

la Biennale di Venezia

15. Mostra
Internazionale
di Architettura
Partecipazioni Nazionali



MONTENEGRO

pavilion

Project Solana Ulcinj

Biennale Architettura 2016

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Ministry of Sustainable Development and Tourism
Government of Montenegro

SUSTAINABILITY AS DEVELOPMENT PLATFORM

by **Branimir Gvozdenović**
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It is a natural tendency of every man to make his life better and materially richer. In this endeavour, especially when material goals outgrow real needs, one becomes prone, all too often, to ignore the possible damage produced by his economic activity. Over time, it can become more and more visible, and a man and society, with considerable delays, realize that it is not only that the economic activity must be restrained, but what has been done also has to be remedied. Otherwise, we jeopardize our own survival, and we deprive generations to come of and jeopardize their future.

Fortunately, awareness of the danger of the developmental self-destruction has matured and become a civilizational value and obligation. The result was the formulation of the concept of sustainable development, as the first and last line of defence. Today, this concept is a sine qua non, and a binding framework of every serious and organized consideration of development.

The essence of sustainable development is a balance in the triangle constituted of economic needs, environmental responsibility and social imperatives. And Montenegro has opted for sustainability as its development platform. However, the road from the declared commitment to the effective implementation and workable policies is neither easy nor short, and often - not clear enough. This complexity of implementation can be most easily seen when the development is put into the context of space, as a key and non-renewable natural resource of each country. The space is trivial category only in conceptual terms and in terms of its visual perception. As soon as some space is added a feature of developmental tangibility, or potential valorisation, we become aware of the multidisciplinary nature of its proper treatment, especially if we are determined to keep development sustainability as essential framework of our action. And Montenegro is definitely determined to do so. Conflicts regarding the development that are commonly encountered mainly stem from a lack of understanding that the concepts of sustainability and inviolability of space should not be considered identical. This misunderstanding, especially in immature democratic atmosphere, can generate social frustrations which exclude a constructive and fruitful dialogue. Therefore, the task of the key subjects in any society is first to remove such elementary misunderstanding, and then to open room for reasoned and synergy-motivated exchange of ideas. Professional structures and state institutions, and by all means the civil sector, as well as all citizens, should participate in this discourse. Namely, regardless of whether the space is treated as a resource or as the foundation of the environment, its quality bothers each of us.

This problem-oriented approach motivated the Ministry of Sustainable Development and Tourism of Montenegro to test publicly, in a transparent and constructive way, all of its initiatives, development policies and projects. We believe that, by such an attitude, we have raised the motivation of the public to get unreservedly and intensively involved in the key issues of the treatment of the Montenegrin space. Although some reactions are too turbulent, we are confident that the path that we have chosen will generate the best solutions.

In the same context we have supported the intention, in deciding on the platform for this year's presentation at the Biennale, to choose one of the most controversial and the most pressing issues on our environmental and development agenda - Ulcinj Saline. It is a specific area of extraordinary value. It is this value that, to a large extent, helped to internationalize the interest in the future of this area. It is safe to say that Montenegro will, no doubt, treat the eco-protection needs of the Saline area with full seriousness. The Saline will soon be a protected area, in accordance with national legislation, and international conventions. However, this should not be the end of our obligations. **The Saline needs life and the future - not just declarations.**

The setting in the Montenegrin pavilion at this year's Biennale involves four architectural and urban planning solutions and, I would also say, functional approaches to the Saline as a sustainable project. This confirms our desire to see this issue resolved with full creative openness. **We, in fact, do not want the spatial values that we have to be a mere object of conservation. We want to add new valued to this space, through carefully thought-out action, with an imperative obligation to permanently preserve all existing value components.**

In fact, today's specificity and values of the Saline have emerged as an unintended product of a different, primarily economically driven human activity. We are therefore convinced that if we would exclude ourselves from impact on its future, in several decades from now it would mean its ending, in terms of its current excellence. However, it certainly does not mean that the future of this area must necessarily be based on the effects of trivial economic and development motivations.

The potential for developing diverse urban planning and architectural concepts is the first association with respect to protection that arises from thinking about the relationship between man and space. That is why we are here and why we have nominated the Saline as the theme of our presentation at the event that is dominantly of an architectural profile. By presenting these solutions, we do not want to limit anyone's assistance expressed in ideas, or even criticism. What we exactly want is to encourage new interest in finding the concrete solution for the Saline as a specific project issue, and for a multi-contextual approach to the challenges of this magnitude.

And, one more thing - Montenegro wants to strengthen its inventive and execution capacities in the field of architecture through communication, not only with domestic but also international experts, through the adoption of expert knowledge and with the acceptance of international expertise. I am sure that there is no better place for a demonstration of this approach than the Venice Biennale.

I would like to thank everyone who participated in this process and contributed to the organization of Montenegro's participation at the Biennale, in the belief that we will all jointly contribute to sustainability of the Ulcinj Saline area, so significant not only for Montenegro, but also in broader terms.

OPENING THE DEBATE

by **Dijana Vučinić**

For a small country like Montenegro being present at the Biennale is more than just thinking and doing architecture, more than being present, more than making a statement, or "showing of" regardless of the theme of this year's Biennale... It is about addressing issues and stirring a debate on a certain level and among the community that can help us understand and solve these pressing topics. Reporting from the front, more than any framework before allowed us to step out, take a risk and take a chance with our topic.

When I grew up I spent my summers in Skadar lake. This is a very beautiful piece of nature resting on the border between Montenegro and Albania. Apart from the beautiful scenery it's rich in history, culture and tradition: the heart and soul of the country. Above all it is a very special nature reserve. It's a protected National park since 1983, and was added to the World's List of Wetlands of International Importance by the Ramsar Convention in 1993. While growing up there I have been taught history, tradition, nature and many official and unofficial rules of behaving in such a precious environment. I knew all the swimming spots, what snakes to be afraid of, that the fishing ban is there for a reason and always ends on my birthday, but the greatest myth of all the childhoods on Skadar lake has been the great Dalmatian Pelican. It could only be seen at certain places, at certain times, always so precious, so mysterious and beautiful, hiding away from the hunters, especially those coming from across the borders, mainly from Italy.

Home of this great creature is not only the Skadar lake but this entire area in southern part of Montenegro and beyond that, on Albanian territory. Some facts and species do not recognize borders, politics, social or economic systems and in a place like Balkans this has a special significance. Skadar lake is part of a larger entity of wetlands and several very significant biotopes: Lake Shas (Šasko jezero), the Bojana river and Solana "Bajo Sekulić" with the Port Milena channel. The area ends with the Adriatic Sea.

The Solana Ulcinj - named Bajo Sekulić after a World War II hero - is situated next to Ulcinj, a city of around 20.000 inhabitants on the Adriatic coast, in the south of Montenegro, just one kilometre from the border to Albania. The Solana Ulcinj lies in the inland lagoon and

the marshland of the former Zogajnsko Lake (Zogajnsko Jezero), in the lower course of Bojana River. It is separated from the river by the barrier island, a natural levee formed by the river, which was partly replaced by an artificial dike for flood prevention and bordering Port Milena channel. Long Beach (Velika plaža) is located south of the Solana.

Following the initiative of the Kingdom of Montenegro, in 1920 the Government of former Yugoslavia selected the Zogajnsko Jezero in Ulcinjsko Polje as one of the places for industrial salt production. The saline "Bajo Sekulić" was founded. From 1926-1934 the first salt-pans were built as well as the infrastructure to exploit them: buildings, reservoirs, evaporation basins and transportation. Finally, in 1935 the salt production started. In 1959 the Salina Ulcinj had a first renovation and the salt-pans have been extended. In 1979 an earthquake damaged salt-pans and infrastructure heavily. With the reconstruction in 1980, another expansion of the Salina including adjoining marshlands was realized. Today, the saline covers an area of 1.492 hectare. The basins measure 1.383 hectare, while dams, levees, canals and the saline's surrounding outer drainage canal 109 hectare. Together dams and levees amount a total length of 130 km.

The saline is a significant and integrated element of the Skadar Lake/Bojana River ecosystem of interconnected wetlands and as such has always been a unique biotope for flora and fauna. For migrating birds, it is an essential stopover on the route from Europe to Africa and Asia and vice-versa, but in general, from about 500 kinds of birds that live in Europe, 250 appear here, of which the rare Dalmatian Pelican and the Greater Flamingo attract most attention. With the functioning of the saline, a new, man-made ecosystem was added to the existing one, because salt water pumped up from the sea also contains all kinds of small organisms on which specific birds can feed.

The ecosystem of Solana as we know it today and that many are trying to preserve and protect has been created like this. While building a salt plant, completely artificial and industrial site man has created an ecosystem of local, regional and even global importance. In order to continue to function as the ecosystem it has become,

the Solana needs to be industrialized again. This makes it a very specific and interesting ecosystem.

After having been privatized, the Solana has lost its production. Without salt production this special place is endangered on many other levels and especially as a biotope. Now, it is a subject of many speculations, disputes and legal processes and it became one of the major environmental and political battlefields in Montenegro. Government of Montenegro with the Ministry of Sustainable Development and Tourism has taken many necessary actions to discontinue further decaying of Solana and now it is going further in order to protect it and secure it's sustainable future. While some see it as a void - an open, empty space - others look at it as the most precious piece of nature that needs conservation. We have decided to go beyond these labels and look at it as a very potential and challenging site where we can test how architecture and other disciplines can contribute to solve the problem.

There are always questions raised when it comes to discussion on conservation or development but in reality it should never be either or. This is why we have decided to invite architects, landscape architects, environmentalists and others to participate in an open debate. This invitation for a debate has been sent out to all the stakeholders in a Symposium in Ulcinj in February 2016 and since then our curators and teams have been working on a platform called Project Solana. This platform is presented in Montenegro pavilion ad Palazzo Malipiero in Venice, open to everyone interested to contribute, discuss or learn about Solana and its potentials.

Today the Dalmatian Pelican can be seen very often in Skadar lake and the Solana. There are no gunshots chasing it away, at least not as many as a couple of decades ago. As I write this Montenegro celebrates the 10th anniversary since it gained back its independence. I believe we have learned a lot lately, we have more understanding for our culture, our history, our nature and its spices. What is even more important however, is that we deal with our issues out in the open, that we have a debate, take position and question it at the same time. That we search for solutions. Today, we invite everyone, every one of you, to take a place at our table and join our conversation on Project Solana.





“NOW I KNOW, AS WITH A CRANE’S EYE ONE SURVEYS HIS FAR-FLUNG REALM”

W.G. SEBALD, “AFTER NATURE”

by Andrej Nikolaidis

The salt pans in Ulcinj must look like a sanctuary from a bird’s point of view. The comfortable plains have been left far behind. Flying over the mountain chains has been an exhausting activity. The wind assisted the birds, trusty as ever, but the most arduous part is ahead of them — the sea. The number of birds that drown in the Mediterranean while struggling to reach the south is not known to us humans. However, the birds are aware of this, although we can assume that statistics do not play an important role in their world.

According to the statistics, which we humans put so much confidence in, the Ulcinj Salt Plant used to be one of the largest salt plants in the Mediterranean. Apparently, “the salt plant is located at the southernmost tip of Montenegro and contains approximately 14,5 km² of salt basins. It was built in the region with the largest number of clear-sky days and the highest insolation in the Adriatic — 2,567 hours of sunshine annually and the largest number of tropical days in the former Yugoslavia. Hence, this is the ideal place for a salt plant which has based its salt production exclusively on evaporation.”

We humans know that salt production is a simple process. After sea water is released into basins, one waits for it to evaporate and then collects the salt. Afterwards, the salt is sold and the employees, who, along with their families, make their living in this way, are paid. This is not the production of microchips or any advanced technology. These are people who harvest the salt with shovels, load the trucks, and transport the salt to be packed in boxes, bags, and sacks by others.

Yet, despite all its statistical advantages, the salt plant has collapsed. It would have been just one more plant that closed down in this region, had the birds not interfered with its destiny, as well as that of its employees and a small town. The salt plant is one of the largest natural habitats of birds in southern Europe. For this reason, humans have decided to create a future for the salt plant that will not endanger the birds.

From the point of view of humans, nowadays the salt plant appears as a monument to the deindustrialisation which was implemented in all the countries that make up the former Yugoslavia, after the fall of the Berlin Wall. The Communists had industrialised the country. Just like the birds, people migrated en masse from the countryside to the cities, where they found employment in factories. Their descendants sold the factories to private owners; subsequently the factories soon ceased to exist. Privatisation meant deindustrialisation. Thus, the salt plant nowadays seems to us humans like a scene from a film that Tarkovsky failed to make. The past only appears to be solid. In its connection to the present, it is like metal left to the elements: rusting, decomposing and dissolving. But the cycle of destruction has to stop eventually and grow into something else, as always hap-

pens with cycles in nature and society, as was indicated in the former communist schoolbooks.

The future of the salt plant is undecided. Many people are involved in it who do not look at it with melancholic eyes, but as engineers: many people trying to resolve a complex equation involving the past, the present, demolition costs, construction costs, the town, the employed, water, soil...

And the birds. Regardless of what it becomes in the future, the birds will still land there.

It is said that our towns would be overgrown with rainforests if humans became extinct. Not even a bird would be able to spot the remains of humanity’s magnificent architecture. The Yugoslav economy serves as proof of this assumption. After factories producing electrodes, construction machinery, textiles, refrigerators and salt closed down and were abandoned by people, insects, snakes, moles, rare species of plants and birds moved in. Within only two decades, nature had taken back what it had once owned.

Nowadays, a visitor to the salt plant in Ulcinj will be met by a security guard who will say, “Flamingos? Walk approximately 1-15 km as far as the old pump, then turn right. You can’t miss them.”

The visitor will pass next to the ruins of the factory buildings with roofs that long ago yielded under the weight of the continuous rain coming with the south wind, and reach the rusty railway wagons which were used to transport the salt from the basins to the warehouse. In the distance, above the unsteady, tall, metal structures which do not even function as scarecrows, a flock of birds is circling. Crabs are sluggishly wandering around the channel through which the sea water was once pumped into the basins.

It is still noiseless in May. The roar of thousands of vehicles carrying tourists heading for the wide area of the Great Beach and Ada Bojana will soon spread across the plain.

After the entire economy of Ulcinj was destroyed, tourism became practically the only source of income for residents, including the former employees of the salt plant. According to statistics, Ulcinj is regarded as the town with greatest natural resources, and yet is the poorest in the country.

In 1999, during the war in Kosovo, it was not only birds that were flying above the salt plant, but also NATO aircraft, on their way from the Aviano Air Base towards Serbia. Hundreds of thousands of people at that time fled from Kosovo. Montenegro, created and preserved on the basis of the myth of defence from the Turks, never built a wall in the direction of Kosovo. It never fell back

onto the need to protect its ethnic structure and Christian values. It opened its borders, cleared its roads, and welcomed refugees. They were Muslims, just like those that are nowadays encountering walls and soldiers with long-barrelled guns on the borders of Europe. Many of the women among the refugees were wearing headscarves, white like the feathers of a swan.

Some of those desolate people remained in Podgorica and in the north of Montenegro, whilst the largest number of refugees — approximately 100,000 of them — found refuge in Ulcinj. Montenegro has a population of approximately 600,000, 22,000 of whom live in Ulcinj. In 1999, according to a simple calculation, there were five refugees per citizen in Ulcinj, the poorest town in Montenegro. Provided we stick to the statistical data, this would be the same as if Europe, which has a population of approximately 550 million people, welcomed around two and a half billion refugees. The comparison is certainly not appropriate, as Europe is neither deindustrialised nor poor.

The visitor who, on their stroll through the salt plant, reaches the abandoned pump and then turns right to find the flamingos, could lie down in the short, scented grass, taking care not to disturb the birds. For a while, they could watch the birds and then fall asleep, lulled by the May sun, the silence and the elegance with which the birds wade through the water rippled by a west wind.

Lord, I had a dream of finally perceiving the world through a crane’s eye. Looking from the north to the south, I noticed barbed wire and furious husbands, as armed guards patrolled the border. I saw white gravestones shimmering in the deep like grains of salt. I saw factory chimneys, smokeless. From above, they appeared like the voiceless mouth of a volcano. I noticed the Ulcinj plain and the salt pans, the mountains of Albania, and the River Bojana making its way through them and flowing into the Adriatic. I spotted lines of people moving in the opposite direction to where the birds go to seek shelter. I saw tented settlements like short grass, on the Greek and Turkish mainland. I discerned fragile watercraft, loaded with many bodies, tiny as a grain of hope, cutting through the waves towards those settlements. Far ahead, I saw the ruins of Carthage, from which the Roman salt had not yet been rinsed by the rain.

Andrej Nikolaidis



Abandoned
Solana Ulcinj
photo:
Luka Bošković
prettyDecay series





Abandoned
Solana Ulcinj
photo:
Luka Bošković
prettyDecay series

MONTENEGRO PAVILION AT 2016 VENICE BIENNALE TO INVESTIGATE ONE OF EUROPE'S LARGEST POST-INDUSTRIAL LANDSCAPES

PROJECT SOLANA

by Bart Lootsma/Katharina Weinberger



Near Montenegro's most southern town Ulcinj sits the former saline "Bajo Sekulic," a completely artificial, man-made biotope which has taken on almost global importance as a crucial node in the migratory patterns of birds. As such, the Solana Ulcinj is the front line of all kinds of conflicts: between nature and culture; the local and the global; economy and environmental awareness.

