

Yaku Cosmo-Infrastructures
Designing with Water Across the Andes

by

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Submitted to the Department of Architecture in Partial Fulfillment of the Requirements
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ABSTRACT

Water in the Andes is a dual entity: matter and energy, terrestrial and celestial, substance, and Cosmos. This thesis is a provocation to reimagine water infrastructures across the Andes as a collaboration of ancestral and modern forms of relating with Water.

As an Andean descendant, my mother taught me that Water is a living being. A series of walks during the summer of 2023, visiting ancestral places, learning from Water nurturers, and participating in the water festival in the South of Peru allowed me to reconnect with my family knowledge. Marcela Machaca, a “Water Nurturer”, taught me that the Andean cosmology considers Yaku (Water in Quechua) to be a person. Yaku Mama (Mother Water) creates life in the Andes through a reciprocal nurturing relationship with the communities.

In contrast, modern epistemologies frame Water as a resource managed through infrastructures that extract, store, and distribute it across places. This approach disregards the Andean communities’ ancestral practices, disrupting the local ecological cycles. In the Quispillacta community, the duality of Water is evident, as they are both a resource managed by a dam and a living entity nurtured through ancestral practices. The incoming infrastructure planned by the government in Quispillacta raises an opportunity to embrace this duality by asking, how can we address the need for water access while also embracing the ancestral practices of living with Water?

An paradigmatic shift in water infrastructures is necessary. This thesis argues for an alternative way to represent, design, and live with Water in the Andes. It proposes Cosmo-infrastructures as a new architectural paradigm that embraces the collaboration of ancestral and modern ways of interacting with Water. By proposing the design of a seasonal learning path in Quispillacta, this thesis articulates stations that mediate, interchange, and regenerate Water in collaboration with the local ecology. This project invites us to think Water as a pluriverse, co-creating with other modes of relating to the world that challenge the canonic binary divisions between Water and land, architecture and landscape, and, most importantly, humans and nature.

Thesis Supervisor: Cristina Parreño
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Acknowledgements

This work is the result of an exploration to think with Water across different ways of relating to the world that wouldn't be possible without the support and guidance of many maestros, relatives, colleagues, and friends to whom I extend my deepest gratitude.

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Kevin Malca Vargas, MIT, May 2023

A mi Wawa y a mi Mamá, mis primeras Maestras del Agua

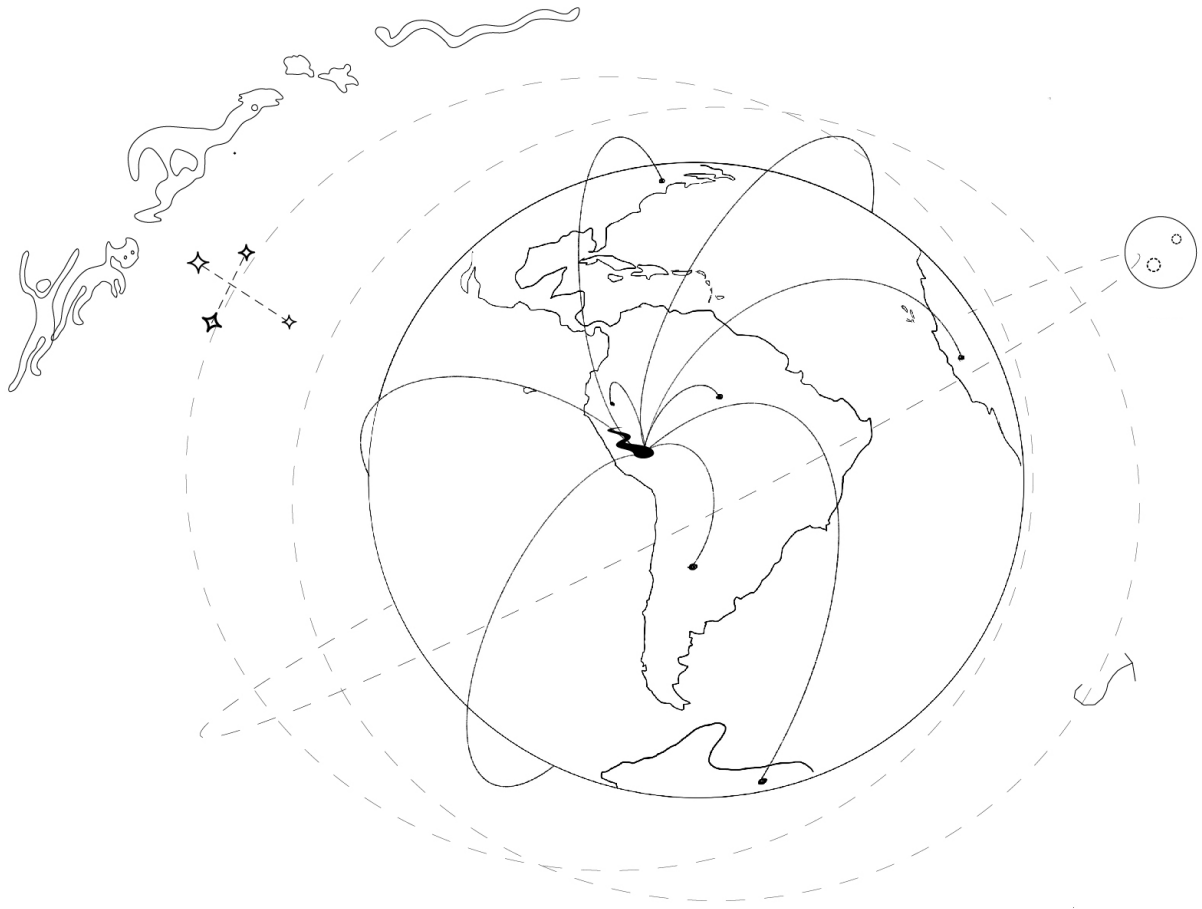


Figure 1 Water Pluriverse

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I

Water Dialectics

Knowledge without Space

1.1

My grandmother was originally from San Marcos, Ancash, Peru. Faria, or “Wawa” (meaning baby, in Quechua), as my family called her, was an Andean woman forced, like many others during the decade of 1970s, to migrate to Lima, the capital city. She had to invent a family economy, finding temporal jobs to sustain and educate her children and grandchildren. My Wawa raised her family in her house, including animals and plants. She dedicated her life to raising her family, including people that temporarily lived with her, treating them as family members. In Wawa’s house were chickens, guinea pigs, cats, dogs, Anteaters, and more. She used to invest every evening with her animals, looking them around. Wawa’s ability to nurture was something that we always remember.

Wawa’s nurturing experience goes beyond the notion of care. Nurturing was her wisdom. Before moving to Lima, she was a Curandera (healer) in her village. She had a deep knowledge of plants that she used to heal people. She healed many people, from common things like flu, fever, and stomach pain, to more complex conditions like severe infections that even doctors couldn’t address. To work and collaborate with plants, my grandma also learned to converse with celestial bodies. As my mother explained, “Wawa didn’t only heal by using plants; she healed people with the moon. Sometimes, she walked alone at night to the village’s water spring in the full moon. She said that plants, Water, and the moon are related, and there are specific moments to collaborate with them.

Wawa knew how to converse with other beings in the landscape as she did with people. That is the respect for nature she transmitted to my mom and my family. Something that I didn't deeply understand. Through a long journey visiting the south of Peru, I learned that my grandmother's nurturing and healing skills are not just practical knowledge about plants. Wawa was a Yachaq (meaning Wise person in Qechua). A Yachaq has deep knowledge about nurturing people, animals, and plants. During my visit to Quispillacta, in Peru, Marcela Machaca, an experienced Water nurturer, explained to me that in the Andean cosmology, being Yachaq is an ability that few people have, they born with it, and it relies on their capacity to nurture, to conversate with other beings. Wawa's ability to conversate with nature allowed her to learn from non-human beings based on a respectful subject-to-subject relation where humans and non-humans operate as equals, part of the same Ayllu (meaning community as the ecology of beings in Qechua).

Andean cosmology is transferred through conversation, practices, and oral stories. I use the word cosmology as Ahmed Ansari "to denote that what we are talking about are large constellations of ontologies that structure how human communities make sense of the cosmos they exist in"¹. The Andean landscape is the result of the active practice of his cosmology, a holistic collaboration that involves humans and non-humans all part of the same Ayllu (meaning community in Qechua).

However, the colonization process, established after the Spanish invasion, imposed a Western epistemology based on a techno-scientific approach. As Jose Canziani points out, “The imposition of colonial rule in the 16th century implied the rupture of the indigenous social order and the structuring of foreign logic.”² Different media and institutions have imposed modern knowledge in Peru that punished the reproduction or transfer of other epistemologies. As a result, many ancestral practices and ways of relating to nature have been marginalized, excluded, and in most cases, erased.

1 Ahmed Ansari, “Decolonizing Design through the Perspectives of Cosmological Others: Arguing for an Ontological Turn in Design Research and Practice,” *XRDS: Crossroads, The ACM Magazine for Students* 26, no. 2 (November 25, 2019): 18, <https://doi.org/10.1145/3368048>.

2 Jose Canziani, “Lima: El patrimonio monumental y el impase urbano territorial” in *Memoria Territorial y Patrimonial*, ed. Eric Bonnet, Francois Soulages, Juliana Zevallos (Lima: Fondo Editorial Universidad Mayor de San Marcos, 2014), 33.



