelligence can be used for predictive analytics – predicting potential environmental issues before they become serious problems – as well as for developing solutions for existing problems related to climate change or pollution levels, which would help us take better care of our planet now and in the future.

8. OTHER POETICS: What other poetics, organizations and initiatives related to contemporary art practices and scientific research do you find especially inspirational for your work?

What I read and what I think is relevant, depends on the ongoing projects, but there are some books and authors that I revisit regularly. The following list includes some of those who have profoundly broadened my horizons: Vinciane Despret, Donna Haraway, Ursula K. Le Guin, Stefan Helmreich,

Jakob Johann von Uexküll, Alexander von Humboldt, María Antonia González Valerio, Rosi Braidotti, María Puig de la Bellacasa, Pascal Quignard, Brandon LaBelle, Timothy Morton and many more. I have also been inspired by excellent marine biologists like Dr. Silvie Earle. I'd like to mention my long-term collaborator/advisor and always an inspiration - an expert on marine plankton and aquatic ecology Dr. Alenka Malej of Marine Biology Station in Piran (Slovenia), who helped me with topics such as oceanography and ecology.

Jean Painlevé, one of the great underwater filmmakers, is also a great inspiration, with animals and creatures from the underwater world being the main protagonists of his films; I like to exchange, discuss and explore with inspiring colleagues/artists like Kat Austen Margherita Pevere, Gjino Šutić, Ale de la Puente, Tania Candiani, Ida Hiršenfeledr, Filippo Minelli, Eduardo Castillo-Vinuesa and many more who are my inspiration and my support when thinking, working; curators such as Blanca de la Torre, or with my colleagues from The Traveling Plant project: Annick Bureaud, Tatiana Kourochkina, Marta de Menezes, Claudia Schnugg, and many others.

When mentioning the names of my colleague's artists/researchers, I definitely forgot to include some important ones (and there are so many!). I met many fascinating and inspiring people at events like the Ars electronica festival, ISEA international events, and group exhibitions like the one in CAAM, Centro Atlántico de Arte Moderno at Grand Canaria and Drugo More in Rijeka, Croatia.