Project Solana Ulcinj, commissioned by Dijana Vucinic and the Ministry of sustainable development and tourism and curated by Bart Lootsma and Katharina Weinberger, is the Montenegrin contribution to the 15th International Architecture Exhibition of the Biennale di Architettura. The Montenegrin pavilion hosts four projects outlining four different sustainable futures for the Solana Ulcinj, developed specially for the Biennale di Architettura by four practices: ecoLogicStudio from London, LOLA from Rotterdam, LAAC from Innsbruck, and Marko Stjepčević and Nemanja Milićević from Podgorica. The last project was decided upon by a competition in Montenegro. **Project Solana Ulcinj** is accompanied by a series of three symposia in Montenegro and in Venice.

Solana Ulcinj

With a surface of 14,9 square kilometres Solana is one of the largest salines in the Mediterranean region. It is a completely man-made, artificial landscape which, founded in the nineteen twenties, turned into a biotope of global importance. Looking for lands suitable for industrial salt production, the Monopoly Management of former Yugoslavia selected the area around the Zogansko Jezero lake, in the delta of the Bojana-Buna River and close to the Adriatic Sea. The lake had become already brackish, because around the turn of the century a failed attempt had been made to drain it with a canal to the sea, to put an end to malaria and win fertile land. At a height of 253 meters above sea level the plateau can become hot and there is a constant wind. These conditions are favorable for the evaporation of water, which is essential for salt production. Between 1926

and 1934 the first salt pans, buildings and machinery were constructed and in 1935 the first salt was harvested. Over the course of its history, the size of the area was increased several times. The aftereffects of the last Balkan war, notably the international embargo related to it, the falling apart of former Yugoslavia and the political and economic transformations in Montenegro afterward caused the Solana Ulcinj to go bankrupt in 2005. The salt production was no longer protected by a state monopoly and the value of salt on the world market had drastically decreased, with most of the world's salt now coming from China. Therefore, the industrial salt production the Solana had focused on was no longer profitable. The Solana Ulcinj was privatized and came into the hands of a few major stakeholders. Ever since, the status of the Solana has been unclear, which explains why it is in urgent need of renovation and reconstruction today. Its future is torn between the commercial interests of the current owners and the international pressure of conservationists, supported by the EU, to turn it into a nature reserve. The government of Montenegro tried to turn the Solana into a protected area by law but the decision was partly revised by the constitutional court, while at the same time the ownership of the Solana is disputed in Commercial Court. The Solana Ulcinj is an unreal man-made artificial and abstract landscape, in which only a few machines stand out, which look like huge donkeys made of rusting steel. Far away, in the background, one can see mountains topped with snow. These are the only elements that define the place, forcing one's gaze to focus on small or even tiny plants and animals. Some are only visible through a microscope or binoculars, but here, undisturbed by any other distractions, this is exactly what makes them fascinating. As such, it is a landscape with a high cultural value. More importantly, the process of salt production in a series of salt pans produces a great diversity in chemical conditions. This not only lends the Solana a great colour palette, but also great diversity of conditions for different flora and fauna. When the sea water is pumped up, small organisms and shrimps come with it. Fish and other animals feed on them. This is the main reason that the Solana Ulcinj currently houses 250 of the 500 kinds of birds that live in Europe

for longer or shorter periods every year. Of those 250, 70 are protected under the Bird Directive of the European Union. The Solana Ulcinj is a resting place for protected bird species on the Adriatic flyway from northern Europe and Siberia to Asia and Africa and vice versa and a wintering or breeding place for others. A special sight is the appearance of the Dalmatian Pelican and the Greater Flamingo. Therefore, in principle, the Solana Ulcinj meets all the required criteria to be listed among the most important protected nature reserves in Europe. As the saline has been out of use since 2012, sea water has not been pumped up for a number of years, and there has hardly been any maintenance performed on the extremely vulnerable infrastructure of dikes, buildings and machines. All infrastructure for bird watchers, like a museum and the watch towers, has been destroyed. Poachers enter the area relatively easily and shoot protected birds. Pending definitive decisions, the Montenegrin state and the city of Ulcinj together have taken a series of provisional measures to avoid the worst, but it is clear that this situation is far from ideal for many different reasons.

Project Solana

Project Solana Ulcinj addresses the Biennale di Architettura 2016 theme "REPORTING FROM THE FRONT" by reporting about this crucial project in Montenegro, which is caught up in struggles between the local and the global, nature and culture, tourism and sustainability, economy and the social realm. **Project Solana Ulcinj** wants to offer spatial strategies that may guide new syntheses for these conflicts. As the Solana Ulcinj is currently torn between conservation and economic interests, it finds itself at an impasse. It is therefore crucial to develop new plans for the future of the saline which are both ecologically and economically sustainable. **Project Solana Ulcinj** takes the challenge to come up with new proposals of how to save the important ecological position and the unique cultural qualities of the landscape, while at the same time enabling and regulating economic interests in the area. To generate a public debate in Montenegro, four practices are selected. All four

of them represent very different positions in the field of landscape architecture and sustainable development. This will give new input to and thus enable to open up and speed up the decision making processes around the Solana Ulcinj. It will also stimulate the debate about architecture and landscape architecture in Montenegro and establish an international exchange. To enable an optimal exchange between **Project Solana Ulcinj**, regional, national and international audiences, three public symposia accompany this fact-and-potential finding mission.

The first symposium, **"THE BRIEF"** took place in Ulcinj on February 12 and 13. Here, the participants in the project got input from regional, national and international experts in the fields of planning, ecology and sustainable tourism. This resulted in the public reading and discussion of "The Brief", which was the point of departure for both the international practices and the competition in Montenegro. The symposium was open to the general public and it was visited by a crowd of local inhabitants, people from other parts of Montenegro and politicians.

The second symposium, **"REPORTING FROM MONTENEGRO"** will take place in the Montenegrin Pavilion in Venice on May 29. It presents **Project Solana Ulcinj** for an international audience in Venice, addressing this years Biennale di Architettura theme.

The third symposium **"THE DEBATE"** will take place in Kotor, Montenegro, between July 20 and 24. It presents and discusses the results of **Project Solana Ulcinj** for the national and international audience of the KotorA-PSS (Kotor Architectural Prison Summer School) - hyperlink: www.kotorapss.me

The Brief (excerpt)

"As the Solana Ulcinj has been out of use since 2012, it is crucial to develop new plans for its future, which are both ecologically and economically sustainable. The Project Solana Ulcinj takes the challenge to come up with new proposals how to save the important ecological position of the Solana Ulcinj and the unique cultural qualities of the landscape, while at the same time enabling and regulating economical interests in the area. The Management Plan as produced by EuroNatur should provide an important point of departure. Pending all ongoing procedures, the results may play a role in the decision making process for the coastal regional plan which is currently being developed. On a more general level, the Project Solana Ulcinj wants to rethink the cultural significance of the position of architecture in a world in which we can no longer afford to make the distinction between nature and man-made environment as they are now inseparably intertwined. Projects should formulate and design a program and an identity for the Solana Ulcinj and come up with a future functional and spatial development of the Solana Ulcinj in its surroundings. The concept should include proposals for possible strategies to be considered both ecologically and economically sustainable. Apart from protecting the site as a nature reserve, they should come up with proposals for the salt production and for example for tourism, medical programs, wellness, bird watching, culture and other programs and strategies to make this protection economically possible. Even if time is short for saving the Solana Ulcinj, programmatic and spatial scenarios that suggest a step by step strategy in time would be appreciated. Projects should furthermore possibly give a vision on the:

- possible functioning of the saline with old or new technologies;
- restauration, re-use and/or reconstruction and redesign of existing buildings;
- restauration, re-use and/or reconstruction and redesign of existing infrastructure and machines;
- relationship between urbanized area, agricultural land and nature;

- relationship/connection between the Solana Ulcinj and the city of Ulcinj;
- entrance area and borders of Solana Ulcinj;
- relationship/connection/barrier to the already existing linear city of informal settlements next to the Solana Ulcinj;
- the relationship to the Bojana river;
- the relationship to the beaches and the green belt;
- infrastructure in and around the area;
- possible vegetation and water management."

Practices were free to focus on some of these issues more than on others or on other issues the offices may find relevant, depending on their programmatic and spatial vision on the Solana Ulcinj. This indeed produces very different results.

The Saline Pyramid of Species / LOLA Landscape Architects

LOLA Landscape Architects, a Dutch practice based in Rotterdam, wants to increase the current biodiversity in the Solana Ulcinj even more in their proposal "The Saline Pyramid of Species." They do this by activating and differentiating the salt sedimentation system in order to generate more life, more diversity of life, and new ways of experiencing the beauty of it all. They introduce more pumps in the saline and propose to pump up salt water all year, instead of just in the hot season to which the industrial salt production was originally limited. Their idea is not to produce more salt, as the Solana could never compete in price with Chinese salt, but to produce salt of a higher and more specific quality, which can be sold for higher prices. Therefore, a smaller part of the Solana Ulcinj would be used for this salt production, and it would use the latest robot technology for harvesting. The real reason for the year-round pumping is to attract even more different kinds of birds, also in periods where there are not that many present right now. These new species are attracted by a larger differentiation of the different fields, which entrepreneurs, hotel owners and farmers can use for different small scale leisure activities (bird watching, floating on salt water, mud baths) or production. The existing buildings would be redeveloped for leisure activities and only a few selected buildings and machines with specific functions (floating sauna, watchtowers, overnight stay cabins, etc.) would be added. A new path system, including new waterways, would make the edges accessible, while the core would remain inaccessible. In the exhibition, the richness of the new, upgraded ecosystem will be demonstrated through a wall with 1000 laser cut contours of all species that could live in the new Solana Ulcinj, from microbes and shrimps through plants and birds to predators and finally humans. In this project, it is assumed that the (national) government of Montenegro owns the Solana Ulcinj, activates the main pumps and does basic maintenance, while encouraging and coordinating local private parties to take entrepreneurial initiatives for production or tourist activities, to increase the biodiversity and to improve the local economy.

Solana Open Aviary / ecoLogicStudio

London-based ecoLogicStudio proposes to take the artificial territory of the Solana Ulcinj, which was shaped in the twentieth century by industrial and mechanical processes, to the twenty-first century by means of the latest technologies. Their project "Solana Open Aviary" proposes to literally turn the site into an aviary without a net, where birds and humans can explore close interaction "without being forcefully enclosed in a confined envelope; this is made possible by digital bird tracking technologies, hi-resolution satellite earth monitoring and robotically driven land sculpting." "Open" refers in

this project just as well to open systems, open source technologies, and the "open" networks of sites defined by migration. The project connects all scales, from the intercontinental scale of bird migration to the molecular scale of the salt and other chemicals that define the special landscape of the Solana Ulcinj. On the largest scale, ecoLogicStudio shows that the Solana Ulcinj is part of a larger network of other salines in Europe and northern Africa, which go through similar problems. These habitats may be scattered over many different countries, but they are all parts of a larger project when it comes to preserve the global bird population and its complex migratory behaviour. Therefore, ecoLogicStudio propose that an international NGO, with international funding, should be in charge of these places. In collaboration with ESA, ecoLogicStudio show the latest analyses of Sentinella2, a high resolution monitoring satellite, which can reveal biochemical processes on the ground and in the water. This reveals the Solana Ulcinj as a landscape that is inextricably the product of the combination of human agency and local biological life. Similar conditions to the ones that appear in the Solana Ulcinj appear in the surrounding landscape, which might enable to virtually enlarge the field of the biotope and thus increase its capacity. At the same time an increase of the range of activities in this area enables economic development on a local scale. The tectonic of the Open Aviary becomes literally a combination of the geological tectonic and human interventions in the skin of the earth. It becomes a robotically fabricated artificial but highly differentiated landscape, capable of attracting an even wider variety of bird species and accommodating all kinds of new programs, from research to leisure and from sports to healthcare.

Coexistence / LAAC

With their project "Coexistence" Innsbruck-based practice LAAC present an animation that transcends the current reality in a more poetical and architectural way. Together with the Viennese firm artfabrik, they have made a complete 3D laser scan of the whole landscape of the Solana Ulcinj. The digital material of this laser scan, which is incredibly detailed, forms the basis for a mesmerizing series of digital metamorphoses, in which nature constantly morphs into technology and the other way round, constantly blurring the boundaries between nature and artifice, suggesting the possibility of a coexistence of the two. Proposals for a new museum on the site, dedicated to modern art and nature, and partial re-use of the existing buildings complete the project.

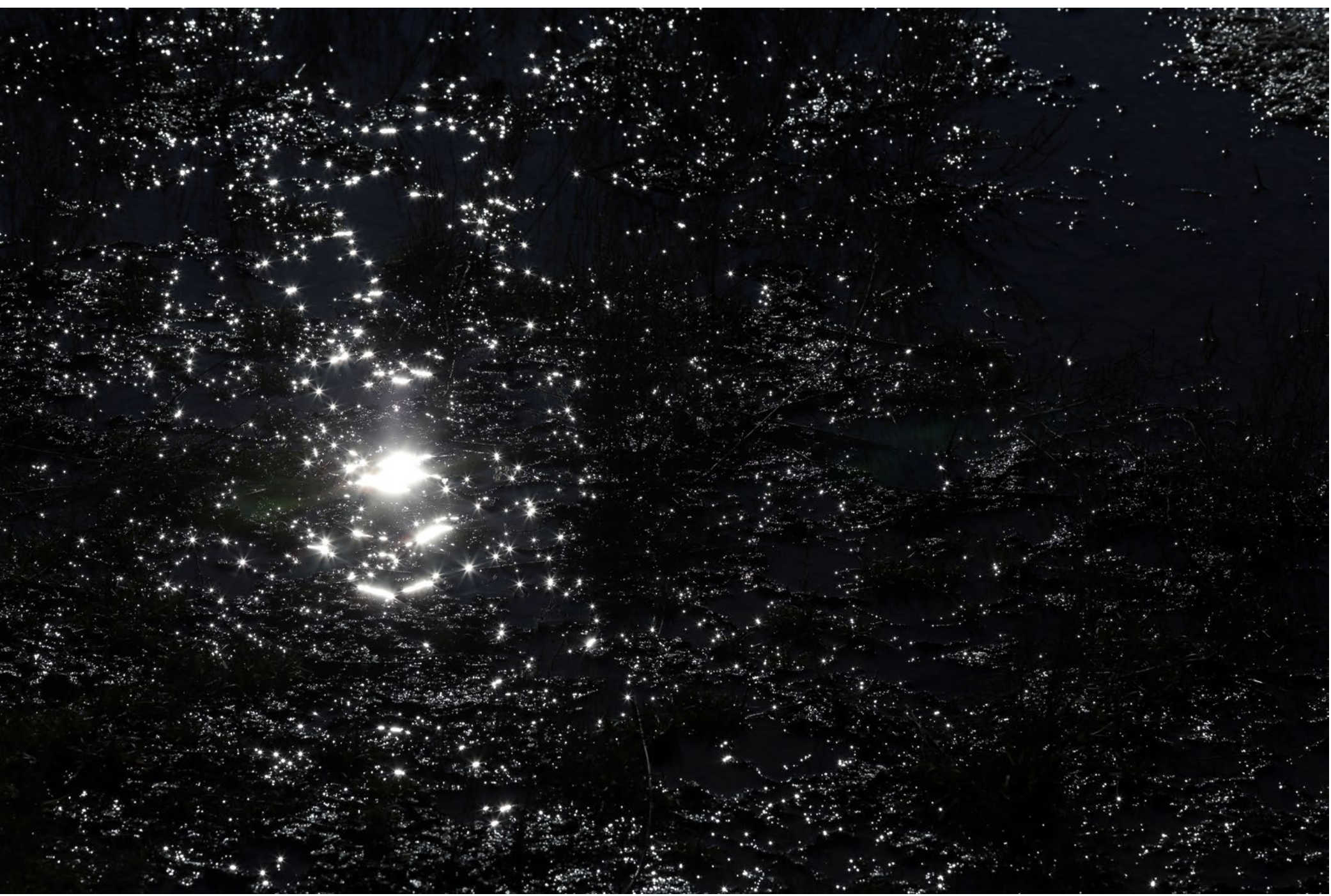
The Trigger

Marko Stjepčević and Nemanja Milićević

"The Trigger" realizes that protection of the Solana Ulcinj is a complex issue and consciously proposes a series of strategies and design principles rather than an overall design. It puts the Solana in the larger context of Montenegro and reconsiders its relationship to it in different ways. The project consists of three parts. In the former hangar for the storage of salt, the storage part is reduced as a smaller amount of high quality salt will be produced instead of the former large scale industrial production. The largest part of the hangar will become a covered market, where regional agricultural products and of course the products of the saline are sold to generate income. A small train line connects it to the city of Ulcinj. A grid of follies, small buildings with a particular function, is laid out over the saline and in its surroundings to generate new touristic activities, limited to small groups of people not to disturb flora and fauna, and to improve surveillance to prevent poaching. Last but not least, The Trigger questions the economical and natural sustainability of the current water management on site and proposes a new system to bring up salt water, which would need less energy, would therefore be less polluting and cost less money.