Figure 2 Mom conversing with Water

Water Dialectics

1.2

My Mother converse with Water,

I don't know what she says,

I only learned to listen words,

As a Peruvian descendent of the Andean culture, my mother taught me that other values surround the notions of Water across Peru. My most clear memory is from 2005, when I traveled with my mother, aunt, and cousins to Ancash. On our way to the Qerococha lagoon, my mother asked us to stop because she saw a lagoon. We walked there, and she talked to Water in Quechua, grabbed a pebble stone from the lagoon, and came back towards us. The Water was cold, but the Stone was hot. A bit disconcerted by the situation, I asked my mother what she did do, and she responded: “Water heals. I was asking for their help.” She showed me her swollen wrist’s skin lesion, which was like it for a few weeks, and mentioned that doctors suggested surgery. She rubbed the Stone on her wrist that evening, and the swelling disappeared the following day.

Traveling with my mom, I have witnessed many conversations between her and Water. Whenever my mom is close to a lagoon or any other water body, she talks with them. She asks for permission, leaves an offering, and enters after. That is how my Wawa taught her, and later she introduced us. “Before entering Water’s path, you have to ask for permission,” my grandmother used to say. Following Wawa’s, my mom always reminded us, “You have to ask for permission to use the Water, especially lagoons, tell it your



Figure 3 Gummy Bears as an offering to the Mountain in Sacsayhuaman, Cusco

intentions, ask it not to harm you, to protect you. Lagoons like candies. They are also Guarapareros (slang meaning “who likes alcohol”). Don’t forget to give an offering.”

My family demonstrated a deep respect for Water as a person, an entity with a personality that exceeds its material condition. I learned these ways to relate to Water from my family but couldn’t find a space to be deep into that knowledge as it was always framed as a cultural belief. According to Raymond Williams, the notion of culture emerged in its “modern sense during the late eighteenth and early nineteenth centuries when it was used to differentiate between European and other human groups.” Since then, relationships established between these other human groups and nature have been read through culture. As Marisol de la Cadena explains, Nature is framed as universal under a “hegemonic opinion is -publicly- only nature; to think otherwise, to think that the mountains or animals are other than human persons are cultural belief.”

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My family demonstrated a deep respect for Water as a person, an entity with a personality that exceeds its material condition. I grew up seeing these ways to relate to Water from my family but couldn't find a space to be deep into that knowledge as it was always framed as a cultural belief along my academic education. According to Raymond Williams, the notion of culture emerged in its "modern sense during the late eighteenth and early nineteenth centuries when it was used to differentiate between European and other human groups."³ Since then, relationships established between these other human groups and nature have been read through culture. As Marisol de la Cadena explains, Nature is framed as universal under a "hegemonic opinion is -publicly- only nature; to think otherwise, to think that the mountains or animals are other than human persons are cultural belief."⁴

Andean cosmology has been historically marginalized as second-order knowledge. I never had the opportunity to position myself in relation to it. During my academic education in Peru, from school to university, I received a curriculum firmly based on the Western canon, so I had to move it to the background. My experience and family story is not anecdotal. Peru has been suffering from a systemic problem in preserving its diversity of cosmologies. Cosmologies that have sustainably held the variety of ecosystems in Peru through rooted ancestral practices.

3 Raymond Williams, *Keywords: A Vocabulary of Culture and Society*, New edition. (Oxford: University Press, 2014)., Qouted in Marisol de la Cadena and Mario Blaser, *A World of Many Worlds* (Durham: Duke University Press, 2018), 7.



Figure 4 Protests in Bagua to defend the land from an incoming mining project that will affect the river. La Republica, Protest in Bagua, Amazonas, Peru. Revista Ideele. Accessed April 22, 2023. <https://revistaideele.com/ideele/content/comemoración-del-baguazo-y-perspectivas-para-el-futuro>

Parallel Understanding

1.3

I grew up witnessing a parallel understanding of nature, one as a person and the other as a resource. After many years of practicing architecture in Peru, working and collaborating with other disciplines across regions, I had the chance to revisit the Andean Cosmology and inquire into my family knowledge.

My interest in working on projects in heritage landscape sites in Peru has allowed me to understand the strong connection that ancestral civilizations sustained with Water. Furthermore, contemporary communities still embrace them through nurturing practices and conversations where nature, humans, and divinities intervene.⁵

At the same time, I witnessed how Water is promoted as a Vital resource that cannot be imagined beyond its substance condition, as a mixture of oxygen and hydrogen transformed through temperature .⁶ Spread through infrastructures provide access to clean Water to politically invisibilized bodies at the expense of other less visible ones. From a Western lens, this condition doesn't raise a debate further than the political conditions of Water as a human right or its commodification⁷ , values that alternate or complement each other, depending on external political or economic forces.

As Jean Pierre Crousse explains, “The sustained economic growth that Peru has experienced since the 1990s has sharpened the antagonism between the development paradigm, which considers the territory as a source of unlimited resources and wealth, and the conservation paradigm, which sees it as a natural place possessing an immense biological value that must be

protected from human intervention.”⁸

For instance, In the context of the free commerce treatise within Peru and the United States, a social conflict emerges in Bagua, Amazonas. The government unlocks a conservation area to begin a mining extraction by an international mining company. The indigenous communities stand against the project because it will pollute the river, among many externalities. Alan Garcia, former President of Peru, stated that the indigenous were not “citizens of first-class” and could not be against the project. He said, “Anyone who thinks in that way pretends to guide us to irrationality and the primitive retrocede of the past.”⁹

Infrastructures will continue to appear in the Peruvian Andes, where different ways of relating Water will prevail. This thesis begins as an inquiry of two modes of relating with Water in the Peruvian Andes and as a personal motivation to explore alternative ways to represent, design, and live with water as a collaboration across-worlds by asking how can we address the need for water access while also embracing the ancestral practices of living with Water?

4 Cadena and Blaser, 3.

5 Julio Vallalodid, “Vision Andina del Clima” (Lima,: Proyecto Andino de Tecnologías Campesinas Practec, 1994), 211. Quoted in Jean Pierre Crousse, *El paisaje peruano*, Primera edición. Trans. Kevin Malca (Lima, Perú: Arquitectura PUCP, 2016), 36.

6 Andrea Ballester, *A Future History of Water* (Durham, NC: Duke University Press, 2019), 106. <https://doi.org/10.1215/9781478004516.I>

7 Ian Miller, *Water: A Global History*, Edible Series (London, UK: Reaktion Books Ltd, 2015),9.

8 Jean Pierre Crousse, *El paisaje peruano*, Primera edición. (Lima, Perú: Arquitectura PUCP, 2016),143.

9 Alan Garcia. “Indigenas: Ciudadanos de Segunda Clase.” Accessed December 12, 2022. <https://www.youtube.com/watch?v=nQzFEJ14L7M>.

10 Marisol de la Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*, The Lewis Henry Morgan Lectures 2011 (Durham: Duke University Press, 2015), 13.

Walking Across Cosmologies

1.4

Addressing my inquiry was possible only after a learning process during my trip to the south of Peru. My thesis is not only a scholar exploration to find new modes of collaboration across the world. It is an effort to reconcile and embrace both systems of knowledge, Andean and Western, that are part of my identity. My thesis results from thinking with others to design with Water in the Andes while revisiting, learning, and unlearning the ways that I know while finding modes of collaboration across worlds.

During the process of developing this thesis, I have talked with several colleagues, NGOs, and professionals from various disciplines: archeologists, anthropologists, geographers, and of course, architects that shared their experience working with Water. However, my awareness of experience as a source of knowledge pushed me to travel south of Peru during the summer of 2022.

During my trip, I first visited many water heritage sites Water in Cusco, walking for several days with my friend Ana, a local architect and trekker with experience in the valley of Sacsayhuaman. This experience was critical for me to expand my notions of the cycle of Water beyond its material condition and how different Water Beings¹⁰, are involved along the cycle. I proposed Water beings in conversation with the concept of Earth beings proposed by Marisol de la Cadena as a translation of the Qechua word Tirakuna that refers to mountains, rivers, glaciers) as living beings. For this research Water beings will be used to talk about of the living beings, humans, and non-humans, that are part of the ecology of Water.

After Cusco, I visited Quispillacta, in Ayacucho, an indigenous community in the Peruvian Andes. My initial plan was to learn the traditional practice of harvesting Water from the community from the Machaca sisters. What I learned exceeded my expectations. The nurturers explained to me their techniques for reading Water in the Land and how the community's life was guided by the cycles of nature. They welcomed me into Yarqa Aspyi, the water festival that celebrates the beginning of the agricultural year. The festival expanded all my learnings by understanding the different ways that Water can manifest through Water beings: Human beings, animals, stars and plants. This water festival allowed me to learn about the Andean Cosmology in the Community of Quispillacta, which frames Water as a dual entity: Substance and Cosmos.

My thesis proposes a new paradigm that reimagines water infrastructures as cosmological spaces of encounters across the world. This thesis proposes alternative ways to represent, design, and live with Water as a collaboration from the ancestral and modern ways of relating with it. In the following chapter, I will unfold my learning through a project that reimagines a future infrastructural paradigm for the community of Quispillacta.

