

Climate crisis, art, and landscape. Case study: El Pescado stream basin, Argentina

Crisis climática, arte y paisaje. Caso: cuenca del arroyo El Pescado, Argentina

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Abstract

The link between art and nature is central to building resilience in the context of the climate crisis. Within the Research Project: "Vacant land, water risk, and landscape. Recent urbanization process in the southeast of the Greater La Plata and strategies for urban growth planning from watersheds", different artistic actions have been developed to reveal the interactions between nature and urbanization that have been occurring in a new urban periphery of the city of La Plata (Argentina). The objective of this study is to expose the works developed to promote the person-nature experience, in which the scale is human and there is a connection with the environment.

Keywords: art; landscape; resilience; climate crisis; environmental governance.

Resumen

El vínculo entre arte y naturaleza es central para construir resiliencia en el marco de la crisis climática. Dentro del Proyecto de Investigación: "Suelo vacante, riesgo hídrico y paisaje. Proceso de urbanización reciente en el sudeste del Gran La Plata y estrategias para la planificación del crecimiento urbano desde las cuencas hidrográficas" se desarrollaron distintas acciones artísticas, con el fin de visibilizar las interacciones entre naturaleza y urbanización que se dan en una nueva periferia urbana de la ciudad de La Plata (Argentina). El objetivo de este trabajo es exponer las obras desarrolladas para fomentar la experiencia persona-naturaleza, en las que la escala es la humana y la conexión con el medio es parte de ellas.

Palabras clave: arte; paisaje; resiliencia; crisis climática; gobernanza ambiental.



Introduction

The scientific call for larger-scale efforts to conserve the biosphere in the late 2010s replaced the concept of climate change with that of climate crisis (Ripple et al., 2020). In 2019, eleven thousand scientists signed a manifesto, based on clear evidence that Planet Earth is facing a climate emergency. It is necessary to maximize efforts and engage all segments of society to find ways to raise public awareness about the fragility of the planet, strengthening environmental governance as a response to halting the commodification of nature.

In one of its definitions, environmental governance can be understood as a phenomenon in which local communities assign meaning to the environment that surrounds them, manage actions to mitigate human impact, and coordinate with other institutions – government, non-governmental organisations, etc. (Molina, 2013) – in pursuit of this. This type of governance emphasises the local sphere, because of its ability to create a social fabric in symbiosis with the environment that promotes the participatory management of the commons and its territory (Montoya Domínguez and Rojas Roble, 2016).

In turn, the concept of resilience, which has emerged more recently in the urban debate, is the counterpart of vulnerability, i.e. the capacity to cope with extraordinary events that affect the development of life and the normal functioning of cities.

Community resilience refers to the set of survival strategies and forms of organization that communities adopt when faced with a given event in order to adapt and continue with life (Arciniega, 2013). It is a process that involves, on the part of expert knowledge, the identification of the different social actors; the degree of vulnerability to which they are exposed to climatic events; the recovery times and capacities of each group; the support actions developed by the State; and the learning achieved both by the community and by local management to address this type of event.

Resilience is thus understood as a dynamic process, where the influences of the environment and the individual interact in a reciprocal relationship, allowing the person to adapt despite adversity. The perspective that guides this model understands that the individual is immersed in an ecology determined by different levels that interact with each other, exerting a direct influence on their human development. The levels that make up the ecological framework are the individual, the family and the community, linked to social services. Social resilience is therefore a process shaped by experiences of disasters and their aftermath, and expectations of improvement and well-being with positive implications for the social, cultural, political, economic and technological aspects of societies. It is a process in which there are also exchanges of elements that make communities stronger or weaker, more vulnerable or resilient, in a context of repeated conflict (Montero Rodríguez, 2020).