Solana Ulcinj,
Montenegro,
photograph **Bart Lootsma**



THE SALT OF THE EARTH

by Robert Schäfer



We rely on salt. There's no life without salt. Over time, salt has been one of the most precious goods. Cities like Dubrovnik and Kotor owed their wealth to the white gold. Caravans transported it over long distances, cities, nowadays important metropolises like Munich, were founded strategically along those transport routes. Tax income from salt trade was relevant for long periods of time. The value of salt was equivalent to money. All over the Mediterranean, the Romans were famous builders of salt pans. Roman legionaries received as part of their pay, a *salarium argenti* or "salt money". Over the centuries the name of this form of payment gave rise to the English word "salary". Salt was also important for the discovery of new continents, since it enabled seafarers to take sufficient quantities of food - preserved in salt - on long voyages. And still today, the health food salad (*insalata*, *ensalada*...) just means: salted.

Today one can buy salt for very little money in any supermarket. The production is hardly profitable. Many salines are nourished by the tidal waves, bringing in fresh saltwater into the salt pans. The Solana Ulcinj needs pumps to get the salty sea water for the salinization process up, which takes some effort, not least financially. With a surface of 14.9 square kilometres, the Solana Ulcinj is one of the largest salines in the Mediterranean region. It is a completely man-made landscape which turned into a vast biotope of highest biological

value and global importance. Whereas most of the salines in the Mediterranean were installed in estuaries or other shallow littoral landscapes, the Solana Ulcinj did not transform one water landscape into another, but created a new and unique landscape type. The sheer extent of the wetland habitats and the high diversity of its fauna and flora are unique for the Eastern Adriatic region. Solana Ulcinj is the most important resting, wintering and breeding site for many species of water birds along the Adriatic Flyway. Except for the birds, Solana Ulcinj is a habitat for many endangered species of fish, amphibians and reptiles, as well as plants of saline habitats. The saline is part of the region's cultural and historical heritage because it has been a driver for the development of the municipality of Ulcinj. 38 European countries, including Montenegro, did sign „The European Landscape Convention“, a Europe-wide concept centring on the quality of landscape protection, management and planning and covering the entire territory, not just outstanding landscapes. Landscape is now understood as a key element of individual and social well-being. Article 1 provides a definition of landscape. For the purposes of the convention it is an area whose character is the result of the action and interaction of natural and/or human factors. It also defines "landscape protection" as actions to conserve and maintain the significant or characteristic features of a landscape and "landscape management" as an action ensuring the regular upkeep of a landscape, so as to guide and har-

monise changes within. Finally, "landscape planning" is defined as a strong forward-looking action to enhance, restore or create landscapes. By developing a new territorial culture, the Council of Europe seeks to promote populations' quality of life and well-being. Landscape today should be seen as the driving force behind most developments. Landscape plays the key role in and acts as a trigger for any spatial planning process. More and more people live in cities, but they still depend on landscape infrastructure and on natural resources. Uncontrolled urban growth will not lead to social welfare. Tourism cannot be seen as a cure-all for cultural landscapes and the leisure industry will be much more diversified than it is today. Beach life and second homes, buildings spoiling seashores and similar phenomena will be seen more critical and quoted unsustainable. Landscape is our silverware. It is obvious that all development including the protection and revitalization of the Solana Ulcinj has to be economically and ecologically sustainable and sane. No cultural landscape can be kept without using it. Landscapes are dynamic and will not function as museums. But exploitation and devastation is no solution at all. There are about ten saline landscapes on the Adriatic east coast. About seven of them are in use, although some only temporarily and limited. Here and elsewhere good examples of how to handle the problem can be studied, keeping saline landscapes alive for the benefit of man and wildlife, while safeguarding social heritage as well. There

are also good examples for a sustainable landscape management. The saline Sečovlje near Piran, for example, is protected as a landscape park, a Saline Museum was declared cultural monument and since 1993 the 500 hectares' area is declared as protected wetland following the Ramsar declaration. Visitors are not only attracted by the peculiarities of nature that can be found here, but also by a spa using salt, algae and mud from the site for medical treatments. The oldest existing salt garden in the Mediterranean, the Ston saline in the south of Croatia, once the main source of income for the city of Dubrovnik, is inscribed on the UNESCO World Heritage list today. In Trapani, and Paceco, Sicily, salines are protected as cultural landscapes. The production of salt was reintroduced after being declared non-profitable already in the 1950's. A private initiative was sup-

ported by the WWF, and today it produces 100 000 tons of pure best quality salt per year on 800 hectares. Las Salinas de Fuencaliente on the Canary Island La Palma is a protected bird sanctuary and a productive salt plant as well. In 1983, Spain designated a large part of the Ebro Delta, Tancada, as natural park with a surface area of 7802 hectares, including wetlands, salines, beaches and estuaries. In 1993, the Ramsar Convention included the area on its list of wetlands of international importance. In 2011, Catalan landscape architect Martí Franch developed a plan to restore both the old fish ponds and the salt pans. The proposal explores the potential of the 'liquid landscape' of the delta. We may easily conclude that the Solana Ulcinj meets all the required criteria to be listed among the most important protected nature reserves in Europe. "Reporting from the Front", the Ven-

ice Architecture Biennial motto, delivers the chance to put Project Solana Ulcinj in the limelight by reporting about struggles between the local and the global, nature and culture, tourism and sustainability, economy and the social realm. Curators Bart Lootsma and Katharina Weinberger expect that the Project Solana Ulcinj takes the challenge to come up with new proposals of how to save the important ecological position and the unique cultural qualities of the landscape, while at the same time enabling and regulating economic interests in the area. The project and the exhibition will hopefully stimulate the debate about architecture and landscape architecture in Montenegro and establish an international exchange for the benefit of a creative redevelopment of this outstanding cultural landscape with its overwhelming ecological value.



Raw salt, from Solana Ulcinj, Montenegro,
photograph **Bart Lootsma**

COEXISTENCE

LAAC Architects in cooperation with **ARTFABRIK**

Coexistence implies the simultaneous occurrence and presence of different elements, such as creatures, species and systems at a specific location. This concept shows how existence and topos, the Greek word for place, belong together and are mutually dependent. Both elements are inevitably linked to a spatial-temporal dimension. Everything that exists has a duration and is due to its presence both a spatial intervention and an expansion. But the term "coexistence" means a particular form of existence. Coexistence is the form of existence in which multiplicity becomes a unity and where the individual has no territorial claim towards the collective. If a place is characterized by coexistence it is not a territory anymore.

Thus, the Solana Ulcinj is not a territory, it is a landscape which is characterized by coexistence and diversity. The biodiversity of the Solana is the result of a process of conversion. Environmental change is determined by specific social, cultural, political or economic conditions and the institutions that accompany them. Processes of socio-environmental metabolic circulations transform both social and physical environments and produce social and physical milieus with new and distinct qualities. Concrete historical-geographical analysis of the production of urban natures provides insights in the uneven power relations through which such artificial natures are generated. Constant simultaneity of natural and artificial processes as well as particular and general behaviour creates a multi-condition. All socio-spatial processes are invariably also predicated upon the circulation and metabolism of physical, chemical and/or biological components. Non-human actants play an active role in mobilizing socio-natural circulatory and metabolic processes. It is these circulatory conduits that connect distant places and ecosystems and per-

mit relating local processes with wider socio-metabolic flows, networks, configurations, and dynamics. The Solana Ulcinj is exemplary for the blurring boundary between the natural and the artificial. It emphasizes the landscape as a composition of natural elements and a socio - cultural idea. Therefore, this project attempts not to evaluate between the natural and the artificial, but to perceive the qualities of this unified structure within which the coexistence of natural and artificial systems created a specific environment. It regards the Solana Ulcinj as a narrative interrelation between utopia and tragedy, between reality and fiction, that encourages further exploration.

TPOLOGY OF SIMULTANEITY

Topology is not just about descriptive geometry and does not only deal with technical questions about continuous surfaces, but it also pays greater attention to the deeper poetic and philosophical meaning of a landscape, and thus helps us grasp as much about its making as about the perception of its intrinsic beauty. This understanding of landscape allows us to go beyond the morphology and physical condition of a site, extracting qualities from it and exploring them in different layers.

The transcendence of this landscape, its structure and facilities, is illustrated in this project by a transforming point cloud. Point clouds, as they result from a laser scan, contain intrinsic information about an existing environment. They emerge as a continuous topology of information without distinction between different elements as such. Natural and artificial elements appear with the same coding by the very characteristics of the point cloud itself.

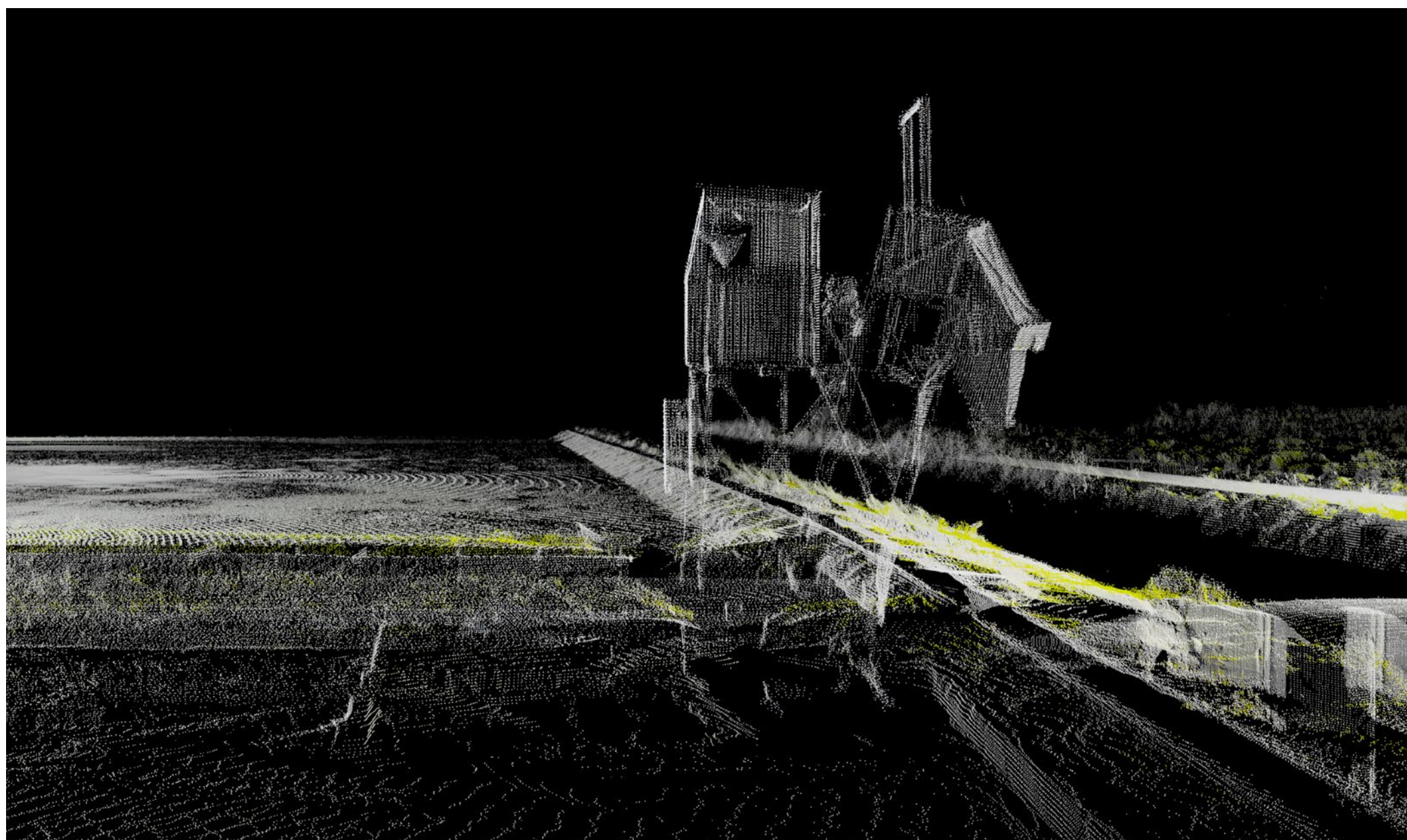
MUSEUM OF CONTEMPORARY ART AND NATURE

Debates on architecture and nature generally conceal the broad questions that undergird and drive them. Is techné a continuation of nature's activity, a rebellion against nature, or a challenge to nature?

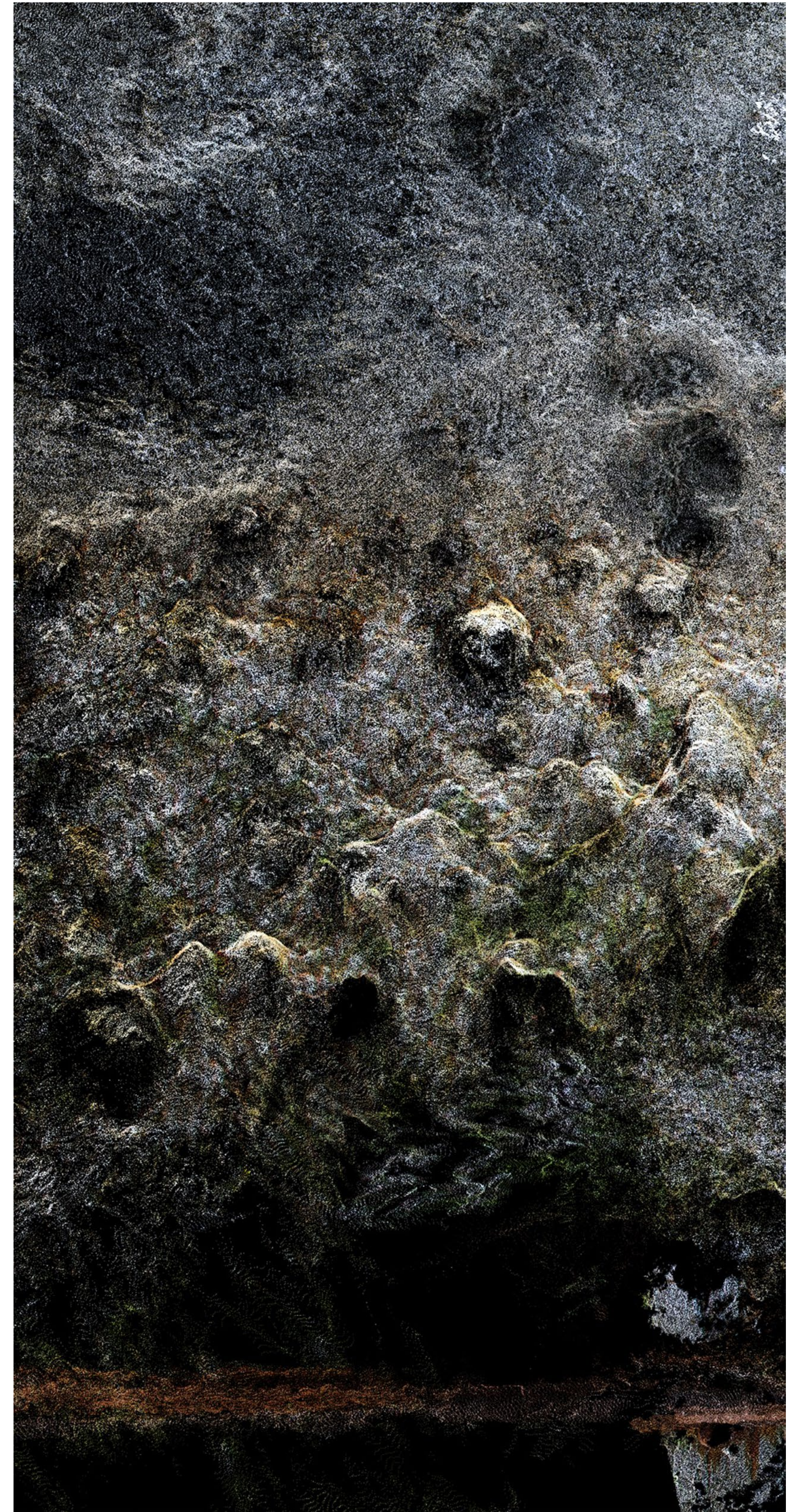
We want to encourage an understanding for the coexistence between architecture and nature, as it manifests itself in the particular natural-artificial environment of the Solana Ulcinj as as a cultural value, a social norm, and a moral authority. Architecture and art can be catalysts to enlighten this concept of diversity.