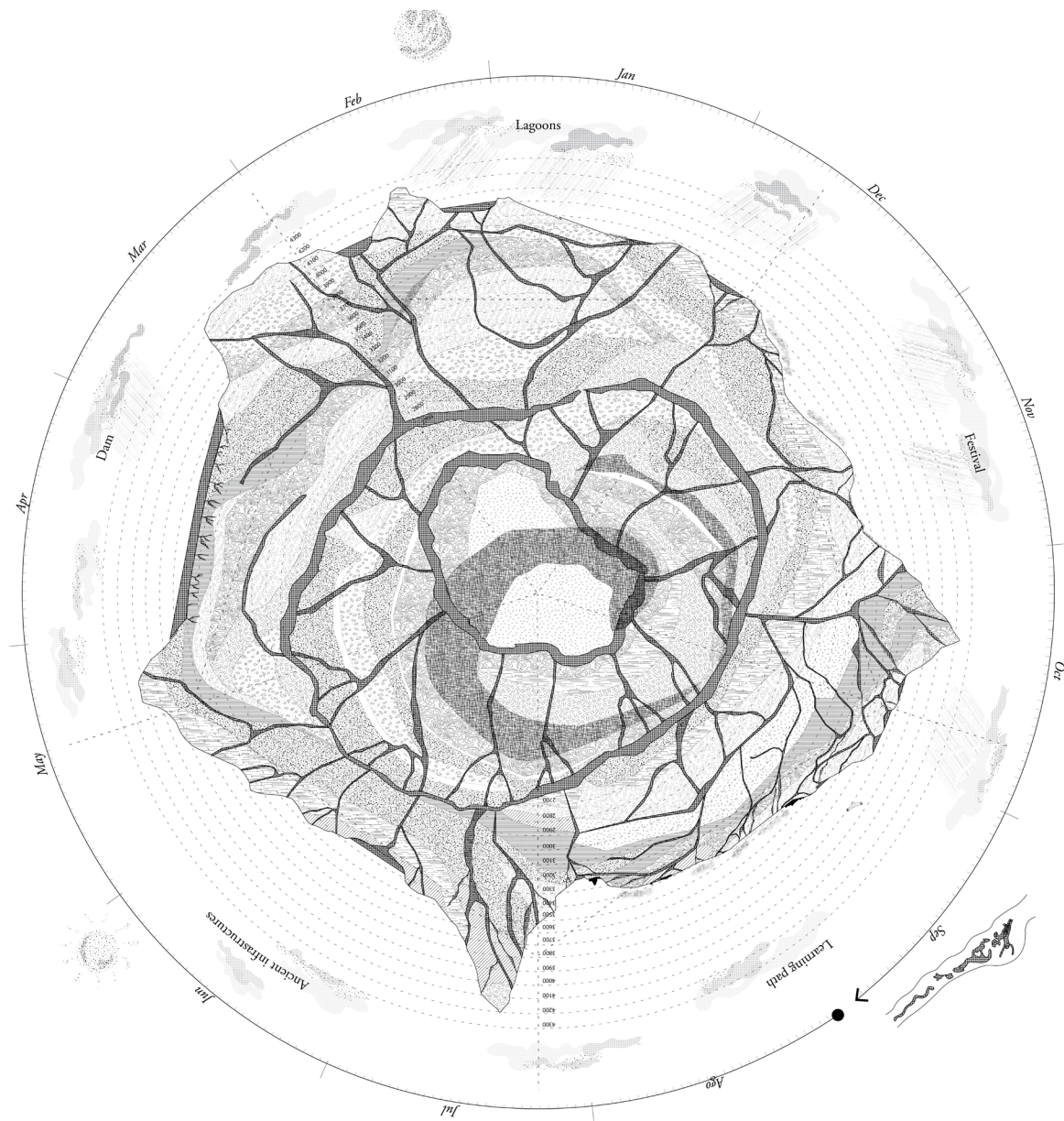


Figure 5 Section my walk learning with Water in Peru

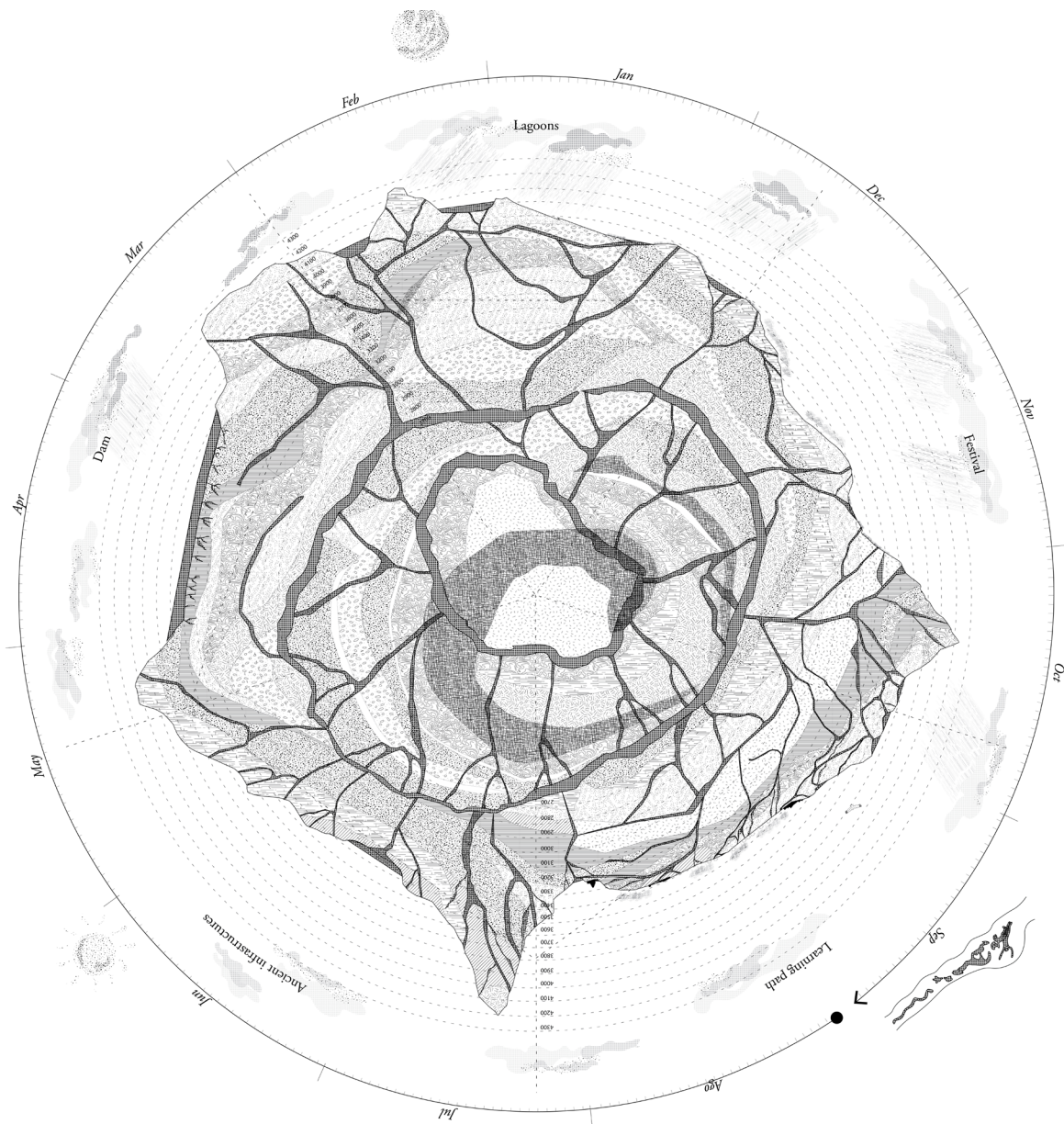


Figure 6 Section my walk learning with Water in Peru

II
Water Duality

Inhabiting a Poem

After my walk, I wrote this poem as the first medium to represent my learnings of Water as a dual entity. I wrote this poem inspired by Javier Heraud's book: "El Rio."¹¹ A poem, is for me, a nonlinear method to acknowledge that what is being presented in this book is not a precise translation of my learnings as there are always partial connections¹² in the process of learning across different epistemologies.

11 Javier Heraud: *El Rio*. (Lima: Grupo Editorial Peisa S.A.C, 2011).

12 Marisol de la Cadena defines Partial connection as "an encounter of knowledge practices (and entities) as they also continue to exceed each other (in divergence). What constitutes the excess may be obscure to participants in the conversation, yet it would also be constitutive of it elements in dialogue may rest unknown: that may be an awkward condition, yet not a deterrent for conversations across worlds". Marisol de la Cadena and Mario Blaser, *A World of Many Worlds* (Durham: Duke University Press, 2018).