We believe that in this process of recovery from adverse events – which are becoming increasingly frequent – the state must assume the role of a ‘estimulador de soluciones creativas que emanen desde abajo hacia arriba y resulten, por lo tanto, más congruentes con las aspiraciones reales de las personas’ (Max-Neef, Elizalde and Hopenhayn, 2010, p. 12) [stimulator of creative solutions that emanate from the bottom up and are therefore more congruent with the real aspirations of the people]. Following this line of thought, we understand that a landscape project can be the appropriate unifier to generate “the articulation of political democracy with social participation” [la articulación de la democracia política con la participación social] (Max-Neef, Elizalde and Hopenhayn, 2010 p. 13) which is necessary to overcome any given crisis, since “los paisajes, con la presencia simultánea de presente y pasado, están impregnados de recorridos de dolor, de la memoria de lo ocurrido” (Venturi Ferriolo, 2008, p. 135) [landscapes, with the simultaneous presence of present and past, are impregnated with paths of pain, with the memory of what has happened] (ibid.).

At the end of the 20th century, landscape was integrated into land-use planning as a concept capable of contributing to a more integrated and sensitive view of the territory, incorporating environmental and heritage dimensions as well as the perception of the population. The recognition of the landscape emerges as a right, which is expressed in the revaluation of local identities together with the enhancement of cultural heritage as an element of social cohesion (Rotger, 2021).

Along with the consolidation of the idea of landscape as an attribute present throughout the territory, there is a need to value everyday landscapes, landscapes that require new

interpretation tools that are able to reveal attributes that are not visible to the naked eye. In this sense, the survey of social perception is positioned as a useful tool for accessing the values of landscapes with little social recognition (Rotger, 2020).

The concept of landscape, from its origins, juxtaposes science with art. Landscape as art aims to appreciate the forms of expression of nature, and from the contemplation of its manifestations, it allows for the aesthetic experience to be lived and enjoyed (Milani, 2008). This emotional practice arising from the communicative process with the environment also involves territorial practices that must be managed (Minca, 2008).

For this reason, works of art inspired by a given landscape seek to be interpreted by those of us who, from the scientific sphere, are called upon to analyse the landscape. Understanding that the artist and their totalising gaze “(...) absorbe en sí plenamente la materia natural dada y la crea de nuevo a partir de sí (...)” (Simmel in Nel-Lo 2007, p.187) [(...) fully absorbs the given natural material and creates it anew from itself (...)] (ibid.).

However, in this case the exercise was different; the research team we belong to set out to make use of the communicative capacities and the awareness that artistic expressions can awaken in order to socialize the results of the academic work carried out, by considering these strategies, we recognize that they can have a greater power to raise awareness among citizens than the usual means through which the dissemination of ongoing scientific studies is carried out.

Thus, to raise awareness about the importance of conserving the landscape attributes of the study area, in the face of an intense and recent process of urban expansion

in areas of environmental fragility, we produced videos, collages and a short film, in which the protagonists are human and non-human inhabitants of the El Pescado stream basin, which encompasses the districts of La Plata, Berisso and Magdalena (Province of Buenos Aires).

It is worth noting that, within the La Plata district, this is the most extensive and least transformed stream basin. It also has natural and landscape heritage, recognised by provincial law as a water resource free of pollution, in which it is necessary to 'protect the integrity of the landscape within its area of influence, maintaining its current natural conditions' (Art. n. 2 – Law 12247).¹ These singularities justify the need to study it from a landscape perspective in order to enhance the value of its heritage, promote the generation of conservation projects associated with the use of public space, and question the sustainability of the urban expansion process (Rotger et al., 2020).

Regarding methodology, with a purely qualitative approach, different techniques were used to investigate local artistic expressions and social perceptions of the landscape, namely: participant observation in local festivals; field recognition itineraries of the environment and its non-human inhabitants; interviews and informal conversations with different community members (neighbours of the area, neighbourhood cultural references, school directors and teachers); and the development of school activities planned in coordination with the teaching staff of primary school n. 9 which included a didactic sequence of work in which students drew, photographed, and wrote descriptions of their neighbourhood landscapes.

The results of these participatory instances were integrated into the artistic products constructed by the research team.

Both in the static and dynamic expressions carried out, flora, fauna and the watercourse became protagonists. These elements of nature intertwine constantly with human life, but are often invisible in the course of daily life. Aware of this, and with the aim of highlighting assessing the relationships that occur in the environment, two central actions were carried out: first, walks along the banks of the watercourse and the flood plain led by the regional naturalist Julio Milat, where in addition to the species that inhabit the wetland – an activity that we could call consubstantiality with the environment – took place; and second, audiovisual products in which the previously invisible nature took center stage.