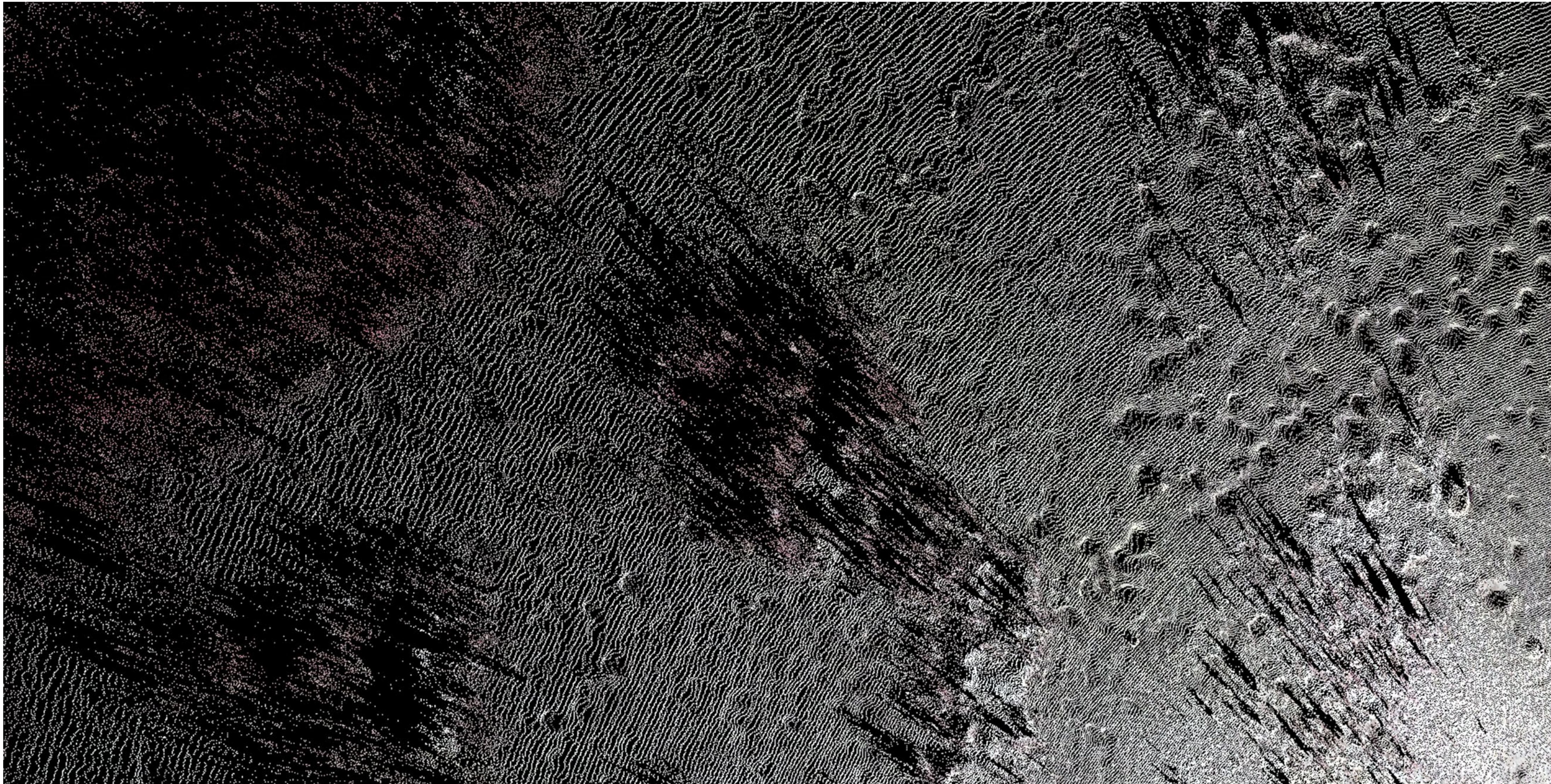
We want to negotiate the coexistence of the natural and the artificial as a cultural phenomenon by means of an architectural intervention in the landscape which accommodates a museum for contemporary art and nature. The project suggests the reactivation of the existing storage space as part of the museum. The salt hill is preserved as a sculptural relict from the past. The former harvesting system is transformed into a route, leading from the storage space to the main building of the museum via the pumping facilities. This part of the museum is embedded in one of the former salt fields. The pump should remain active in order to facilitate the harvesting of salt on a smaller scale, which ensures the preservation of the ecological system. As the product of an symbiosis between artifice and nature, the salt can be sold in the museum's shop.

Saltfield



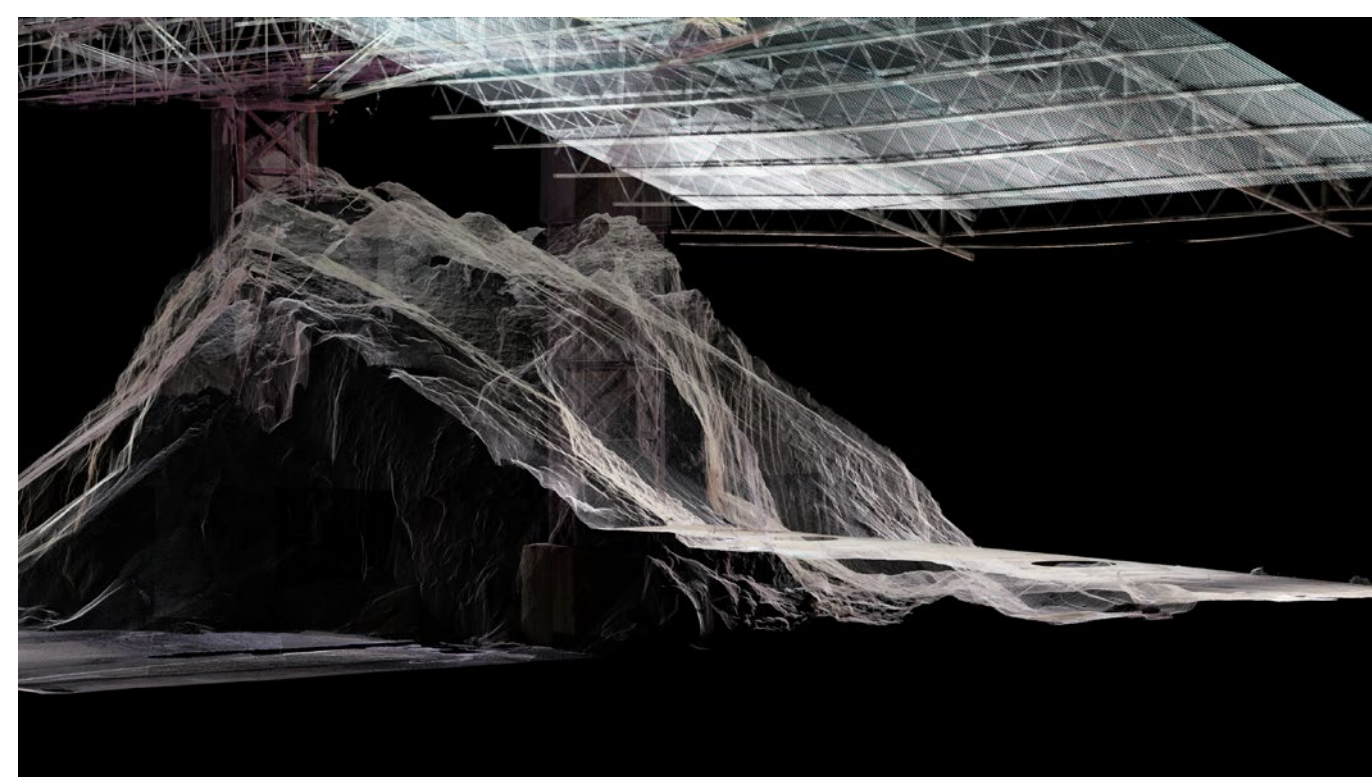
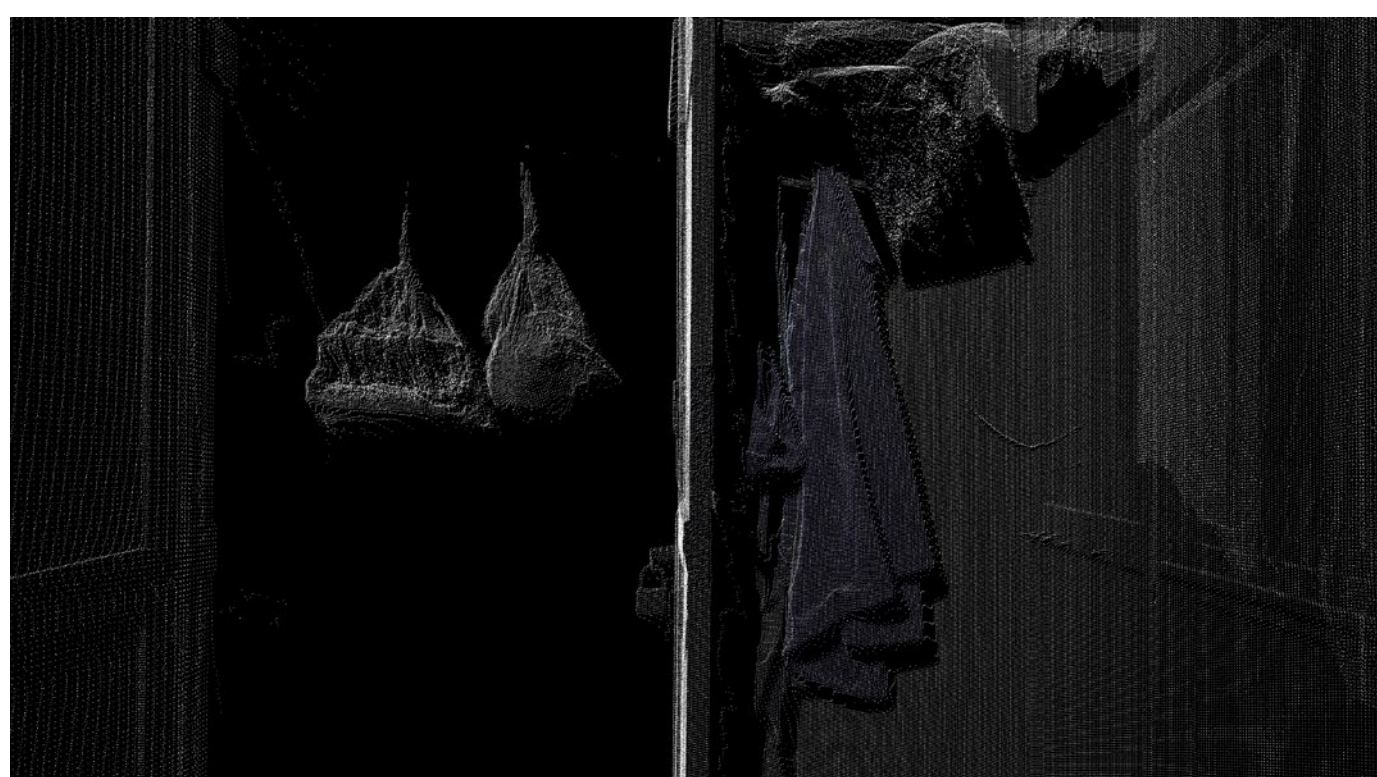
Donkey





Saltfield

Dressing room



Salthill

THE TRIGGER

Marko Stjepčević
& Nemanja Miličević

The Genesis

Long before it became a saline, Zoganj Lake near Ulcinj was a wetland and home to the malaria mosquito. Queen Milena, aiming to address this problem, ordered digging the Channel Port Milena, in order to drain the water of the lake into the Adriatic Sea. It was seen as an adequate solution: not only the mosquitos would be gone but also new fertile land on the site of the former lake would become available. What the engineers did not realize was that Zoganj Lake was in **crypto-depression**, meaning its bottom was below sea level. Therefore, the lake was not drained but instead the canal enabled salty seawater to pour into the swamp. Coincidentally however, as they were intolerant to seawater, the mosquitos were gone.

At the beginning of the 20th century, this location was chosen to construct a new saline. Soon, the Solana Ulcinj was very profitable and at times employed between 300 and 400 workers. Apart from that, the chosen method of salt production caused something amazing: it launched a new development of the nature on the site. The increasingly salt water attracted microorganisms that now inhabit the salt pan pools. In turn, these have spurred the development of other, larger organisms. As the Solana Ulcinj already found itself on bird migration routes, it now became a real bird airport. Thus, industry helped nature to become more diverse and richer. The saline has functioned quite well during the period Montenegro was a part of former Yugoslavia. In 2003, it was privatized. It continued working until 2013, when it officially stopped operating. Many people lost their jobs and the number of birds decreases every year. If sea water isn't pumped up soon, the ecosystem will be seriously threatened. This makes it quite urgent to intervene. Our project should not be regarded as a conventional architectural project. We hardly propose new forms and structures to solve the problem. Our main goal is to analyze the spatial potentials and problems of the Solana Ulcinj in a wider context and focus on infrastructural solutions. The new sustainable scenarios we generate can be followed for 5% or 95%. They can also be realized in different phases. That is not the most important thing. More important is to pull the trigger that, this time, should save the ecosystem. Therefore, we propose three different topics to work on.

The trigger

This is the first step in our proposed intervention, since it relies upon the existing objects in the Solana Ulcinj. Salt isn't profitable, but it's necessary for the ecosystem. We will pump up water and produce salt in much smaller quantities: specifically, only 10% of the former capacity of the saline. Instead of 30000 tons of salt per year, we can produce 3000 tons of high quality salt. We will keep existing facilities that are essential for and highly specialized in the production of salt for that purpose.

Others will be converted into spa facilities using the salt and mud, which can use all pools of the saline and to enable visitors to enjoy the richness of its flora and fauna and turning it into a unique destination for this kind of tourism. Smaller objects can function in service of the Nova Solana park for ticket sales and similar functions. The existing train track for the salt transportation will be used as a connection with a large beach. With the reduction of the salt production, the capacity of the main hangar for salt storage can be reduced to 20% of what it used to be. The rest of the hangar can become THE MARKET, a distribution center for organic products from the region, such as fish, cheese, vegetables, fruit and honey. Also the authentic salt and mud from the Solana Ulcinj can be sold here. The Nova Solana Park will be responsible for it that this market is indeed both natural and commercial, guaranteeing the quality of all products. Stands will cover around 2000 m² of the hangar for around 2.00 €/m² per day. Thus, the Solana Ulcinj becomes financially sustainable again and moreover, together with the other facilities on the site, it will employ almost the same number of people as it once did, in a better past.