La dualidad el Agua

*Soy el agua recorriendo tus montañas,
Y las historias que me Narran,
Soy las vasijas y los templos,
las lagunas y los sueños,
Soy lo que soy y lo que de mi
no ven,*

*Soy marea, humedad,
Nubes y estrellas,
Soy las piedras y las hojas,
Luna y ranas que se empozan,*

*Soy el rio que vuela,
y las semillas en tus manos
Soy los cultivos y la arcilla,
alimento y vasija,*

*Soy el camino y el caminante,
las palabras y canciones,
Soy tu sangre y tus lágrimas,
Tu alegría y tu tristeza,
Somos lo que soy y lo que en mi
no vemos*

Water Duality

*I am water running through your
mountains,
and my stories narrated,
I am vessels and the temples,
lagoons and conceits,
I am what I am and what in me
you don't see,*

*I am tide, humidity,
clouds and stars,
I am rock and leaves,
Moon and croaking frogs,*

*I am the flying river,
Seeds in your hands,
I am crops and clay,
Food and vessel,*

*I am the way and the wayfarer
words and songs,
I am your blood and tears,
joy and sorrow,
We are what I am and what in me
we don't not see*

JANAQ PACHA

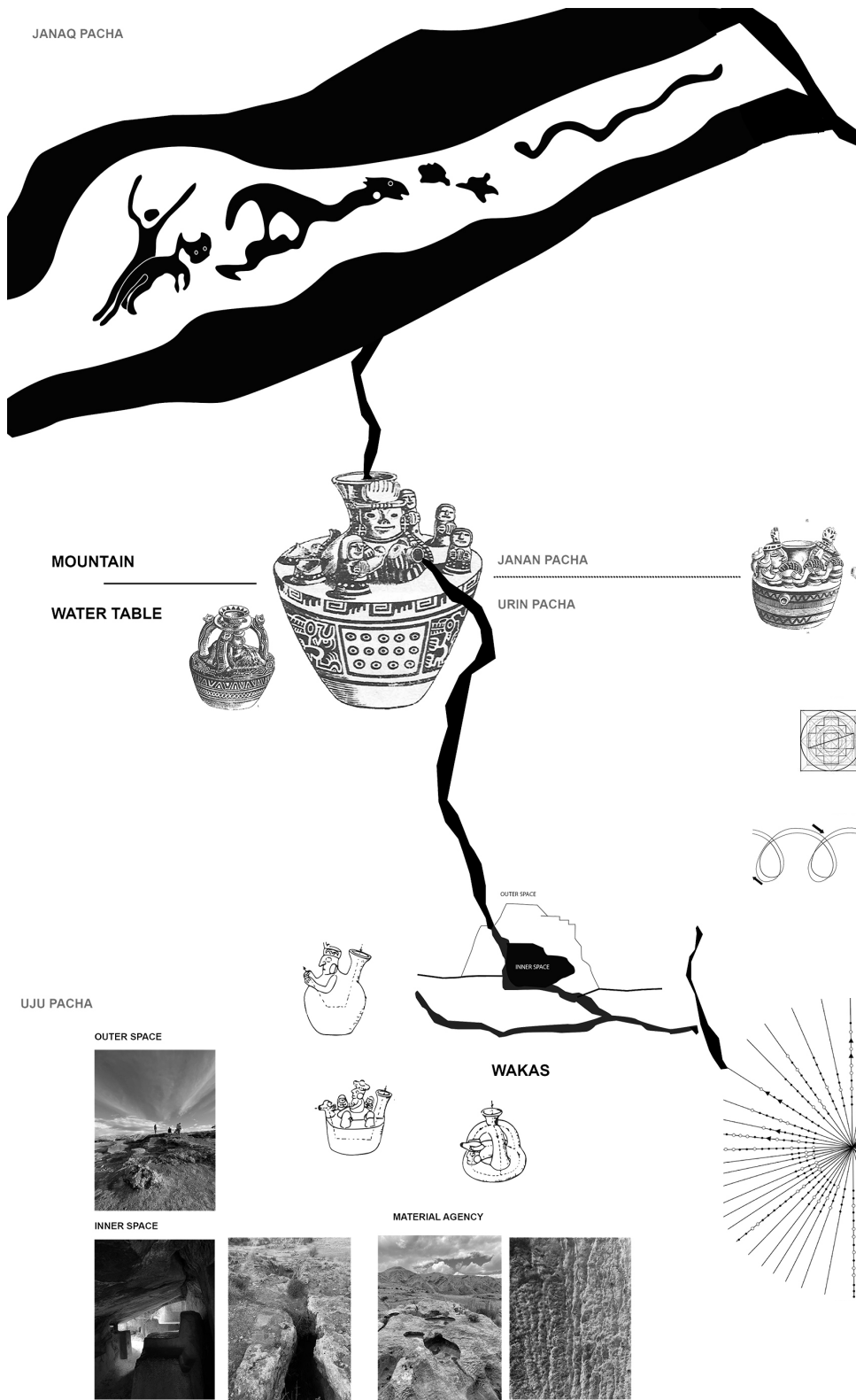
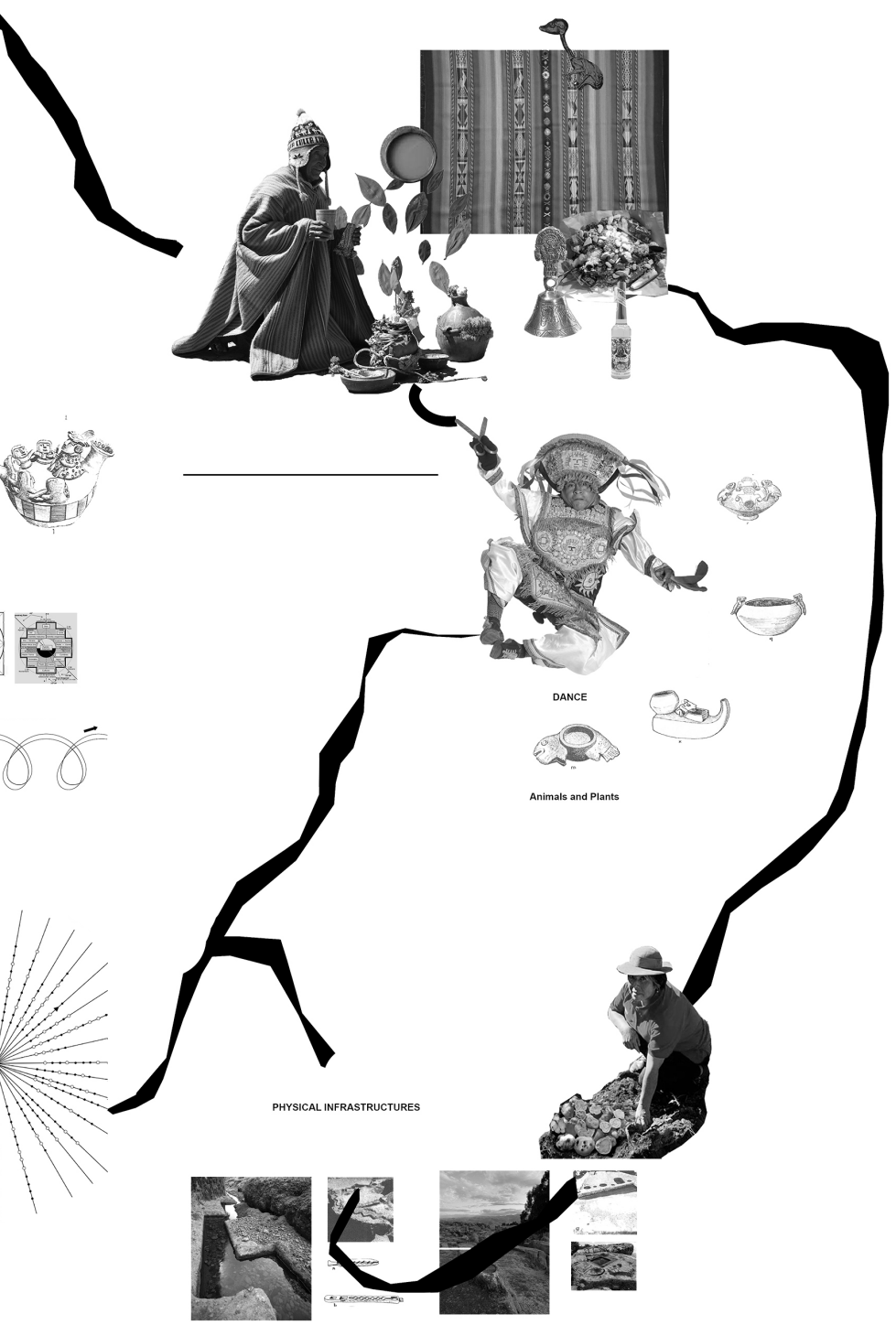


Figure 7 Cycle of Water's regeneration in the Andes



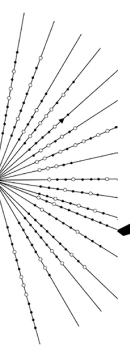
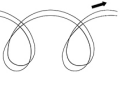
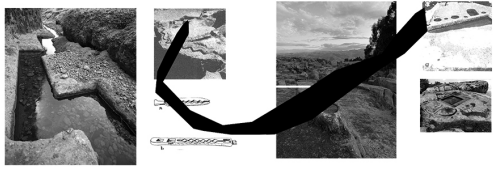
DANCE



Animals and Plants



PHYSICAL INFRASTRUCTURES



III

Quispillacta

Conversing with Marcela

3.1

Marcela, Ana, Lidia, and Magda are Water Nurturers. They have nurtured more than 120 lagoons in the past 30 years, increasing the water access in their community, Quispillacta. They run an NGO called ABA (Asociacion Bartolome de Aripaylla) in Ayacucho, Peru. During May 2023, I had the opportunity to contact Marcela through a video call. I wanted to learn from her experience nurturing lagoons in Quispillacta, Ayacucho. In this conversation, she mentioned how the internal conflict in the 80s affected the community by breaking their communal organizations. Moreover, the armed groups assassinated the Yachaq, wise people of the community, to prevent them from turning against the ideology they were trying to impose. However, physical violence was not the only situation that affected the community. Schooling, in turn, oppressed indigenous knowledge, framing it as outdated and against the catholic church. Instead, it promoted a “modern” Western knowledge affecting the transfer of their ancestral practices in the community.