Water territories: valuing and communicating

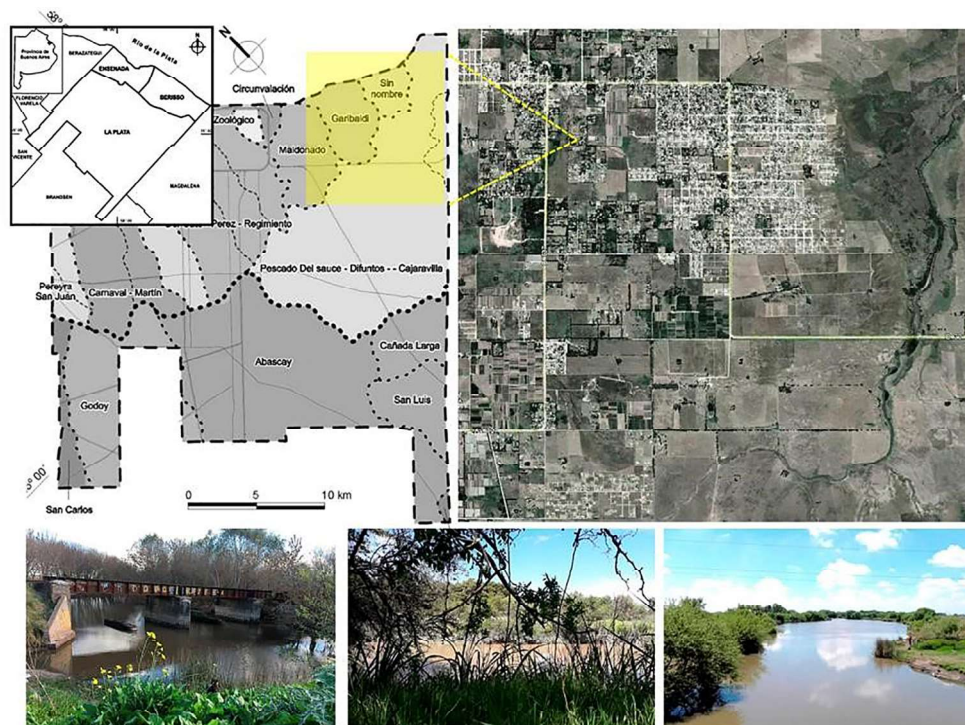
The landscape is a common means in the sense that multiple forces are deployed in it, forces that give rise to and transform the forms of the territory. (Besse, 2021)

The south-eastern sector of Greater La Plata (Figure 1) has undergone profound transformations over the last two decades as a result of a rapid process of urban expansion, driven by the dynamism of the construction industry and state policies on access to housing, accompanied by new ways of creating urban land (Rotger and Sanz Ressel, 2020).

This residential growth has taken place in environmentally fragile areas: watersheds with little degree of modification, and outstanding elements of ecological and landscape value. This not only leads to the deterioration of the sector's natural and cultural heritage, but also modifies surface runoff conditions, increasing the impermeability of the soil, which often ends up causing flooding, especially in developments located in wetlands (Rotger, Dominella, Martínez Damonte, 2022).

One of the expansion areas, the neighbourhood known as Parque Sicardi-Villa Garibaldi, is located on the basin of the El Pescado stream, which, as mentioned above, has a rich natural and scenic heritage recognised by law, and is also a scarcely polluted watercourse. The neighbourhood is located just over 11 km southeast of the city centre of La Plata. It was born at the end of the 19th century, as a subdivision for Italian immigrants, and was not heavily occupied until the 1970s, when weekend