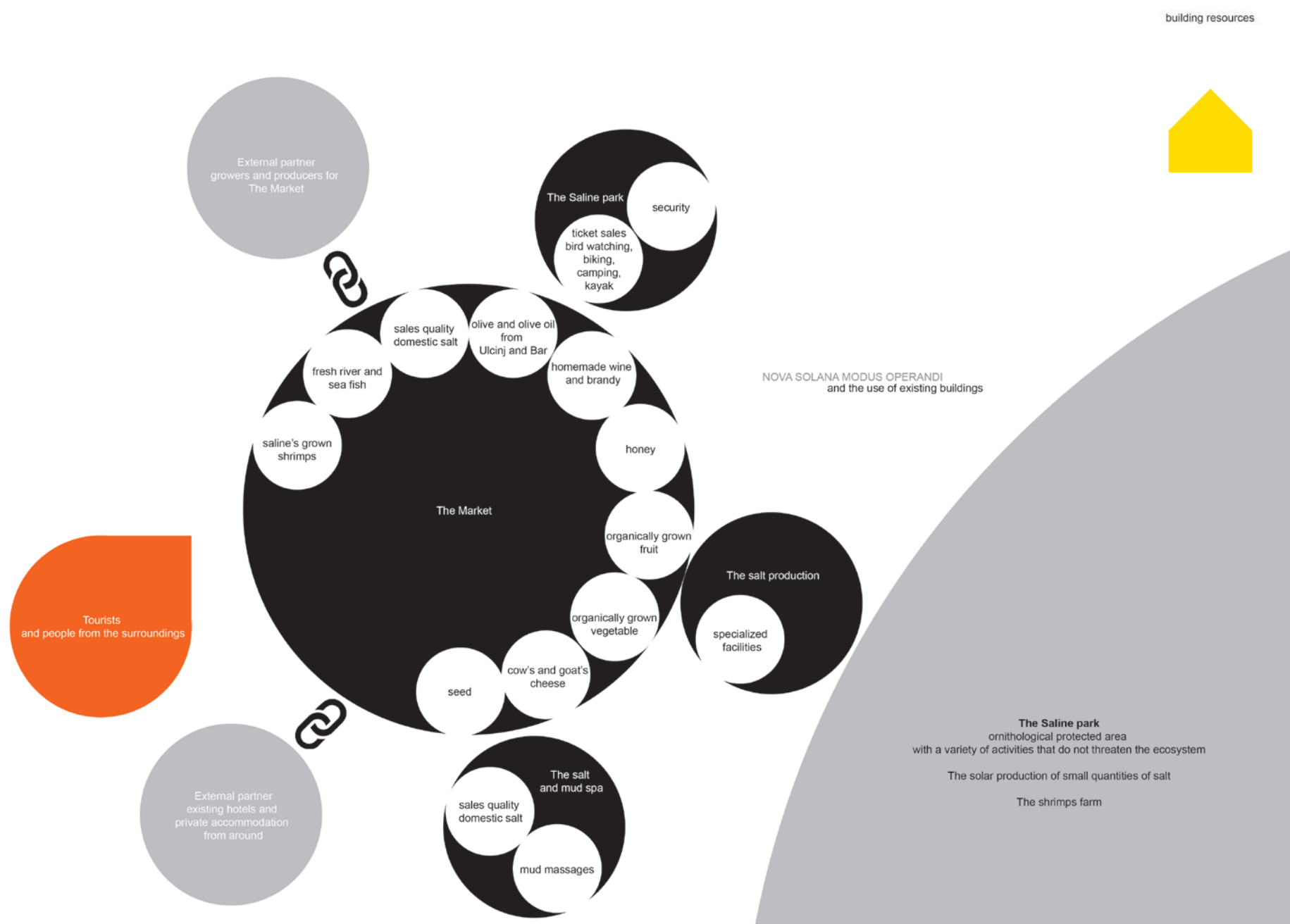
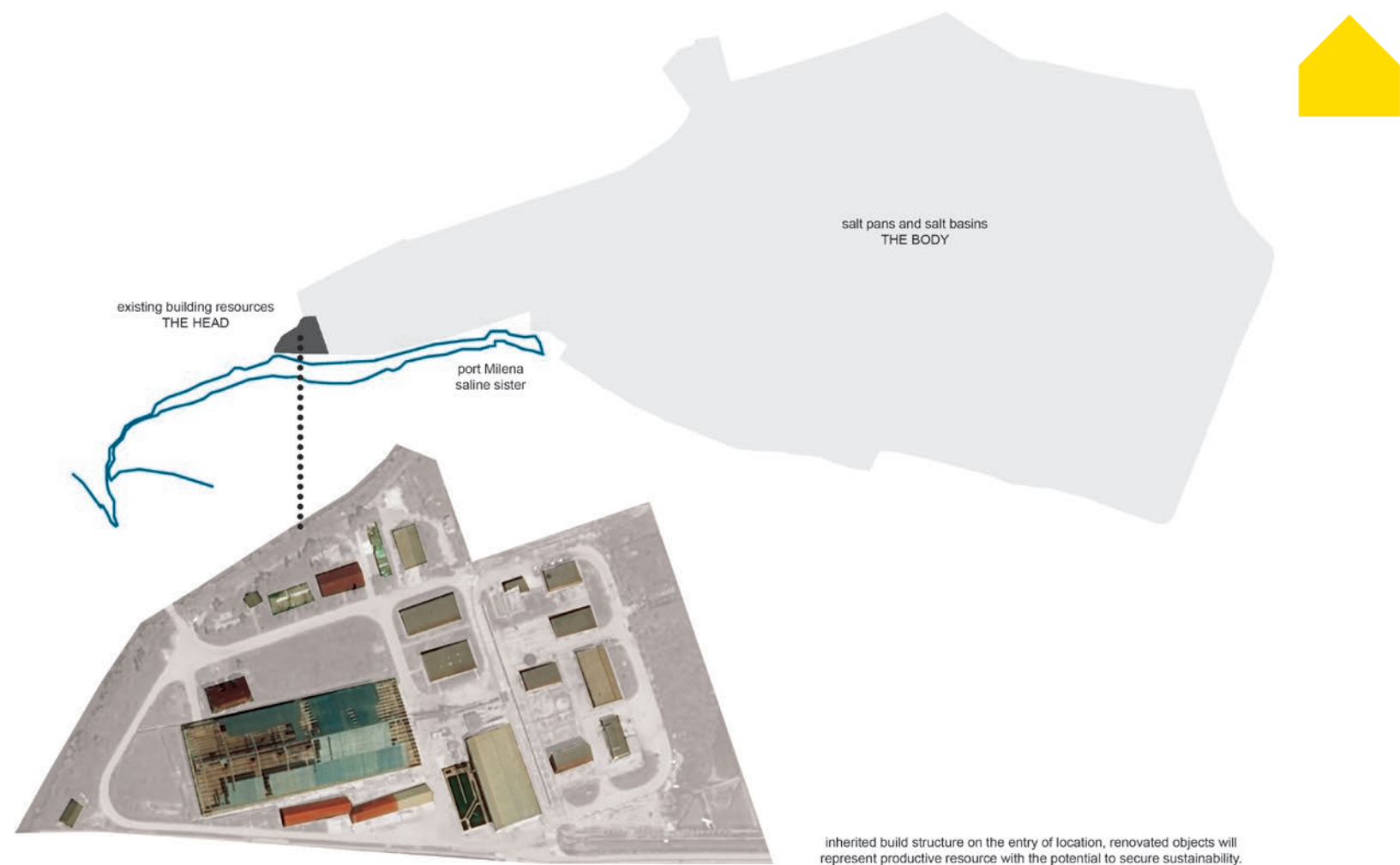
La pan folie

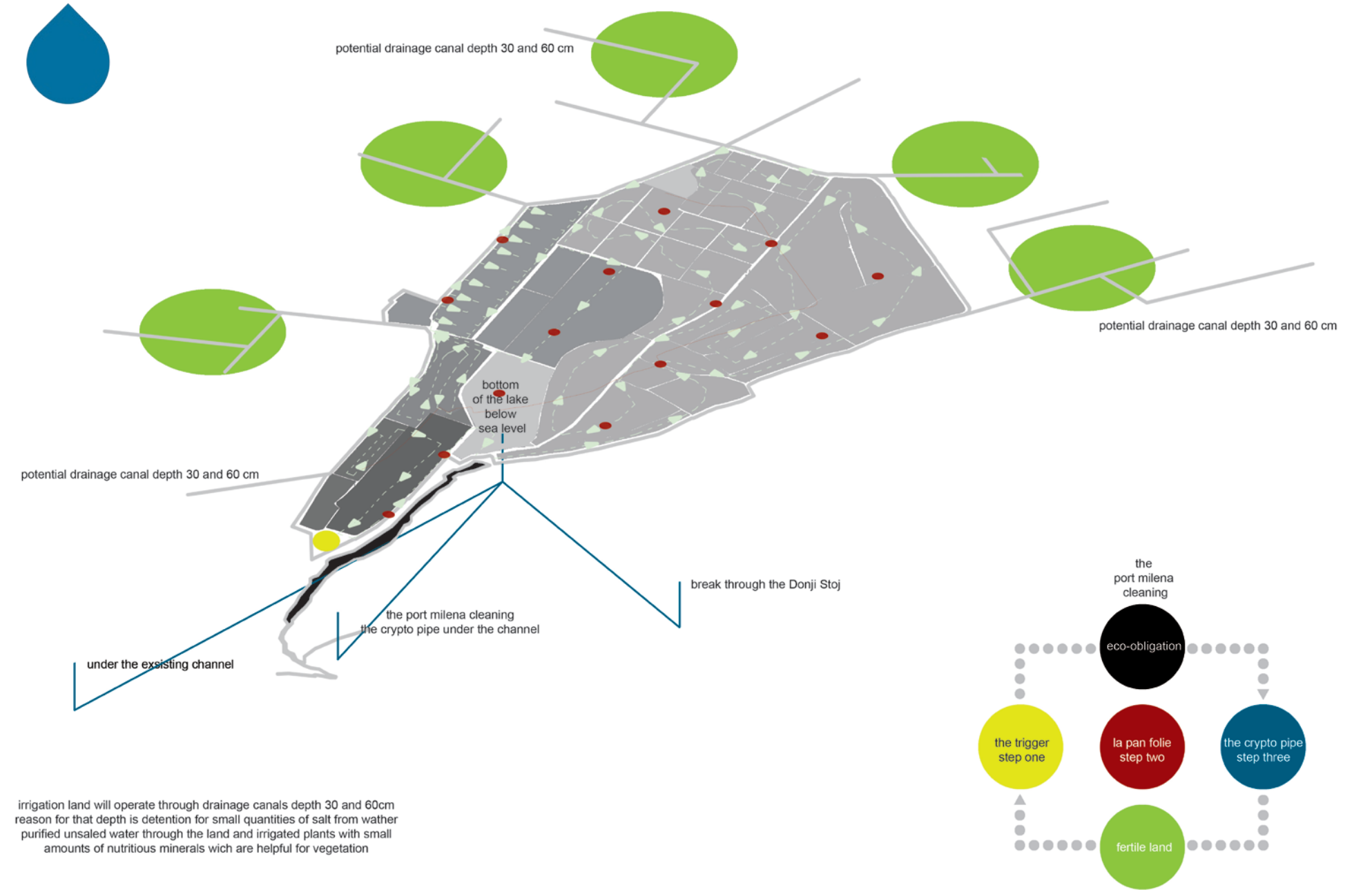
This is perhaps the most formal intervention in the saline. It consists of small modular buildings, **folies**, which will be developed on an orthogonal grid of one by one kilometer from the center of the saline, extending 3 kilometers outside it. They connect the Solana Ulcinj with its surroundings and with natural and touristic resources, and make the vastness of the saline measurable by functioning as landmarks. Depending on their location, they could become generators for different activities: a simple observation post for bird watching, a simple shelter for the hot sun and wind, a kiosk or a place for renting bicycles or kayaks. Beyond that, they also function as a kind of "scarecrows" against poaching – not against birds by allowing a better safety coverage of the area by the authorities. The advantage of this solution is that it can be developed in phases. We do not want to define how many objects there would be in the final version, since it may depend on the needs, donations etcetera.

The crypto pipe

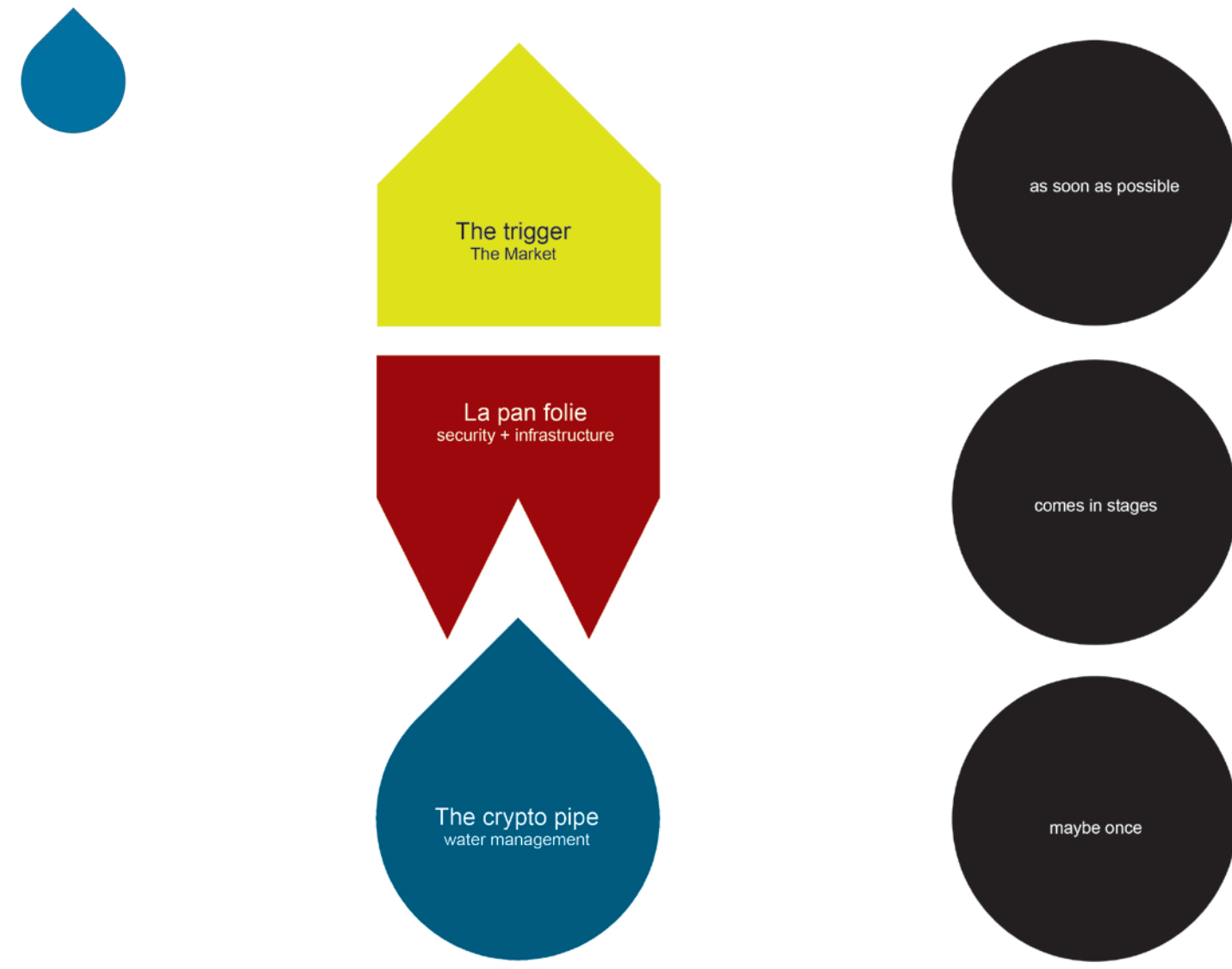
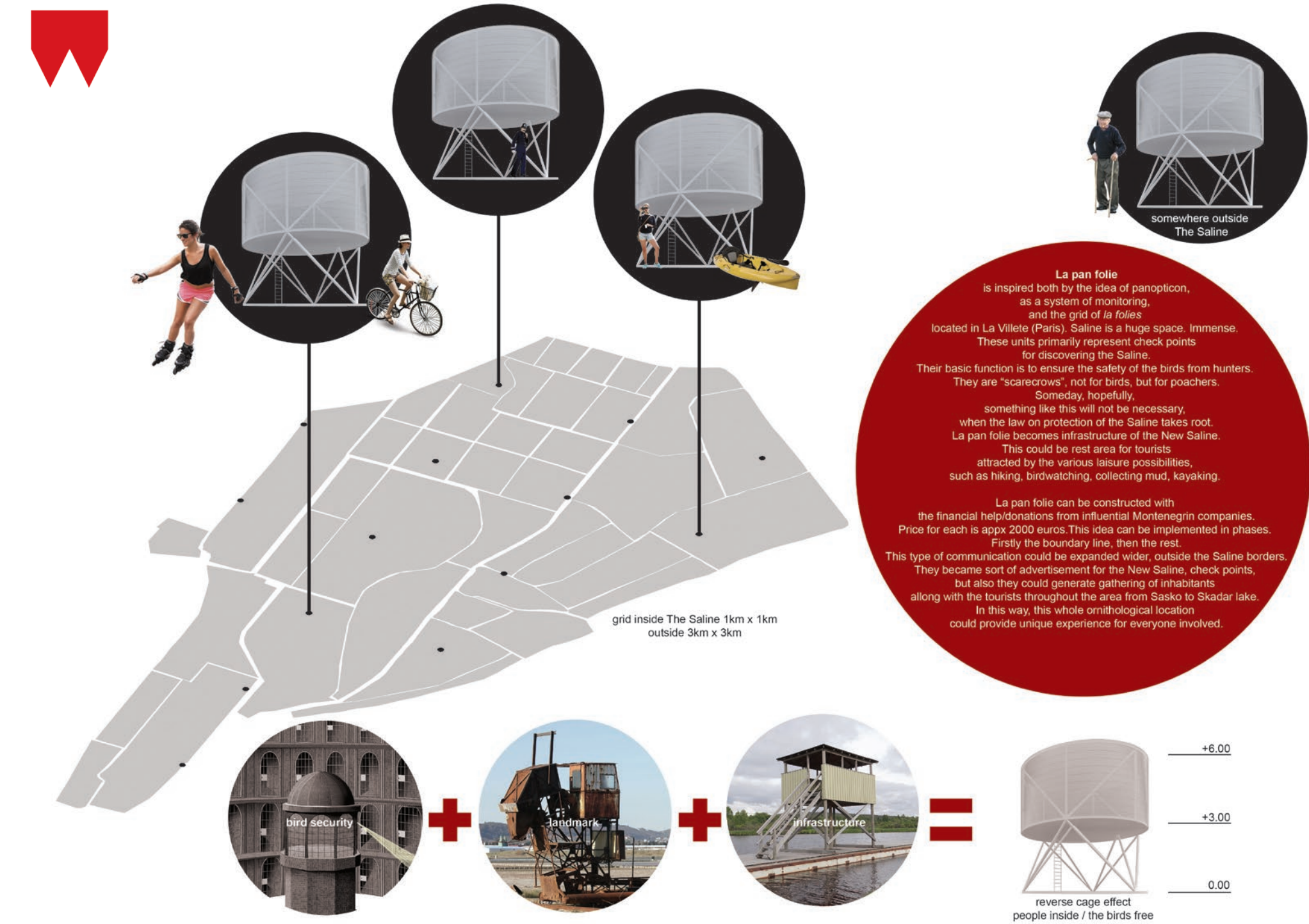
Looking at satellite images of other salt pans on the Adriatic Sea, one fact took our attention: they all have direct contact with the sea. Could it be that the sustain-

ability of the Solana Ulcinj is endangered by not being connected with the sea water in a natural way? Could this problem be solved? We remembered Queen Milena and her attempts to drive away mosquitoes from Zoganj Lake. Also, we thought about movie "Čudo nevideno" by Živko Nikolić from 1984. In this film, one of the main characters, by constructing a channel, tries to empty Skadar Lake into the sea in order to gain fertile land for cotton growing. Skadar Lake is a crypto-depression as well. We want to use this natural phenomenon in our favor. Next to the Solana Ulcinj, the Channel Port Milena is located. It takes the water back to the sea after the salt production. Once it was one of the biggest fish hatcheries in the Adriatic. Today, thanks to sewage waste, it represents an ecological bomb. The international community has engaged in order to resolve this issue urgently. If this is done, salt water can be brought through the pipe, to the deepest pools of the saline, and then easily and cheaply transported further. This way, the Solana Ulcinj could have a certain amount of fresh seawater all year long, potentially attract different species of animals, and become more sustainable. Perhaps this is a utopian idea, but it seems logical: The Solana Ulcinj would work similar to many other salines in the region. Whereas the salt water entering the saline has about 35 grams of salt per liter, the water that goes out has less than 0.1 grams. This remaining water is now drained through the channel Port Milena back in the sea, but it could be used for controlled irrigation for fruit and vegetables in the vicinity of the Solana Ulcinj just as well. This is how the circle of sustainability is closed. People bring their products from the surroundings and sell them in the market of the Nova Solana Park. The small fees they pay for the rent of their stalls are used for pumping sea water into the salt pans. Because of this water, an ecosystem develops and because of this, tourists come. Because of these tourists, the distribution center can function, just as well as the hotels located on the Velika Plaža and the accommodation in Štoj.