All these episodes affected the relationship between the community and Yaku since many practices related to nurturing Water were lost. Recovery is a long process that, to this day, Marcela stated, “It is difficult to deconstruct. It is a process of permanent unlearning because there is a process of permanent colonization”. In this sense, one of the significant challenges that Quispillacta faces is maintaining cultural continuity, but the practice of nurturing Water is helping to address it.



Figure 8 Magda explaining the practice of Nurturing Water in Quispillacta

Marcela explained how challenging it is to work with Water across communities and ABA's effort to converse with the "technical world." Marcela finds that for to have more influence in other places, it was necessary to carry out a translation process. The practice of planting and harvesting Water is a practice that they call "Nurturing Water." However, the idea of Nurturing generates rejection because it confronts two ways of seeing the world: Water as a person that must be nurtured versus Water as a resource that must be managed. As she points out, "By being well placed in our culture, we can talk. Planting and harvesting of Water were coined to be able to communicate or to be understood in other cosmologies, but in ours, it is the nurturing of Water. In the technical world, they can understand the idea under this name. It is a way to demonstrate your knowledge to the public."

Our practice is not about managing Water, there are ways of relating, and there are ways of conversing with Water. Our practice is a form of conservation and nurturing. Nurturing makes Water a person, a person that nurtures other people. With nurturing, we obtain abundance; with management, we can become scarce. What has the extraction left us? Drought. What they teach us is to exhaust, extract and not nurture."

These ideas resonate with the contributions of Marisol de la Cadena in conversation with Mariano Turpo, where they use "not only"¹³ to recognize that in each process of translation, the meanings are what we think but

cannot be limited to them. Marisol de la Cadena suggests being aware that many words translated across cosmologies exceed their translated definitions, but those differences have the chance to connect. Hence, when Marcela says Water to refer to the substance, she is not saying that Water is only a substance. Still, she is constraining their meaning to be able to fit in the context without giving up its actual complexity.

For the Indigenous community of Quispillacta, Water is a mother. Yaku Mama, meaning Mother Water in Quechua, is the way they refer to Water with whom they establish a filial relationship through nurturing practices the practice.

Yaku Mama nurtures people by fertilizing the land, allowing life, and they nurture Water along its regeneration cycle. In this practice, the Quispillacta community engages in active conversations with Water. Conversations that would enable them to read the intentions of the Water, and its “passions” (feelings, emotions), according to Marcela Machaca. Marcela explains that the forms of conversation are relational. They are not limited to semantics. Conversing with Water, like the one I have witnessed multiple times with my mother, is not limited to a verbal act. “I think there are things that are not said, but they communicate. It is not necessary to speak, to communicate.”

According to Marcela, “Water has its own culture. They know how to respond in a certain way. Yaku is not through something else. It is Water manifesting in different forms. It is not a figurative way. It is a way of seeing it. Water has a way of manifesting itself. Thus, our practice of nurturing Water is a permanent form of conversation with Yaku as a whole”. This idea resonates with Eduardo Kohn when he states that life is constitutively semiotic. “What differentiates life from the inanimate physical world is that life-forms represent the world in some way or another, and these representations are intrinsic to their being. What we share with nonhuman living creatures, then, is not our embodiment, as certain strains of phenomenological approaches would hold, but the fact that we all live with and through signs. We all use signs as “canes” that represent parts of the world to us in some way or another. In doing so, signs make us what we are.”¹⁴

Communicating with what we understand as a resource seems impossible. It sounds impossible to converse with Water within our binary division of the world based on the subject-object relationship. However, Quispillacta’s experience disrupts this conception and offers a space to reflect on the person-nature division. “We think like humans. We think anthropocentric. Our Andean cosmology is not metaphorical. It is not a representative form. It is a way of interacting with the whole, interacting with Water, working vigilantly.” Marcela invites us not only to think about other beings but also to stop thinking only as humans and to think with others. How is it possible to think with Water?



Figure 9 Magda Machaca Making an offering to a Puquio, Water spring, before begin our journey.

After an exchange of experiences, Marcela mentioned something that deeply resonated with my family experience. The conversation with Water is active in Quispillacta, as in many other Andean regions. Marcela explains to me that Water has a cycle. Since it is a living being, it is essential to converse with their cycle. For example, She told me that the community calls the Helada(Frost) a thief because it steals their crops, drying them and frustrating the agricultural cycle. Therefore, the community has historically developed methods to deal with it.

Marcela told me that the frost has a path that the community has identified, so when it comes, people ring the town's bells, and another group is in charge of lighting fireworks with salt. The frost doesn't like the fireworks, so it turns back. This is how crops are saved. Curious, I told her I had heard the same thing in Cusco from a farmer. She told me that this solution had been explored in Quispillacta for many years and shared with other communities using local radio to warn them about the presence of frost. Thinking of a dynamic relationship with Water through this story expanded the forms of interaction with Water that I witnessed and aroused a more significant curiosity to experience it.

After expressing my interest to Marcela in learning about Water with her, she invited me to visit Quispillacta during the summer and to accompany them to Yarqa Aspiy, the water festival. Talking with Marcela allowed me to reconnect with many family experiences and, at the same time, position

what I found in theory with less precision. However, virtuality, as well as language, brings limitations. She mentioned that it is a unique moment where all the conversation with Water intensifies: “From the festival, you will leave with knowledge of how you have to plan things for the incoming agricultural year, but those readings are not static. It is a living world, just like people. Water always has emotions and reactions that are expressed in different ways over time. You don’t stop conversing, observing, and interacting. The conversation is continuous, and it intensifies during the festival”.

Before finishing, she gave me one last piece of advice when she noticed my enthusiasm to rationally decipher everything we talked about: “There are things that cannot be answered from the reason. Feelings cannot be explained. It is about other emotions, which are based on respect.” It is a way of learning by connecting with others.

This comment made me reflect on the many questions that I asked my mother during the trips and that were difficult for her to turn into words, as we are used to filter the world through a the unique lens that exist; what John law has called the one-world world; a world that has granted itself the right to assimilate all the other worlds and, by presenting itself as exclusive, cancels possibilities for what lies beyond its limits”¹⁵. I decided that during my travel, the best thing would be to prepare myself not to frame everything through the lens of reason and focus only on what my experience will allow me to perceive and learn.

Marcela and I ended the conversation with Emotion. Marcela said, “You know what? Sometimes we know how to say. Sometimes, the times are precise. It has to be the exact moment, and if you have approached us, it is because I think the Apus has reunited us and that this meeting shouldn’t be just a casual encounter. What is this about? The key is three, to converse, to converse, to converse”.

13 la Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*, The Lewis Henry Morgan Lectures 2011 (Durham: Duke University Press, 2015).

14 John Law, “What’s Wrong with a One-World World?,” *Distinktion: Journal of Social Theory* 16, no. 1 (January 2, 2015): 126–39, <https://doi.org/10.1080/1600910X.2015.1020066>. Quoted in Cadena and Blaser, *A World of Many Worlds*, 3.

15 Andres Verjizl and Rutgerd Boelens, “Templos Modernos y Espacios Sagrados: Territorios Hidrosociales Entrelazados, En Cuchoquesera, Perú” 63 (November 1, 2019): 7, <https://doi.org/10.22199/issn.0718-1043-2019-0036>.

16 Eduardo Kohn, “How Forests Think: Toward an Anthropology Beyond the Human,” in *How Forests Think* (University of California Press, 2013), 13, <https://doi.org/10.1525/9780520956865>.



Figure 10 Peru, represented trough rivers and Water bodies. Kevin Malca (Edited in Illustrator, Data Geo GPS). “Ríos del Perú (Red Hidrográfica)” Geo GPS Peru, Consulted November 15, 2022, <https://www.geogpsperu.com/2020/10/rios-del-peru-red-hidrografica.html>

Quispillacta

3.2

I visited Quispillacta between August and September of 2022. Quispillacta is an indigenous community located in Ayacucho, in the south of the Peruvian Andes. In this community water has a duality, as they are both a resource managed by a dam and a living entity nurtured through ancestral practices. Quispillacta is located between 3000-4000 meters above sea level. It gathers 13 villages with a population around 4000 people. The community is an Ayllu (meaning collective of families, or relatives in Quechua). In the Andean cosmology, Ayllus gather not only humans but also non-human beings: Water, Mountains, Animals, Plants, Crops, and spirits are part of the Ayllu.

The Ayllu dedicate their time to nurture. They do agriculture, planting papa, maize, oca, ulluco, and quinoa, using traditional methods of sowing and irrigation. The community also raises animals, sheep, cows, and llamas. Nurturing the ecosystem requires Water that the community harvests by using ancestral techniques.

The community is organized based on the cycles of nature. As Marcela explained, "While modern man does not take into account the rhythms of nature, here the planning and decision of these social actors prevail. Otherwise, we would live without direction." Water influences life in the community and their different temporalities. The ritual and agricultural calendars are based on the cycle of Water and other beings.