Figure 1 – Southeast sector of the La Plata district and El Pescado stream basin



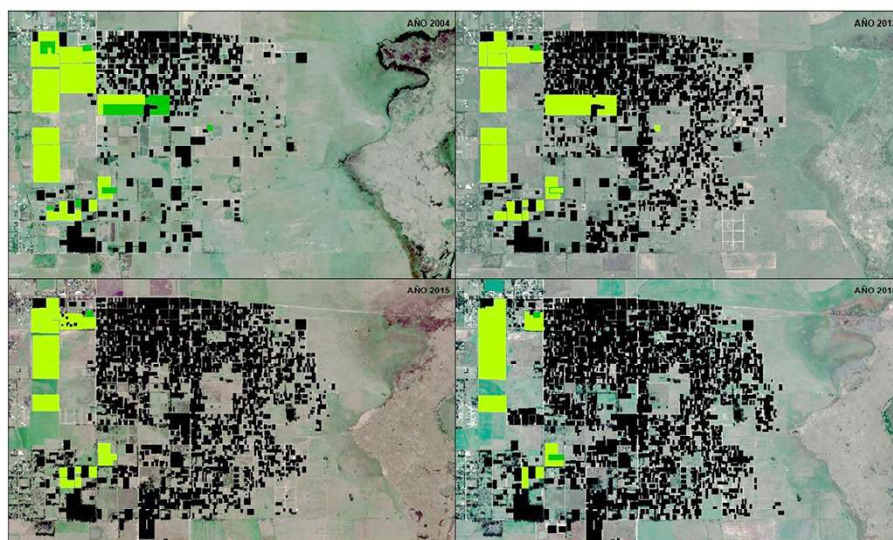
Source: own elaboration based on Hurtado et al. 2006 map and satellite image. Own photographs.

homes began to be built. In the last two decades, it has been one of the fastest growing neighbourhoods in the city, going from being a weekend housing area to a sector dominated by permanent residences. According to our own data, based on photo-interpretation and fieldwork, in 2003 the sector was dominated by vacant plots, weekend homes, and open-air and indoor horticulture. At present, the urban area has been widely extended and is mostly permanent residences, accompanied by commercial developments and gated and semi-gated communities. The distribution of land use back in 2003 indicated 40% of open agricultural activity, 6% of covered agricultural activity, and 54% corresponding to the urban area. By 2018, the distribution of land use indicated 12%

open-air agricultural activity, 0.4% covered, and 87.6% corresponding to urban sprawl (Rotger and Sanz Ressel, 2020) (Figure 2).

The encounter between a landscape of rural characteristics, with a barely modified watercourse that runs in the open air, and the new ways of inhabiting this territory, generates diverse perspectives and claims on the inhabited space in which nature occupies a central role in the discourse of the inhabitants (Rotger et al., 2021). These characteristics make it especially necessary to study the El Pescado stream basin from a landscape perspective, in order to value its heritage and promote the generation of conservation projects associated with the use of public space, which can contribute to the sustainability of the urban expansion

Figure 2 – Evolution of urban sprawl and agricultural activity in Parque Sicardi-Villa Garibaldi



Source: Rotger y Sanz Ressel (2020).

process (Rotger et al., 2020), taking into account that La Plata is a city where flooding due to overflowing storm drains occurs periodically. This situation repeats frequently in both central and peripheral areas, being a constant that dates back to the founding times. In fact, since meteorological records have been kept, 36 rainfalls of more than 100 mm have been recorded (Facultad de Ciencias Astronómicas y Geofísicas, 2017).

Landscape, as a fact that hybridises nature and culture, makes it possible to approach the territory from a comprehensive perspective, which is especially necessary in watercourses threatened by urbanisation, such as El Pescado stream. Some of the benefits of adopting a landscape approach for the El Pescado stream basin include: enabling a quick visualisation of nature-society conflicts within the basin; raising awareness about the only stream in the province with protected landscape status; promoting the collection of the necessary information for the elaboration of a management plan – which does not exist yet –; assisting in the classification of animal and plant species that inhabit the area in order to preserve them; helping identify the anthropic actions that threaten the preservation of its landscape conditions, and regulating them; promoting the basin as a management unit and suggesting concrete actions that gradually transform potentially degrading activities into options that are more in harmony with the environment; recognizing the concerns and values that local residents of the basin attach to their daily landscape; and, finally, setting a precedent for the creation of an environmental observatory in the stream basin.