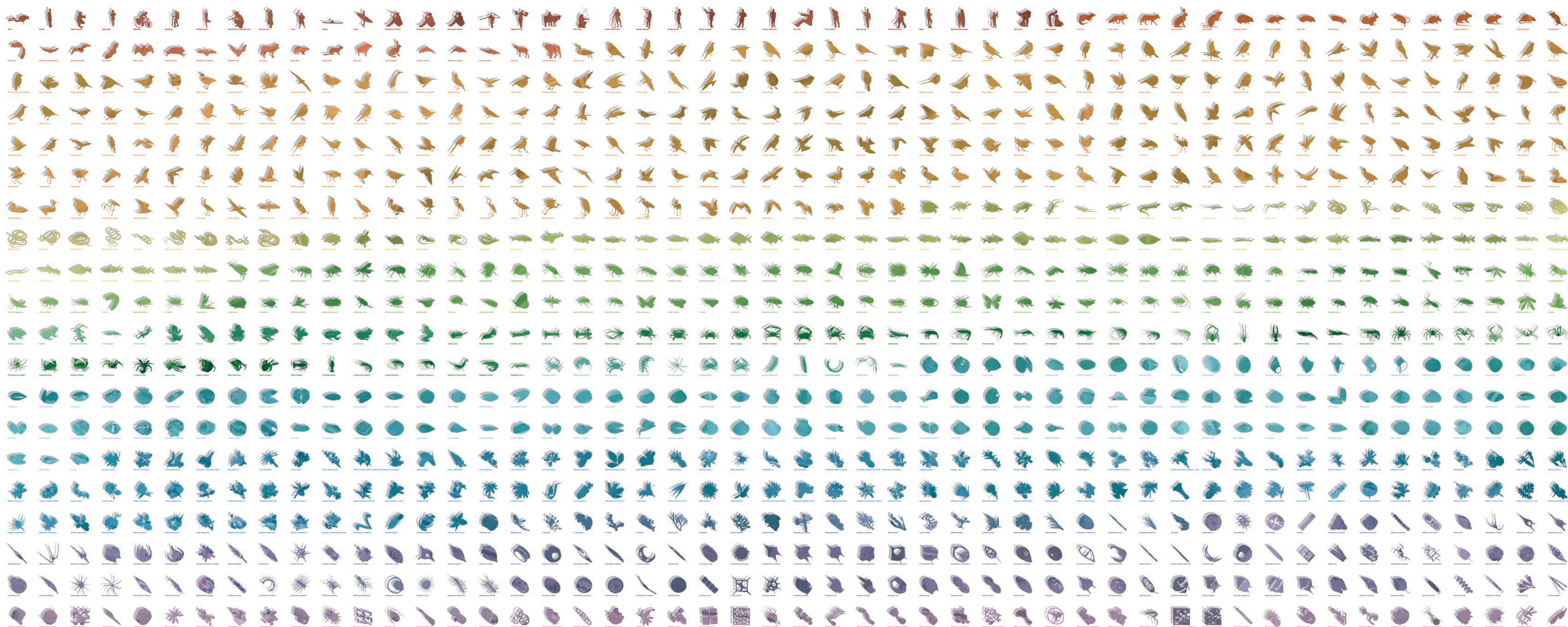




THREE POSSIBLE WAYS TO POSITIONING THE CRYPTO PIPE



The Ulcinj saline concept step by step



The Wall of 1000 Species

LOLA Landscape Architects

THE PYRAMID OF SPECIES

The origin of the Solana Ulcinj lies in the production of salt, but the it's also a renowned nature reserve in Montenegro. The fact that the salt flats are manmade makes them unique, but vulnerable to change too. These days the importance of the saline for regular salt production is long gone, since the bulk of salt comes from China. The loss of salt production makes the continued existence of the Solana Ulcinj as a wildlife sanctuary uncertain. The pumps have stopped pumping salt water on the flats and sweet water now

dissolves the virgin salt. The importance of the Solana Ulcinj is still undoubted. It is of great value for countless species of birds that cross the Adriatic Sea on route of the Adriatic Flyway in large numbers. There is a chance that the whole Adriatic Flyway would collapse without the Solana Ulcinj. That makes the presence of it of European importance. The birds make it of regional importance as well. Many people and birdwatchers in particular enjoy the beauty of the abundant wildlife and come to Ulcinj to spend their vacation. The massive

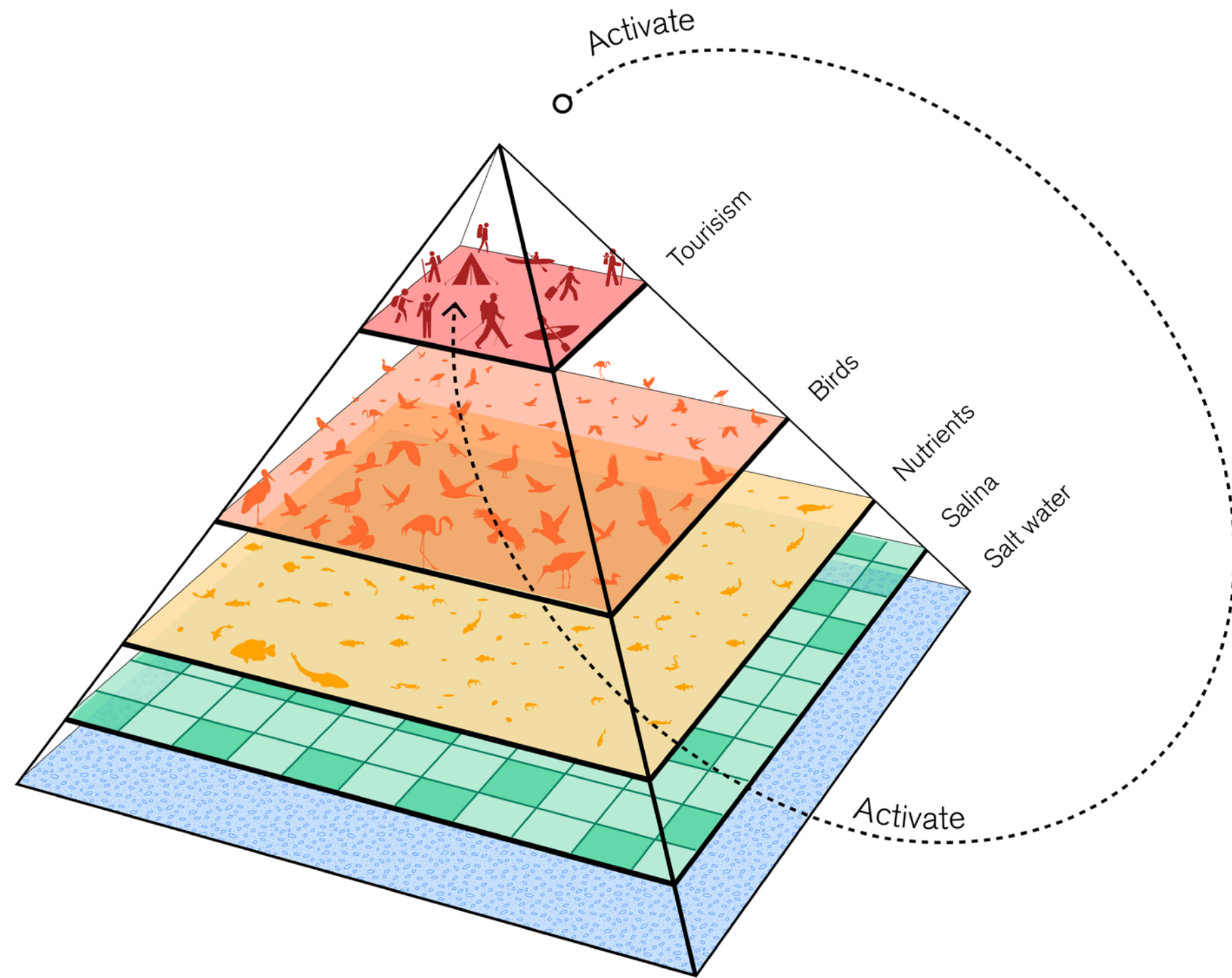
presence of the birds is explained by the nutrient rich water that is being poured out over the flats. The presence of the many birds in turn explains the presence of birdwatchers. This defines the Ecological Pyramid of the Solana Ulcinj, although right now it's more like a house of cards that could easily collapse. To make the pyramid solid, stable and working, the key issue is to get that water running into the saline again. Start the pumps! It could be that easy. First the national government needs to step up. Let's face it: this is a matter of national

importance. Sure, mistakes have been made and the privatization of the Solana Ulcinj was one of those, an expensive one. But the government needs to secure the future and be in charge of the pumps again. That is the only way a basic biodiversity of the Solana Ulcinj can be guaranteed. That's not enough though, not nearly actually. The Solana Ulcinj is beautiful as it is, but everyone can see it is in severe decay. No serious investments have been made over a long time. Further decay is very likely to happen if nothing is done. The structure of the saline is already falling apart. Illegal hunters are prowling the area every day. The informal settlements next to it at the coast will destroy the attractive landscape in no time. The whole area could be gone before we would notice. The loss of the Solana Ulcinj would be an utter waste. Because the Solana Ulcinj could be so much more than it is today! The famous saying 'less is more' really does not apply here, quite the contrary. More is better! The saline could generate more colours, more wildlife, more visitors and more economy. The way to sustain all this is to create hyperdiversity. This is a new concept with which, within the larger framework of the basic biodiversity of the Solana Ulcinj, a multitude of alternative conditions can be created. These alternative conditions result in variations in salinity, shelter, nutrients, shading, etc. More variety means more biodiversity. What's the role of the people of Ulcinj in this? The people of Ulcinj are welcome to benefit from the Solana Ulcinj, if they are willing to contribute to the hyperdiversity themselves. When the pumps are restarted and the Solana Ulcinj Pyramid is reactivated, many people are expected to flock in to watch the return of the birds. Let's make a simple rule here. If one wants to develop a hotel to attract bird watchers, that person should have

a responsibility in the wellbeing of the Solana Ulcinj. The investment should not be done by taxes however: it should be an investment in the creation of alternate conditions in the framework of the Solana Ulcinj. How can alternative conditions be created? There are many possibilities. For instance, a hotel owner could make a vantage point for birdwatchers inside one of the basins of the Solana Ulcinj instead of outside the perimeter. Its base will over time influence the water flow within the basin. Water will stagnate behind it, sedimentation will occur and plants will start to grow. All in all: alternative conditions will be created and more wildlife will be attracted. Hyperdiversity! If one can prove that an initiative will not harm but contribute to the specific characteristics of the Solana Ulcinj and add to its biodiversity, the initiative is welcome. That's not all. There is more to tourism around the Solana Ulcinj of Ulcinj than just bird watching. The Solana Ulcinj also is highly attractive for wellness purposes, for instance. Enjoy the sun in a private basin, bath in the salt water, or rub your skin with salty mud. An accessible muddy basin would attract mud loving people and mud loving fauna alike! Farmers could grow shrimps or saline vegetables inside the saline to sell to the fish restaurants in and around Ulcinj. On one condition: their crops and installations should also add to the alternative conditions within the Solana Ulcinj. Everything should benefit the presence of birds. Last but not least, there is what it all began with: the salt itself. Heavily devaluated over time, the production of salt in the Solana Ulcinj is now a costly endeavour, especially the way it is traditionally done in the Solana Ulcinj: by the many hands of local people. The only way to make the production of salt in the Solana Ulcinj viable, is to the reduce costs of the production and increase