Figure 11 Nurturing the landscape in Quispillacta

In Quispillacta, the territory is fluid. It changes over seasons, following its local calendar. Land ownership follows this organization, where Runas, people, are temporary plot owners. If the Ayllu, community, agrees to modify the configuration or change the use, the boundaries are redefined using landmarks. As Boelens and Verjizl explains, “ We believe that the borders, limits and substantial foundations of the territory are not fixed but fluids, and they are (re)produced continuously; maintaining by its components and activities such as markers, rules principles of community collaboration, the practices rituals, sharing food and drinks in the chores, belonging to ritual symbols and system of relatives; and also the registrations and titles of property. Fluency is a term we use to indicate not only the territory but also the access, they are transient, polymorphous, and multiple” .¹⁶

As Magda Machaca explained when we walk next to the lagoons, “Water does not have a territory. When we work with Water, we don’t choose to benefit one locality. We think in the Ayllu. The community harvests Water from the rain using ancestral techniques. The former glaciers dried 20 years ago. As Marcela Machaca explains, “The lagoons are our new glaciers, our water reserves.” In response to the situation, the community has been strengthening the ancestral practice of nurturing Water.

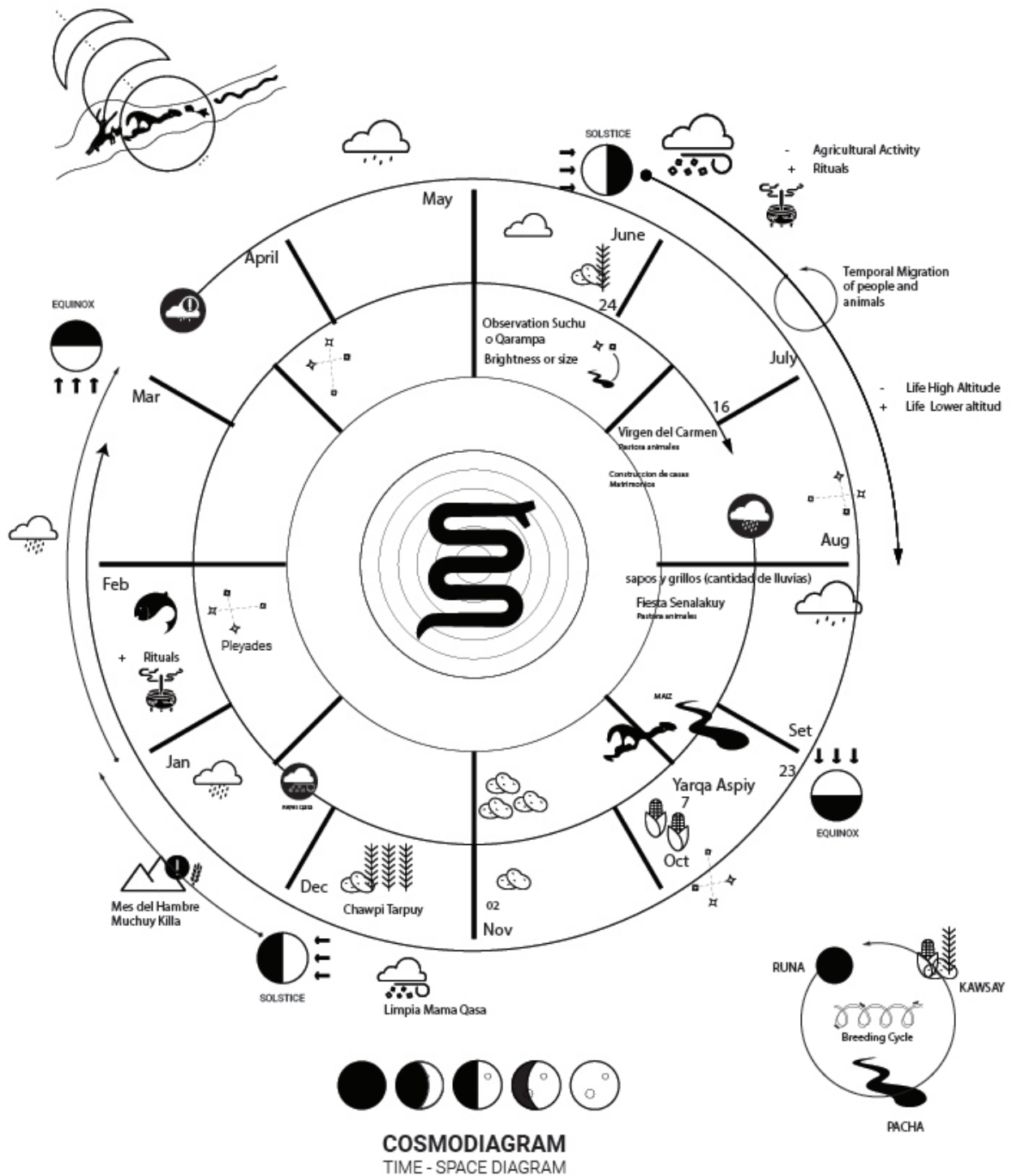


Figure 12 Quispillacta's Calendar following the Cycles of Nature

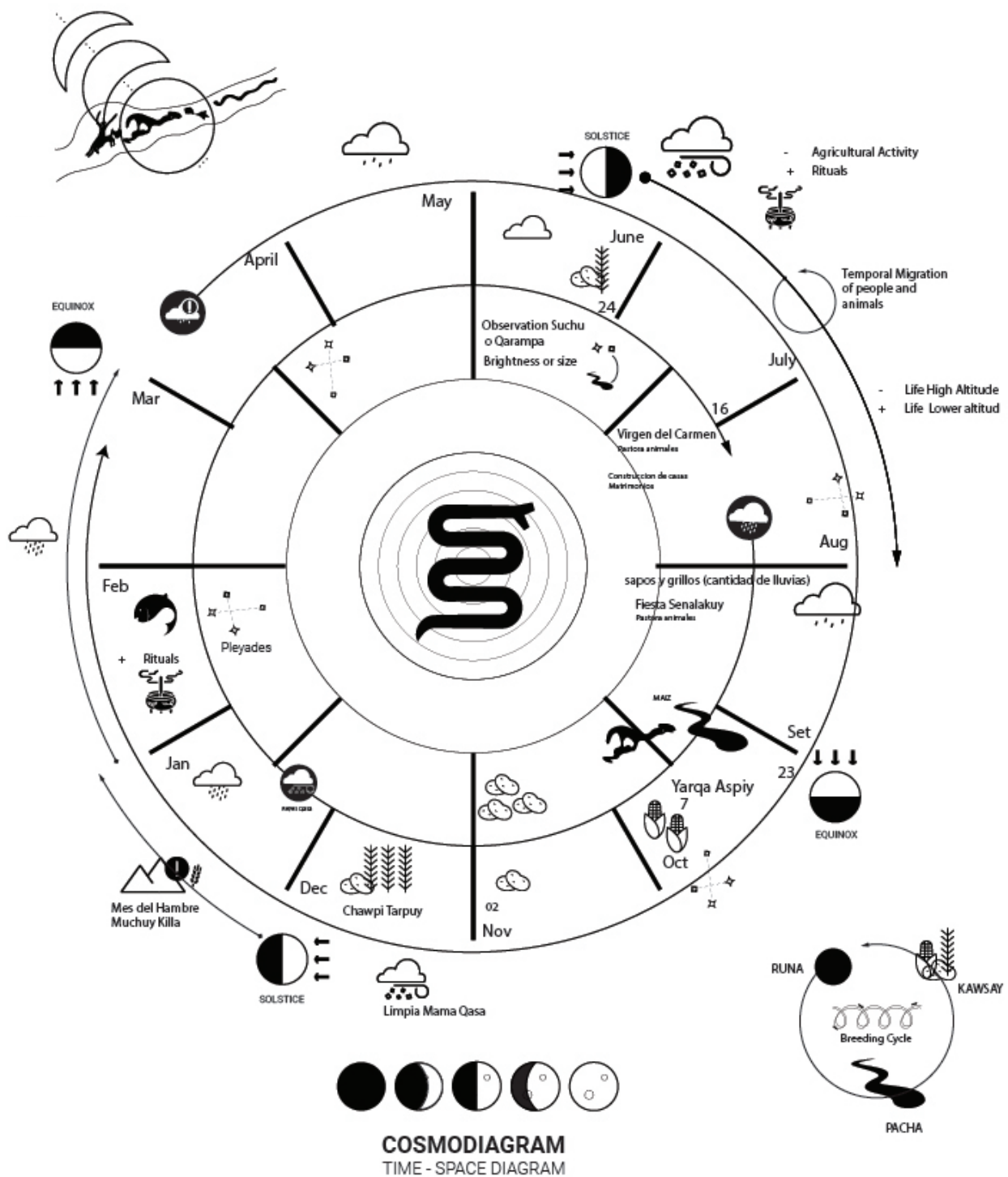


Figure 13 Quispillacta's Calendar following the Cycles of Nature



Figure 14

Magda's brother and his dogs grazing sheep in the highlands



Figure 15 Magda Harvesting Cochayuyo in the Highlands



Figure 16 Houses and agriculture plots in Union Potrero, Village in Quispillacta

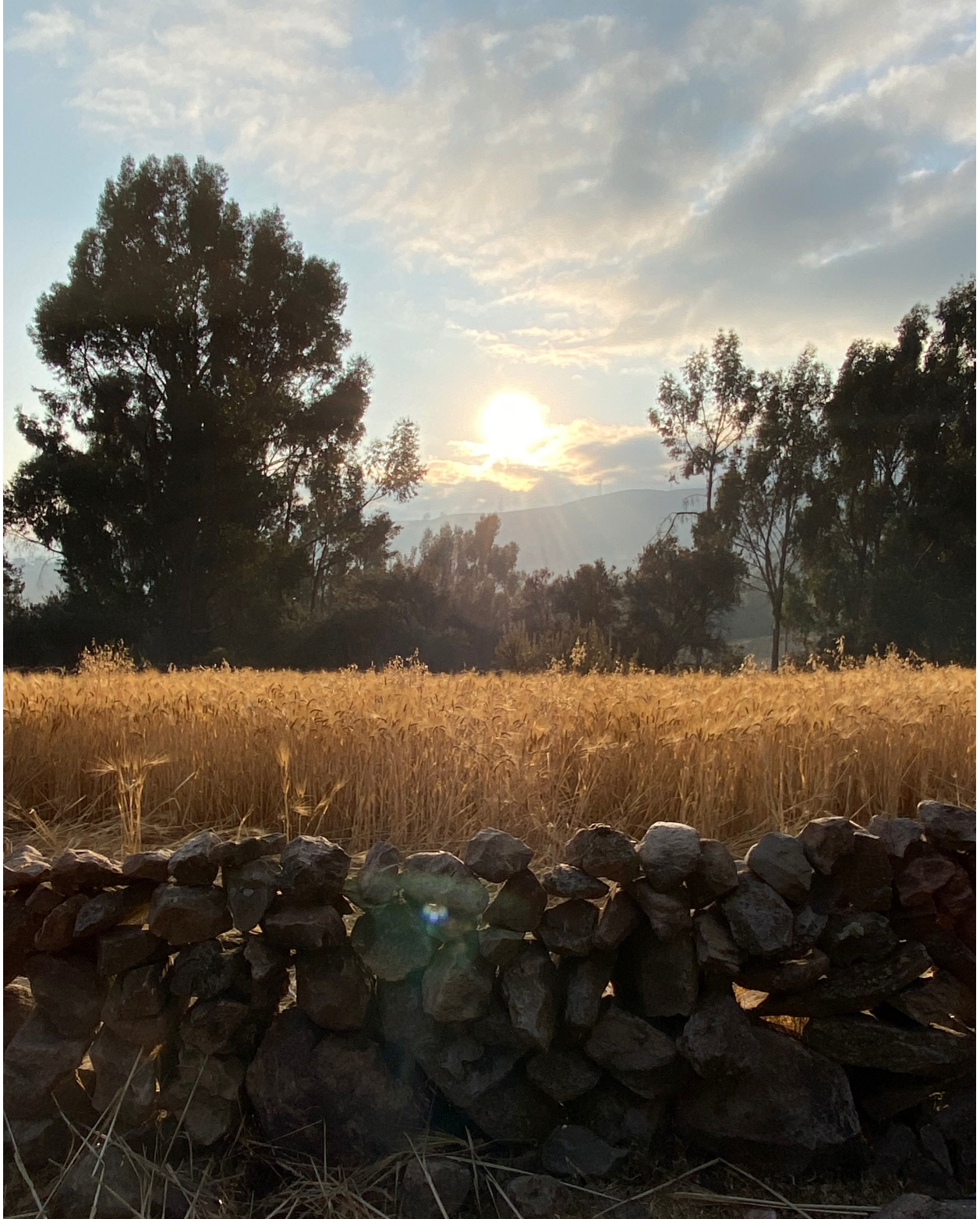


Figure 17 Cebada Crops in Union Potrero

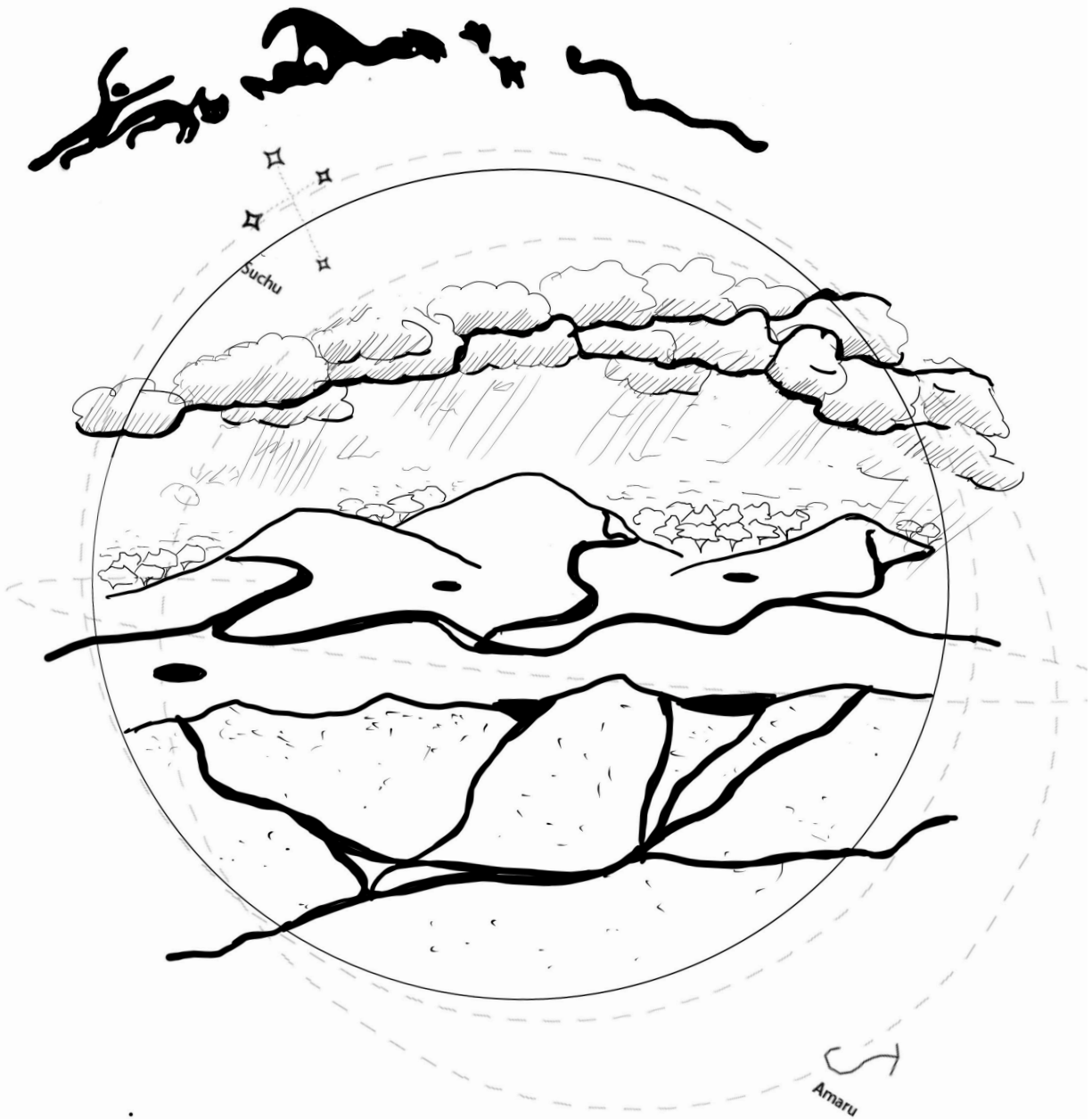


Figure 18 Four Rivers Across the Cosmos

Nurturing Water

3.3