The history of landscape is the history of visions (Aliata and Silvestri, 1994), which is why any process of landscape enhancement must be participatory: The concept of landscape can capture how people perceive and interact with the world around them (Zusman, 2008). In turn, landscape is a necessary condition for the reformulation of a political ecology (Besse, 2018). In matters of water and the city, it is necessary to make the invisible visible. The consequences of the invisibilization of water resources on the quality of urban life and sustainability can be very serious (Perlo Cohen in Castro Reguera, 2022).

From art, we seek to account for the diversity of views on landscape, and also to distance ourselves from anthropocentric logic, since, as Besse (2021) points out, landscape is a living environment crossed by many beings other than humans, and all these beings contribute to its conformation/manufacture. According to this author, landscape is essentially an assemblage of forms animated internally by forces of which those forms are both mobile and transitory expressions, forces and forms of all kinds, human and non-human.

The researcher Alain Roger (2007), in his work “Brief Treatise on Landscape”, identifies two modalities in the artistic operation, which, according to him, are two forms of intervention. These are: *insitu* and *invisu*. The first refers to direct action on a place, while the second, with an indirect intervention, which the author considers to be “the gaze”.

The function of art, then, becomes that of mediating and making something visible; intervening from both the object and the subject. That is to say, it attributes great value to the role

of art and specifically, to the gaze of the observer as the constructor, both to make it visible and to mediate its attributes. The image was never impartial and from its origins, it became part of the everyday life of human beings. Over time, its value as a mode and means of expression has increased, while an important role as an instrument for making environmental and social events visible has emerged and asserted itself. The capacity to reproduce external reality gives it a documentary character which, approached from multiple perspectives – whether anthropological, sociological, ecological or aesthetic – allows it to communicate both the visual and lived experience. The very act of recording events transforms them into significant occurrences which acquire value when they are shown.

The visual and audiovisual image (hereinafter vi and audiovisual) then becomes a tool for expressing, informing, denouncing, questioning, evidencing, moving, linking, integrating. It becomes a path for personal and social transformation. Generating mechanisms that nurture collective memory as a builder of resilience represents therefore a key issue to be resolved in order to generate adaptations that are sustained and able to evolve over time.

Just as certain social groups build their habitat by making risks invisible, social agreements are also generated about what is forgotten and what is remembered about a catastrophe. The concept of memo-landscape (Báez Ullberg, 2017) refers to the set of memories and oblivions shared by a social group at a given time and place: ‘El memo-paisaje se construye en un proceso social que transcurre en ámbitos públicos y privados

mediante diferentes prácticas, por ejemplo, en los rituales y monumentos públicos, a través de las historias escritas o en imágenes y en paisajes y lugares’ (Báez Ullberg, 2017) [The memo-landscape is constructed in a social process that takes place in public and private spheres through different practices, for example, in public rituals and monuments, through written stories or in images and landscapes and places] (Báez Ullberg, 2017). Collective memory, as Hallbwachs (2001) puts it, “ensures the identity, nature and value of the group it encompasses; in this case, the whole community”. It is constructed in the current frame of reference, based on the reconstruction of a shared and sharable narrative which, although it constitutes the sum of fragmentary visions of reality, is neither arbitrary nor totally subjective.

The construction of this shared subjectivity requires the necessary representations. The image thus plays a relevant social role as a record, production, reproduction and recreation of facts, in the face of what needs to be remembered in order to act. Art makes expression possible. The image makes visibility possible.

Walking the water

Walking requires neither learning, nor technique, nor material, nor money. It only requires a body, space and time. (Gros, 2014)

Jean-MarcBesse (2021) warned us that ‘Los seres humanos debemos aprender de nuevo a escuchar lo que cuentan los animales’ [Human

beings must relearn to listen to what animals have to say] Jean-Marc Besse (2021). Educating the gaze is fundamental to recognize the values of the everyday landscape and in this way we can achieve a collective ethic (Nogué, 2021).