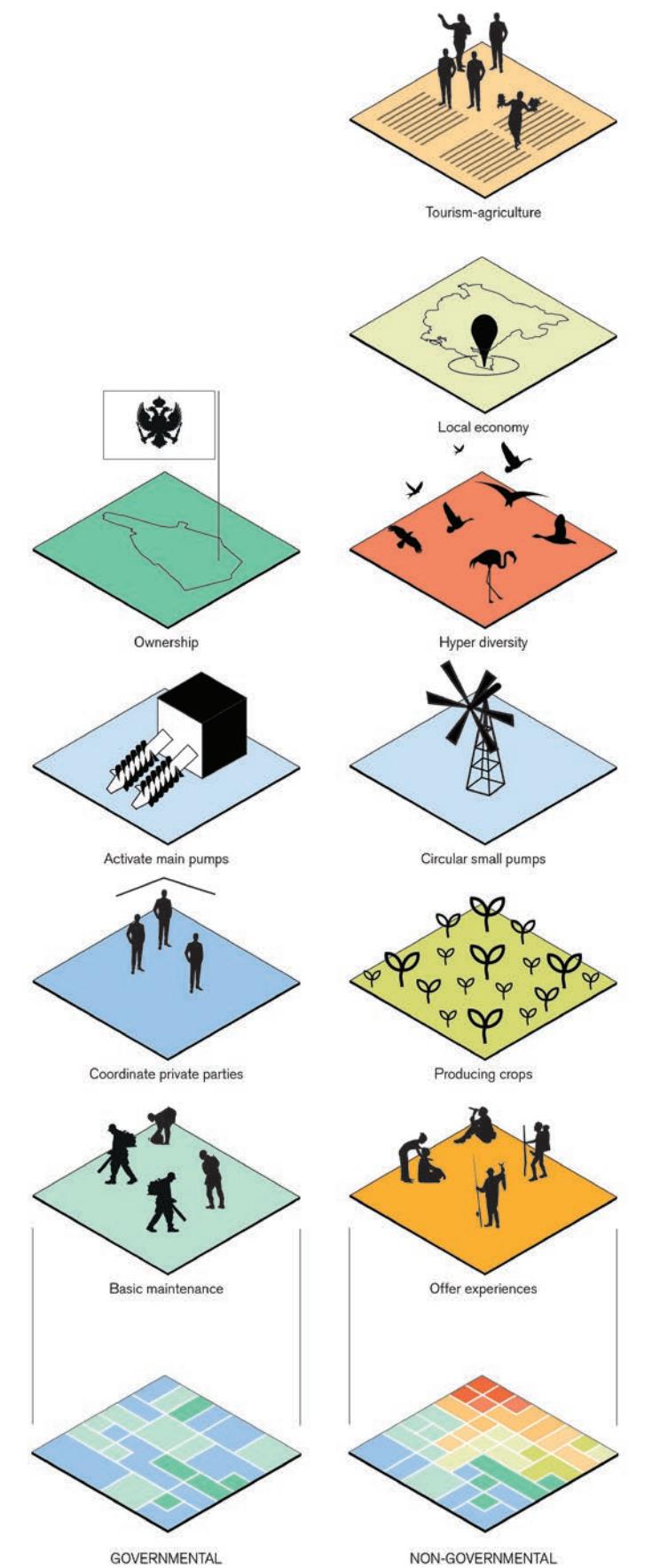
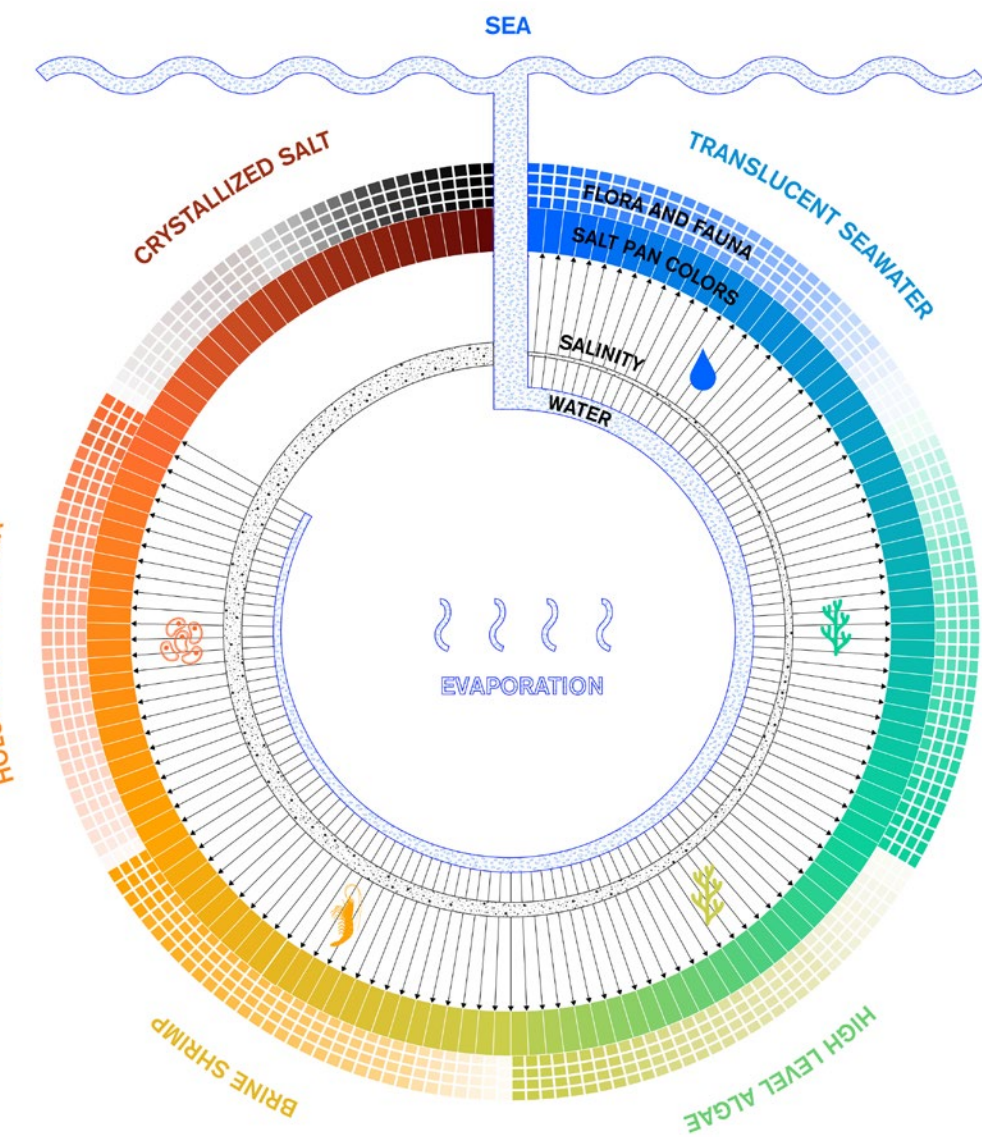
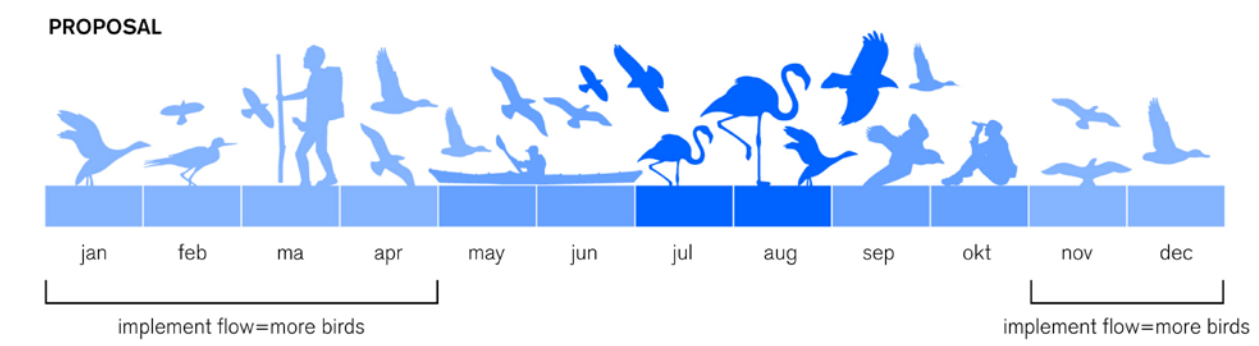
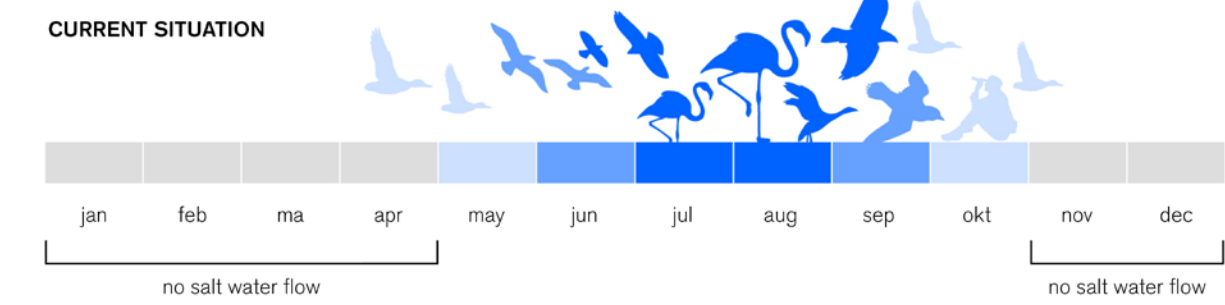
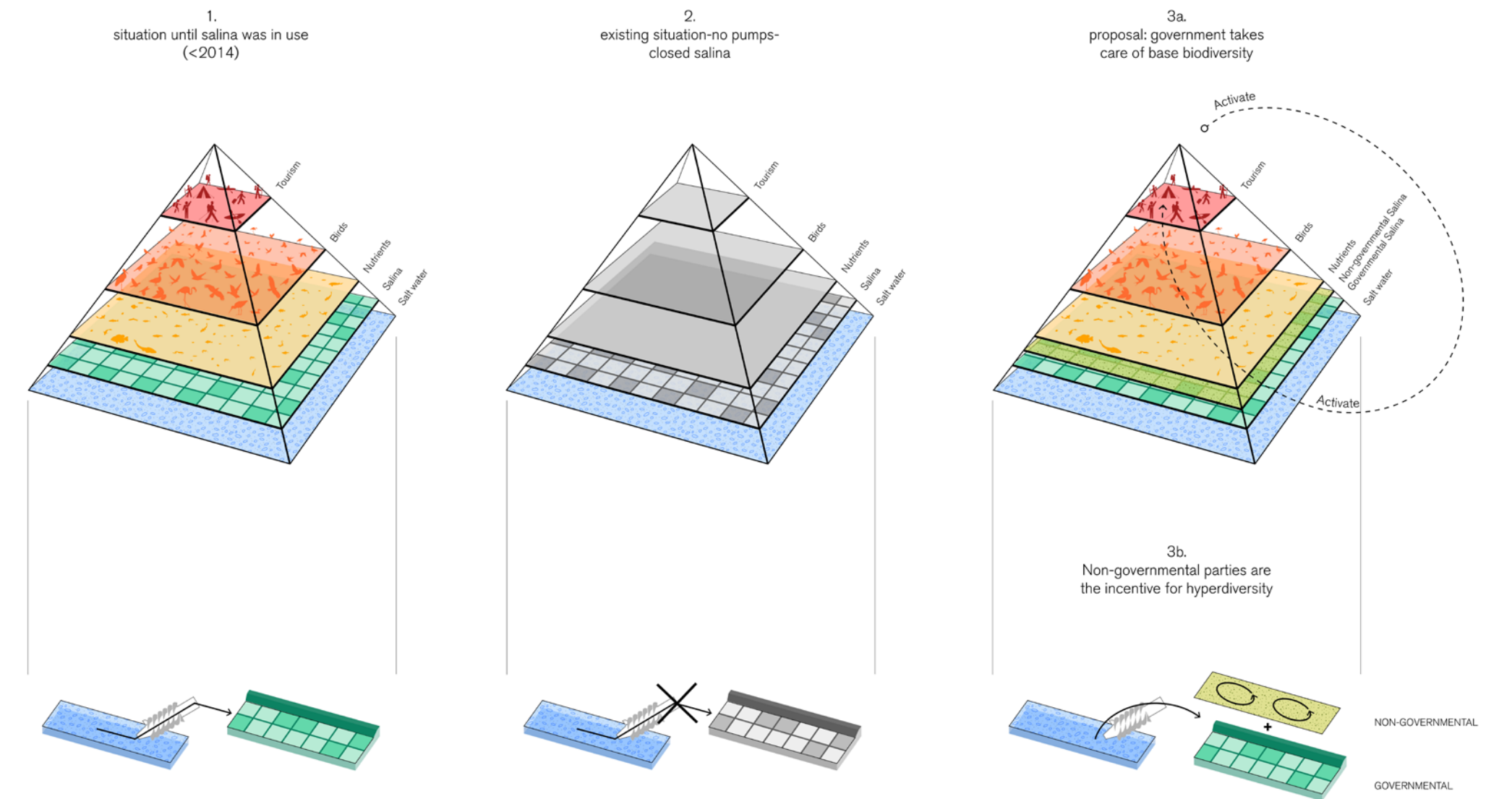
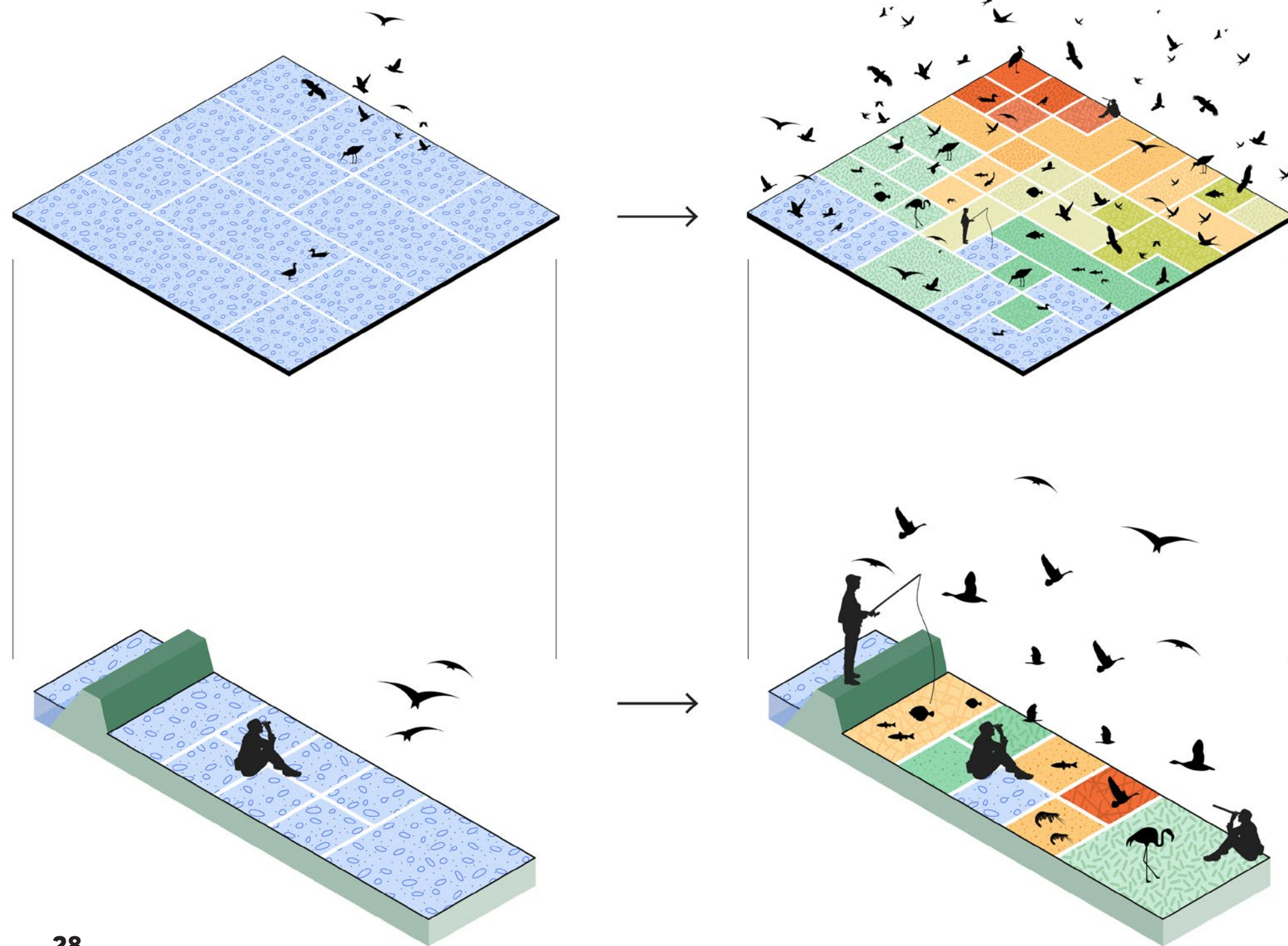
the value of the product. Make use of machines or invite volunteers to come in and spend their holiday harvesting salt. Create something special! Don't just make generic salt for regional kitchens, but produce flamingo salt for flamingo fanatics around the world! Whatever the outcome may be: the message should always be that ecology, recreation and economy could go hand in hand in Ulcinj better than in anywhere else. The Solana Ulcinj is the place where an example can be set; where we can really show that we learn from mistakes and show that nature can actually bounce back; where we can learn that nature can benefit from our presence as human beings instead of only the either way around. All of this can happen when we take responsibility, and make it a joint effort from all of us.

LOLA landscape architects



Salina without intervention

Salina after activation



SOLANA OPEN AVIARY

by Claudia Pasquero and Marco Poletto
[ecoLogicStudio]

Global Premises: Urbansphere versus Biosphere

According to Global Footprint Network, an international think tank that provides Ecological Footprint accounting tools to drive informed sustainable policy decisions, *Earth Overshoot Day* falls on August 8th this year. Which means that less than three months after the opening of the 2016 Venice Biennale, we have used as much from nature as our planet can renew in the same whole year. For the remaining days we will increase our ecological deficit by consuming local resource stocks and accumulating carbon dioxide in the atmosphere. This is caused by the existence of what we call *urbansphere*, the global apparatus of contemporary urbanity, a dense network of informational, material and energetic infrastructures that sustain our increasingly demanding metabolism by offsetting the fluctuations and deficiencies of the natural biosphere in providing us with our required levels of resources in the right place at the right time. The Solana Open Aviary project proposes a reframing of the local artificial systems of production (Urbansphere) by suggesting novel terms for their sustainable co-evolution with the natural ones (Biosphere). *ecoLogicStudio* has developed a bio-digital design workflow for this project, which acts as an operative tool to conceive and design augmented territories. These are populated by eco-systemic architectures in which human inhabitation is understood as a co-evolutionary force of natural ecosystems.

Local Strategy: A Regional Proto-Garden

Solana Open Aviary deals with the redevelopment of the saline in Ulcinj. Responding to the specificities of the brief, *ecoLogicStudio* started by uncovering, measuring and evaluating the latent potentials in the Bojana-Buna Delta region, which includes the area occupied by the saline. We propose a method and related workflow to productively develop a series of bio-digital pilot projects, capable of a catalytic action at multiple scales. After the initial phase of analysis, we focused on to the generation of an urban co-action plan or regional

proto-garden. The region is framed through managerial zones of different resolutions: molecular (focusing on bacterial presence in the Salina's salt crust and operating at the scale of microns), architectural (with a resolution of one meter), local ecology (on the scale of the dam), and the global ecology (with a resolution of one kilometer).