Marcela, Ana, Lidia, and Magda are Water Nurturers. They have nurtured more than 120 lagoons in the past 30 years, increasing the water access in Quispillacta, where they run an NGO called ABA (Asociacion Bartolome de Aripaylla).

Magda taught me, that the cycle of Water in the Andes does not start from the Pacific Ocean, but from the Amazon rainforest. The Amazon produces clouds from the transpiration of trees, which gathered are larger than the amazon river. This “Flying River” brings rain to the Andes. Rainwater is mediated in the land, slowly feeding the aquifers that later will bring Water back to the surface to nurture the ecology. When the time to regenerate comes, the celestial River emerges, “Rio Mayu” or Milky Way as we call it, bringing Water back to the sky. Water is an entity that connects different planes in the atmosphere, and the community has learned to nurture it over this path of regeneration.

Mediate

The Machaca sisters mediate the relation between Water in the sky and the land by building lagoons, with the ancestral practice of Qucha Ruwa”. Cochas, Lagoons, capture rainwater, slowing down its flow to feed the inner aquifer. The lagoons are architecture, built infrastructures that emerge and change throughout time. Lagoons are filled during rainy seasons. Machaca sisters have learned to read the mountain’s geomorphology to identify adequate geological depressions. following the path of the rain.

The sisters choose the areas with counterslopes and narrow ends, or what they call “Troats,” where they build thick containment walls with the local matter, rocks, and Clay. As Victoria Machaca explained during our walk, “Clay is not rigid. It takes the shape of Water,” so it is the ideal material to work with Water as it adapts to its seasonality.

Interchange

Months after the dry season, the community interchange with Yaku, through Puquios - water springs-, and bofedales -wetlands- that they nurture, protect and maintain. Moreover, these aquifers nourish rivers, streams, and waterfalls. In return, Yaku nourishes the community: Humans, crops, and animals.