Frequently invisible, non-human living beings play a very important role in shaping the landscape. Not only do humans shape the environment we inhabit, but each species, in one way or another, leaves its mark on space, with great differences, of course. Most humans pollute, deteriorate and permanently threaten ecosystemic harmony, and consequently transform landscapes full of life into desolate territories. This situation is more than recurrent in the framework of the anthropocentric

conception that relegates nature to being considered as an inexhaustible basket of resources, and puts human beings in a position of superiority over other species; understanding humans as the only ones with the capacity to grant values and be subjects of rights, while the rest of life forms (plants or animals) were considered objects of value (Gudynas, 2015).

In order to deepen knowledge of the environment together with the community, guided walks were carried out (Figures 3 and 4) by members of the project and by the renowned naturalist Julio Milat, proposing activities of nature interpretation and bird watching, in which the premise was the consubstantiality with the environment along the main course

Figure 3 – Flyers to promote walks along the stream



Source: own elaboration through Canva.

of El Pescado stream, both in the districts of La Plata and Berisso (two of the three districts that take up the stream basin).

According to Gros (2014), the march gives a glimpse of a dream: to walk as an expression of rejection of a polluting and alienated civilisation. Walking the stream allowed us to get to know and be aware of the dynamics of nature that transcend and cross human existence in order to learn to coexist with them; but also walking, participating in the landscape, merging with the sounds, aromas, and images makes it possible to imagine a better future between people and nature. In this context, the vi and audiovisual image establishes a direct relationship with collective memory and resilience, linked to natural environments. It then appears as a builder of social memory, where the production of both the inhabitant and the researcher mediates between people and nature, thus generating resilience through the vi and audiovisual narrative, in a resignification of contents.

The act of walking, although it does not constitute a physical construction of a space, implies a transformation of the place and its meanings. Only the physical

presence of man in an unmapped space, as well as the variation of perceptions he receives when he crosses it, already constitute forms of transformation of the landscape which, although they do not leave tangible signs, culturally modify the meaning of the space, and consequently, the space itself. (Careri, 2002, p. 51)

The walks around the stream were conceived as a first step towards situated collective artistic practices, taking into account that art can be a means that actively involves the community, using the real spaces where everyday life takes place,

collective artistic practices allow us to set in motion the possibility of transforming our own realities by collectively imagining other possible worlds and creating them together with others in a first fictional rehearsal of potential change. It is a first attempt to put the body into transformation, to put the imagination into action by meeting with others, and gradually begin to think and feel collectively as an active subject of transformation of their own realities, creating a possibility of change and generating a collective confidence in that possibility. (Bang, 2013, p. 6)

Figure 4 – Walks along El Pescado stream



Source: photographs of the PPID U010 project.

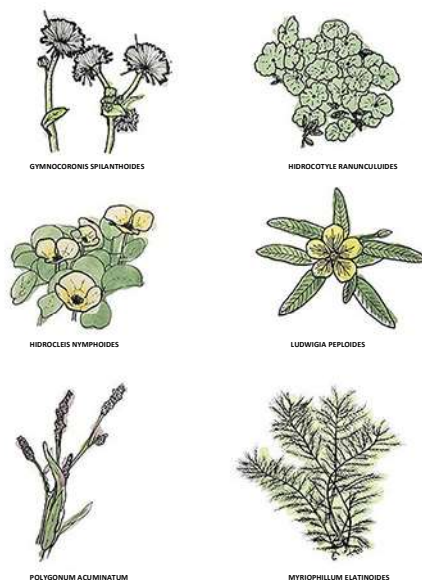
Amphibians as a collective identity

Few elements are as decisive and relevant in the configuration of landscapes and their representation in our collective imagination as water. This is due to a very simple and at the same time forceful reason: without water there is no life. (Nogué, 2009, p. 183)

In order to begin to change the way we look at the environment and stop understanding it solely from an economic perspective, we wanted to give prominence to some of the animal and plant species (Figures 5 and 6) characteristic of the study area. This work was carried out by architect Rosario Martínez Damonte, who produced the following illustrations.