Local Pilot Project: The Open Aviary

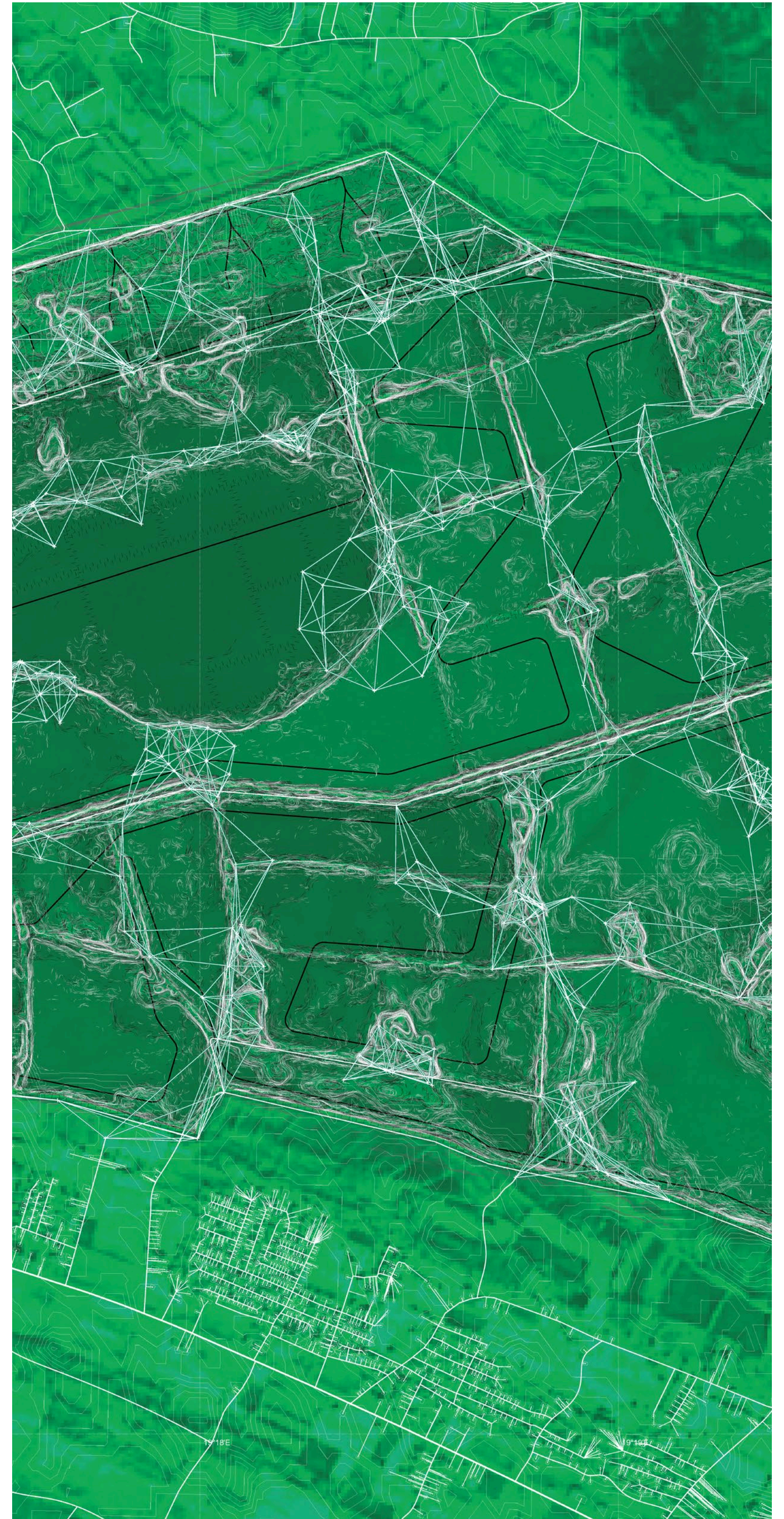
From our analysis and site visit we realized that a social disconnection between urban development and the understanding of the local landscape is taking place, with evident negative repercussions in both realms. As a consequence, the design has developed a catalogue of proto-gardens called *Open Aviaries*, pilot projects devoted to stimulate reconnection and intensify co-action between socio-economic groups and their immediate surrounding landscape. An Open Aviary is quite literally an aviary without a net, where birds and humans explore close interaction without being forcefully enclosed in a confined envelope. It is made possible by digital bird tracking technologies, hi-resolution satellite earth monitoring and robotically driven land sculpting. In our proposal the integrated design of digital technologies and landscape ecology confer to the word "open" multiple meanings in the physical and virtual realms, as in "open" source ornithological database, "open" networks of migratory sites and "open" systems habitat. This is the key design concept for the project to promote the emergence of a new concept of natural reserve: a boundless, open and networked man-made ecosystem. The project Solana Open Aviary proposes to redevelop the artificial territory formerly occupied by the salt production plant near Ulcinj into what would be the world's first Open Aviary, an augmented ornithological park where to study, experience and affect the co-evolution of humans and birds.

Intra-disciplinary design

The project embraces the implications of its concept at all scales, from the intercontinental to the molecular. The tree main levels are: The *Inter-Continental*. This is a bio-political simulation at the inter-continental scale describing how habitats scattered in many different countries and regions are in fact part of a single project when it comes to preserving the global bird's population and their complex migrating behaviors. The *Regional*. Through the eye of Sentinellaz, ESA's new hires earth monitoring satellite, the open aviary embodies a detailed scanning of biochemical processes on the ground and water as we have never seen before, revealing a landscape that is inextricably the product of the interaction of human agency and technology with local biological life. The *Material*. This is a robotically fabricated artificial landscape that envisions a new life for the saline and its infrastructure in the bio-digital age. Using local material, such as the unique black clay mud and the salt crystals, an open process of natural mineral accretion is accelerated and articulated to evolve into a highly differentiated landscape, capable of attracting a wider variety of bird species than currently present in the region and accommodate multiple architectural programs, from research to leisure, sports and healthcare.

To articulate these levels of the project *ecoLogicStudio* has teamed up with the *Lab Urban Morphogenesis* of UCL (University College London) and the ESA (European Space Agency) research group based in Rome. The work of the Urban Morphogenesis Lab consisted in interfacing with ESA to define a workflow that enabled us to design with near real time data from their new Sentinellaz Satellite. ESA has provided the Lab with a set of virtual machines on which Rhino Grasshopper and Processing software have been installed. Thus, we are able to use data from the satellite with a resolution of 10 meters directly into our design simulation and digital plans. Real time feedback between remote sensing and onsite manipulation of the landscape determine the morphogenesis of the Solana Open Aviary, which is shaped by the dialogue between natural and artificial, local and global ecologies.

Open Aviary:
infrastructural landscape





DIJANA VUČINIĆ

COMMISSIONER

Dijana Vucinic is the Head of the Department for Development Projects in Urbanism and Architecture at the Ministry of Sustainable Development and Tourism where she manages a young and enthusiastic team working on portfolio that includes projects from architectural competitions to development on cultural heritage and other emerging projects in architecture and urbanism. She is a commissioner for Project Solana – Montenegro pavilion at 15th International Architecture Exhibition – la Biennale di Venezia. Vučinić is a practicing architect, founder of an interdisciplinary architectural practice DVARP, with projects that range from urban design to hotels, residential buildings and theater stage design and research. Her work is based on research of urban condition in the developing touristic areas on Montenegrin coast and in the mountains. She is also the founder of Kotor APSS Architectural Prison Summer School in Kotor, Montenegro. KotorAPSS has been investigating mechanisms that could redefine



the relationship between architecture and the city in Montenegrin coastal cities and improve urban setting by redefining the approach to urban planning and design. KotorAPSS is imagined as a platform for education and further research and development of urban structure in these cities and it has been gathering architects and students from all over the world. For her work she has received several awards. Vučinić is also one of the curators of the exhibition “Treasures in Disguise”- Montenegro Pavilion at La Biennale di Venezia 2014 that has been recognized as very successful in Venice and has initiated development of abandoned structures in Montenegrin cities. She teaches at the University of Donja Gorica and has been a guest lecturer at several other Universities and symposiums in Montenegro and abroad. She has been involved in many research projects for Ministry of Culture and Ministry of Sustainable Development and Tourism in Government of Montenegro.

Curator: Bart Lootsma, Innsbruck / Bart Lootsma (*1957, Amsterdam) is a historian, theoretician, critic and curator in the fields of architecture, design and the visual arts. He is a Professor for Architectural Theory and Head of the Institute for Architectural Theory, History and Heritage Preservation at the University of Innsbruck. He was Guest Professor for Architecture, European Urbanity and Globalization at the University of Luxembourg; at the Academy of Visual Arts in Vienna; at the Akademie der Bildenden Künste in Nürnberg; at the University of Applied Arts in Vienna; at the Berlage Institute in Rotterdam and Head of Scientific Research at the ETH Zurich, Studio Basel. He was Head of the Department of 3D-Design at the Academy of Arts in Amheim. Bart Lootsma was guest curator of Archilab 2004 in Orléans. He was an editor of ao. Forum, de Architect, ARCHIS, ARCH+, l'Architecture d'Aujourd'hui, Daidalos, DOMUS and GAM. Bart Lootsma published numerous articles in magazines and books. Together with Dick Rijken he published the book 'Media and Architecture'. His book 'SuperDutch' was published by Thames & Hudson, Princeton Architectural Press, DVA and SUN in the year 2000; 'Archilab 2004 The Naked City' by HYX in Orléans in 2004 and 'Reality Bytes' will be published by Birkhäuser in 2016. Bart Lootsma is member of the committee for the IBA Vienna 2020. He was a member of several governmental, semi-governmental and municipal committees in different countries and he was Crown Member of the Dutch Culture Council. www.architecturaltheory.eu

BART LOOTSMA

CURATOR



CO-CURATOR

KATHARINA WEINBERGER

Co-Curator: Katharina Weinberger, Innsbruck-Linz / Katharina Weinberger is a historian, curator and teacher in the fields of art, architecture and urbanism. She studied art history at the University of Innsbruck and worked at the „Kunsthalle Tirol“, aut (architektur und tirol) and the „Forum Hall“. In 2001 she curated the anniversary exhibition on the occasion of the 100th Birthday of Herbert Ploberger (Stadtmuseum Linz and the Museum für Siegel und Stempel Wels). From 2002 – 2006 she was research assistant at the Department for Digital Preservation of the University Library Innsbruck and from 2004-2006 project manager of the EU funded project reUSE. From 2003-2005 she was exhibition manager for the travelling architecture exhibition ‘austria west’ from ARCHICULTUR.EU. Since 2004 she is the curator of the art collection of the Tiroler Sparkasse bank as well as consultant in cultural matters, architecture and marketing. Since 2006 she is speaker of the Institute for Architectural Theory and History at the University of Innsbruck, where she also teaches courses. Together with Bart Lootsma she built up ARCHITECTURALTHEORY.EU and in 2008 they curated the project ‘Linz Status Quo’ for the Cultural Capital Linz ‘09. Since 2013 she is research assistant at Sustainable Architecture + Future Tactics (Prof. Matthias Böttger) and Vice Chairperson of the Senate at the University of Art and Design Linz. www.architecturaltheory.eu

ROBERT SCHÄFER

Robert Schäfer, 61, is one of the greatest international experts in the field of landscape architecture. He studied landscape planning at the TU Berlin and journalism and communication at the University of Stuttgart-Hohenheim. He was Editor in Chief of Garten + Landschaft, a monthly magazine on landscape architecture, urban design and related issues for 30 years. He was founder and editor in chief

of Topos, the most important international magazine on landscape architecture, for 22 years. Since 2016, Robert Schäfer works as a freelance writer, lecturer and consultant in the field of landscape architecture, urban planning and architecture.



ANDREJ NIKOLAIDIS

Andrej Nikolaidis grew up in a Montenegrin-Greek family in Sarajevo. He lives in Ulcinj, Montenegro. Nikolaidis is known for his hard-hitting writing style. He is considered an influential post-Yugoslav intellectual. Nikolaidis published several novels, translated to 13 European languages. For the novel “The Son”, he received the 2011 European Union Prize for Literature. An ardent supporter of Montenegrin in-

dependence, anti-war activist and promoter of human rights, especially minority rights, Nikolaidis initially became known for his political views and public feuds, appearing on local television and in newspapers with his razor-sharp political commentaries. He is a columnist at Delo (Ljubljana) and E-novine (Belgrade), Al Jazeera and has recently written a number of articles for The Guardian.

LAAC ARCHITECTS

Innsbruck



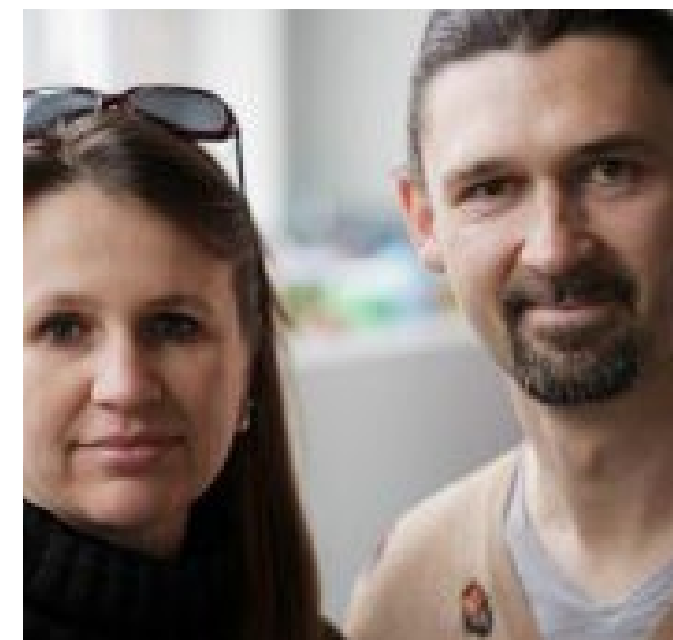
Exhibitors: LAAC, Innsbruck / 2009 Founding the architectural office LAAC, synonym for landscape, architecture and cities by Kathrin Aste and Frank Ludin. LAAC develops contemporary architectural solutions for urban and landscape challenge. LAAC tries to be an interface for implementation, teaching and research besides doing projects of architectural practice. The ideological goal of LAAC is it to overcome the growing gap between architectural practice, research and theory, in order to strengthen the importance of discipline in society again. www.laac.eu

ECOLOGICSTUDIO

London

Exhibitors: ecoLogicStudio, London / ecoLogicStudio is an architectural and urban design studio co-founded in London by Claudia Pasquero and Marco Poletto. In the past few years the studio has built up an international reputation for its innovative work on ‘systemic’ design; ecoLogicStudio’s method is defined by the combination and integration of systemic thinking, bio and socio-logic research, parametric design and prototyping. Completed projects include a public library, private villas, large facades and eco-roofs; ecoLogic has

developed prototypes and installations for the most important Architectural Biennales, including Venice in 2008 and 2010, Seville, Istanbul and Milan Fuorisalone. ecoLogicStudio runs international workshops and cultural activities and is involved in academic research. The work of ecoLogicStudio has featured in many international architectural books and magazines. The core innovation of the studio has been published in 2012 by Routledge in a book titled “Systemic Architecture”. www.ecologicstudio.com



MARKO STJEPČEVIĆ

THE TRIGGER 50/50

NEMANJA MILIĆEVIĆ

Marko Stjepčević (1983 / Podgorica), graduated in 2009 at the Faculty of Architecture/UCG. Stjepčević is a lecturer in the module: Space, “Politehnica”-UDG. He is the author of many award-winning projects. Notable are: First prize—Competition for reconstruction of the Municipality of Herceg Novi (2006-building constructed); First prize—Competition for arranging Hill Šipčanić(2007); Second prize—Competition for the “European House of Chess”/Meljine (2010). Second prize—Contest for the commercial-residential complex “Luković barracks”/Tivat(2011); Third prize—Competition for the hotel complex “Delfin”/Herceg Novi,(2015); Second prize—Competition for “House of Revolution”/Nikšić(2016). At the Summer School of Architecture “Kotor APSS” (2013) he was one of the mentors. Same year, Stjepčević wins First prize at the First Montenegrin Salon of Architecture, for the interior design of the Primary Court in Podgorica(co-author).

Podgorica



Nemanja Milićević (1993 / Podgorica) completed BSc studies in 2015, Faculty of Architecture/UCG. He has participated in: Summer School of Architecture “APSS 2012”, a year later, he became a member of the organizing team; in the organization of “BAFF”(Boka Architecture & Film Festival 2014)/Kotor where prospective architects and artists in the field of audio-visual mediums had the opportunity to present their works; in the “PAF” -u (Podgorica Art Festival-2015) as the head of the artistic and architectural settings. He worked on various projects that include participation in the design of residential and commercial objects, interior and reconstruction projects. Currently is a student of post-graduate studies at AF/Podgorica where, for his final paper, is doing research on the topic of abandoned facilities and possibilities for their sustainable conversion.



Exhibitors: LOLA, Rotterdam / Eric-Jan Pleijster, Cees van der Veen and Peter Veenstra graduated from Wageningen University as Landscape Architects in 2003 and 2005 (Veenstra). In 2006 they collectively started the office LOLA landscape Architects in Rotterdam, which strives progressive landscape architecture. With spot-on ideas and actions based on a combination of research and design, LOLA (LOst Landscapes) wants to bring new life to forgotten, worn-out and changing landscapes. In doing so, LOLA has an optimistic and conceptual approach, as well as a fascination for new spatial phenomena. LOLA works for governments, provinces, municipalities and project developers. The office won multiple design competitions and awards, amongst them European Portugal, the EO Wijers competition and the Delta Water Award. www.lolaweb.nl

LOLA ARCHITECTS

Rotterdam

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every day from 10AM to 5PM except on Mondays**

The Montenegro Pavilion can easily be reached by vaporetto, with either line 1 (stop: Campo San Samuele) or line 2 (stops: Campo San Samuele and Accademia).

It's approximately 15 minutes away from the Giardini with the express vaporetto line 2.
Montenegro Pavilion, Palazzo Malipiero, San Marco 3079



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