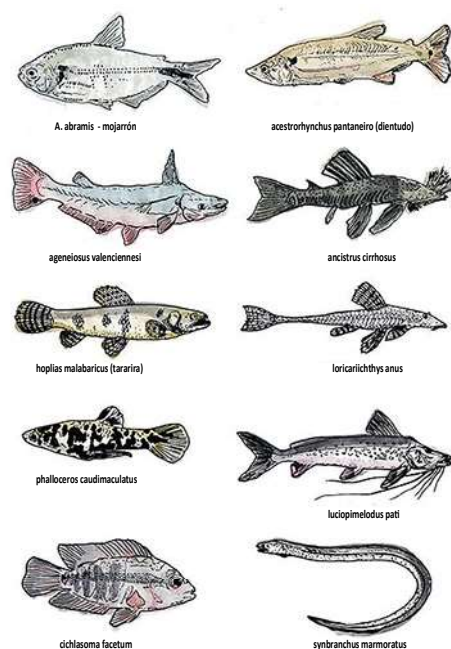
On the other hand, we were also interested in expressing graphically ‘the spirit of the place’ (*genius loci*), made up of those intangibles that the landscape holds as energies, stories or marks of history. The collages produced for this purpose by Architect Agostina Dominella (Figure 7) reflect the idea that each landscape is inhabited by living beings that express their materiality by making use of the space and configuring it according to their needs, but that at the same time it is also crossed and constituted by the successive lives that have developed in it, and that although they are not present today in a material form, they survive in the spirit of the place and give it meaning.

Figure 5 – Illustration of flora of El Pescado stream



Source: Arq. Rosario Martínez Damonte.

Figure 6 – Illustration of fauna of El Pescado stream



Source: Arq. Rosario Martínez Damonte.

Through the different artistic strategies deployed, we wanted to express the consubstantiation that exists between human beings and the environment. We inhabit landscapes and give them content; but landscapes also inhabit us and give us an identity (they construct our own identity). To capture the latter, Dominella produced collages showing

different people traversed by the landscapes of the study area (Figure 8). This idea arose from the talks in the research team in response to the need to show how human beings build our identity, on the basis of experiences that take place in a particular geographical area, which becomes the continent of expression of our life journeys.

Figure 7 – Collage



Source: Arq. Agostina Dominella.

Figure 8 – Collage



Source: Arq. Agostina Dominella.

The drawings and collages were incorporated into an audiovisual presentation called 'Habitantes. Historia de un paisaje anfibio en la periferia platense' [Inhabitants. History of an amphibious landscape in the outskirts of La Plata], presented at the Feria del Agua, [Water fair] (2021). The video, in addition to presenting the objectives of the research project we are carrying out, includes some definitions of landscape that guide our work and incorporates cartography, photographs of the landscapes of the study area and drawings made by children who live in the area.

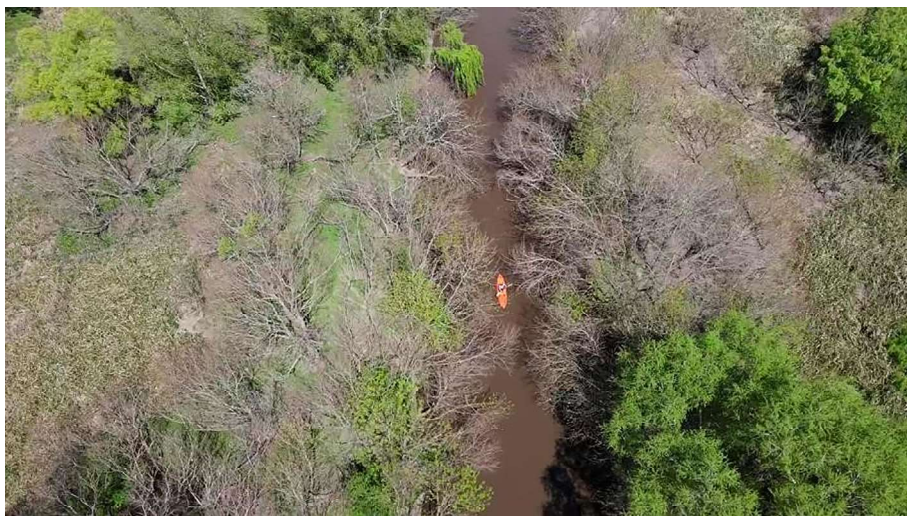
We understand landscape beyond the physical, wrongly associated with the built environment or the materiality of the surroundings. Landscape is movement, it is life and also a reliving of the memories of the place. According to the philosopher Zimmer (2008), landscape is not only nature, nor only culture, but the inseparable unity of nature and culture.

With the resonance of these ideas, we began the application to the call 'Humadales para mapear' [Wetlands to Map], being aware that we wanted to present a product that would allow us to communicate and make visible how human trajectories intersect with the flows of matter—which form the physical

bases of the landscape— and with the life trajectories of other species. This is how the short film 'Trayectorias Anfibias' [Amphibious paths] (Figures 9 and 10) was created by the project team together with the audiovisual arts graduate Camila Stornini. She was able to express the interests of the members of the research team in terms of creating an artistic product that could express the particular meaning of inhabiting the wetland of the El Pescado stream, by making the connections that exist between the trajectories of the different inhabitants (human and non-human) visible, as well as the traces they leave in the landscape, thus trying to raise awareness from the short film that:

For human societies, inhabiting the landscape consists of integrating oneself into that play of forces and forms, and in some way, to prolong them and become entangled in them, to become attached to the landscape or simply to be attentive to it, it is to act with those forces and those forms, (...) it is then a matter of involving one's own action in the set of dynamics that pre-exist us, that are underway; of inserting ourselves into that general fluidity and adjusting and accommodating ourselves to it precisely. (Besse, 2021)

Figures 9 & 10 – Images of “Trayectorias Anfibias”



Source: property of the authors.

Concluding thoughts

For decades, the formative potential of art and aesthetic experience has been studied as an essential contribution not only to personal but also to social development. Thus, as witnesses of their time and heirs to various schools of thought, several generations of essayists and researchers have been building – over and above their conceptual, political and aesthetic differences – a corpus in this field that challenges us to continue imagining and questioning ourselves in the face of the challenges that are emerging in our time (Errázuriz Larraín, 2016).

The understanding of landscape that began at the end of the 20th century, and whose relevant point is the definition formulated by the European Landscape Convention as: “An area, as perceived by the population, whose character is the result of the interaction of natural and/or human factors” (European Landscape Convention, 2000, p. 2), introduces two novel approaches to the analysis of the territory: on the one hand, the consideration that all territory is landscape, not only those sites that have an official designation or are places of tourist interest; and on the other hand, the inclusion of aspects hitherto excluded from the territorial diagnosis, such as intangible aspects (memories associated with the place, feelings, historical stories) and artistic manifestations.

Art is thus a means of valuing the landscape, a way of connecting sites and the artistic expressions associated with them, of charging them with new meanings, of

connecting places and events. But it is also a means to give visibility to the deepest layers of the landscape, those that are not perceived in a panoramic view and that require a process of ‘artialisation’ (Roger op. cit.) to reach the spectator and transform reality.

From the experiences developed in the project, we can conclude that situated art allowed us to approach social sectors that do not have a daily link with the academy: neighbours, schools, political decision-makers, all of them fundamental actors for the transformation of the territory.

Art proved to be a key tool to make the hidden visible, to make the intangible tangible, to give value to that which happens every day, which is degraded and even stigmatised, and to unite culture and nature in a story that recovers community identity. Through art it is possible to rethink the environment, to focus on the positive qualities of the landscape, to recreate landscapes from the imagination. Art allows us to imagine a better future, it offers us a prefiguration of an already transformed reality, and on the basis of this idea, we can join forces to make it materialise.

Art constructs meanings about the environment, guiding environmental governance processes that promote the protection and sustainable management of the commons. As Cyrulnik states, all art forms are a factor of resilience. Building one's own identity through art, and understanding landscape as the framework of everyday life, strengthens territorial governance and therefore contributes to generating community resilience.

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Note

(1) Law declaring the El Pescado Stream Basin as a Provincially Protected Landscape of Interest.

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