Regenerate

The community prepares the path of Water for its return, cleaning and maintaining its green infrastructures. Yarqa Aspyi is the water festival where the community celebrates the Water’s birthday by cleaning their paths. As Marcela explains, “ Yarqa Aspiy is more than a celebration, is an intensification of the Andean Life and the relations between all the Andean world members. People, water, seed, and celestial bodies join to restart life after a season of rest”.¹⁷

The celebration is a pilgrimage to the main Puquio, while the community cleans the canals to let Water walk during the incoming year and regenerate life. Along the pilgrimage, water temples work as stations to give offerings to Water and share with the Ayllu. The pilgrimage concludes with the offering to the main Puquio water spring. After the walk, the community gathers, celebrates, and discusses what they learned from Yaku during the festival.

Visiting Quispillacta and Yarqa Aspiy was critical for understanding the duality of Water in the Andes. It exists as a substance but also as a cosmos, expressed through an ecology of Water beings: Stars, animals, plants, and humans are crucial in its cycle of regeneration, and they work as manifestations of Water, scales that exchange roles throughout the process. Architecture in this context emerges as the space of encounter and conversation for the ecology of beings over its regeneration cycle.

17 Marcela, Magdalena, and Gualberto Machaca. "Kancha Chacra Sunqulla: La Cultura Agrocentrica en el Ayllu Quispillacta. Accessed April 30, 2023, <http://www.pratec.org/wpress/pdfs-pratec/kancha-chacra.pdf>, 67.

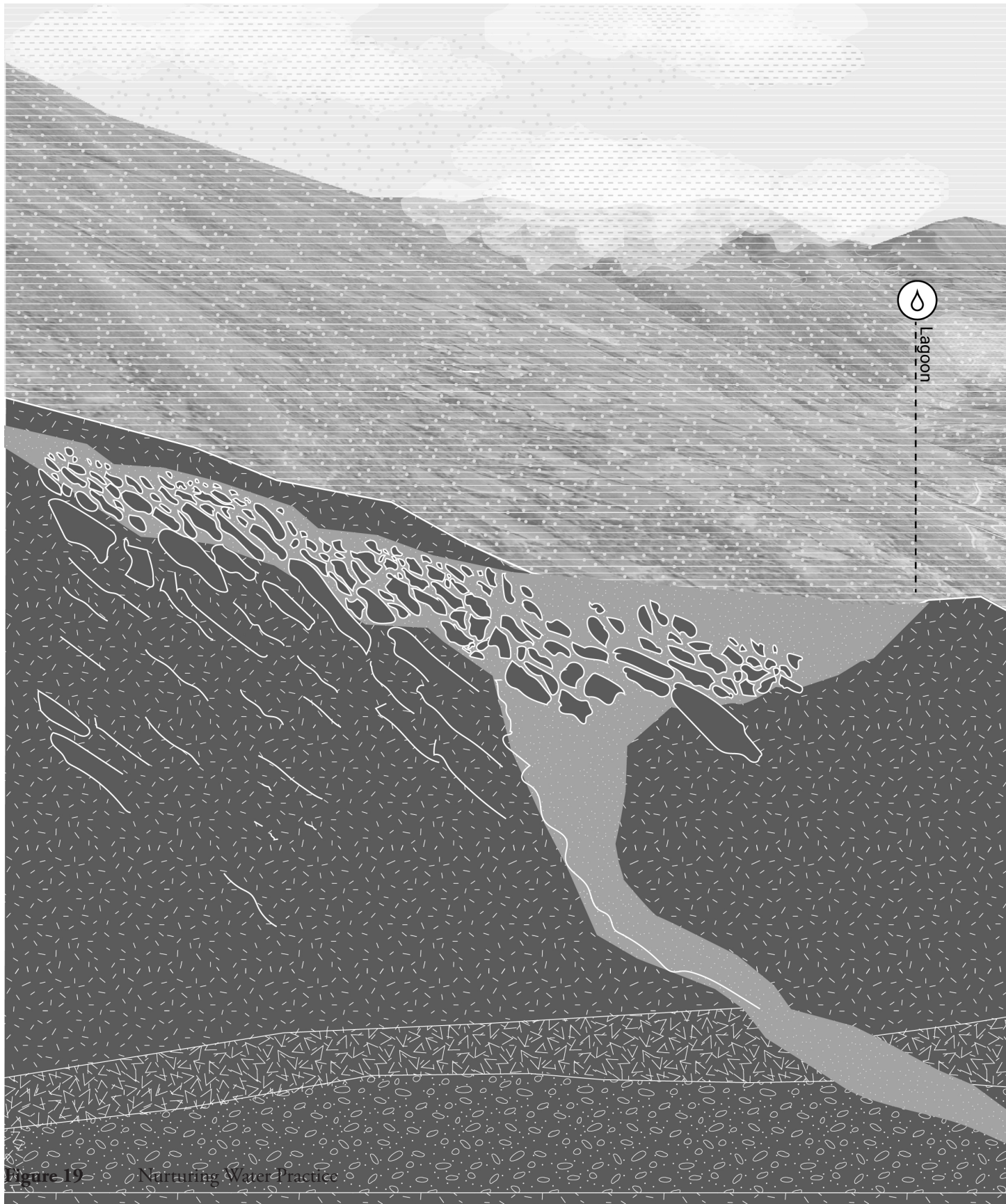
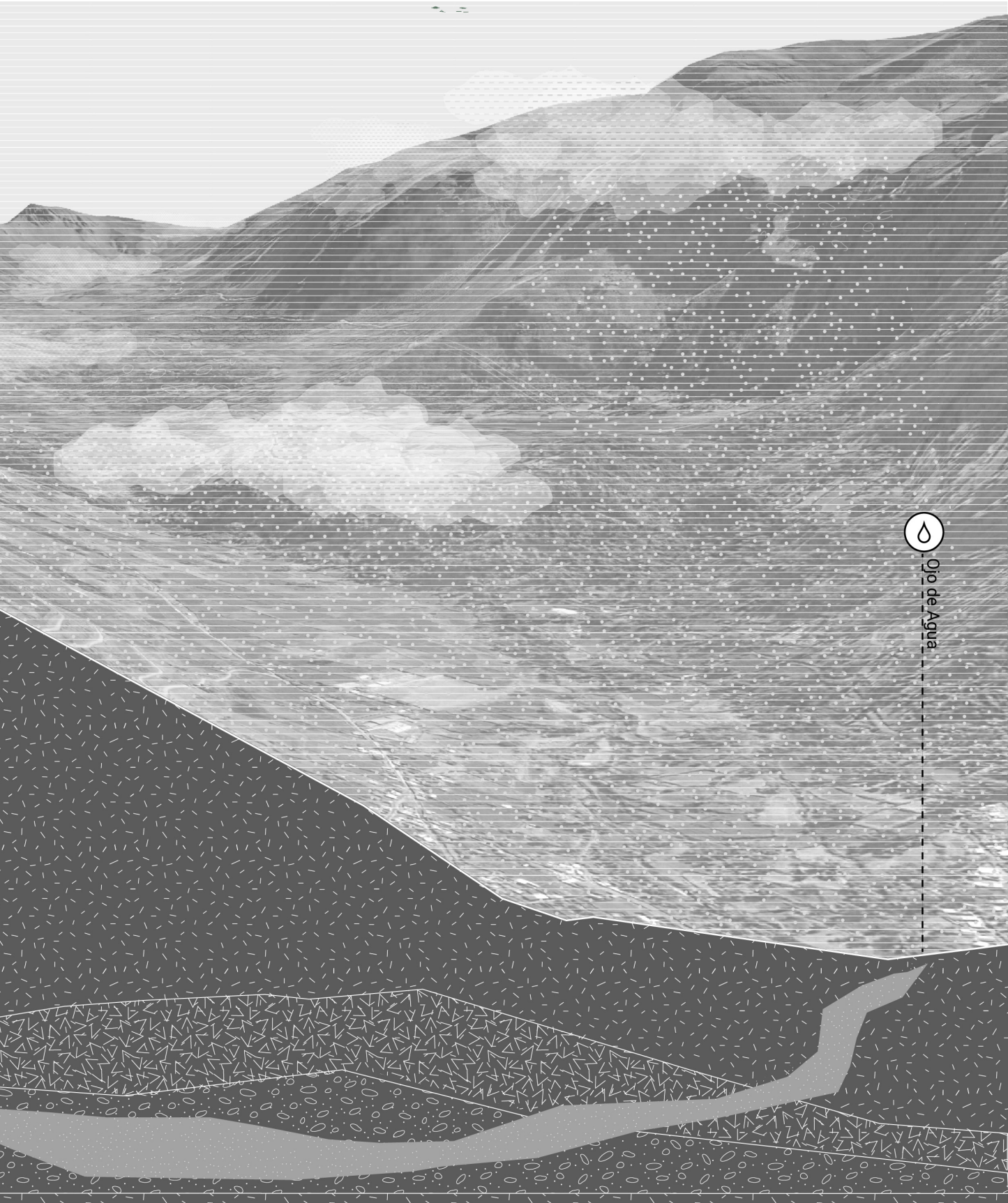


Figure 19 Nurturing Water Practice



Ojo de Agua



Figure 20 Mediate. Learning about Qochas, Lagoons, with Machaca sisters and Crispin

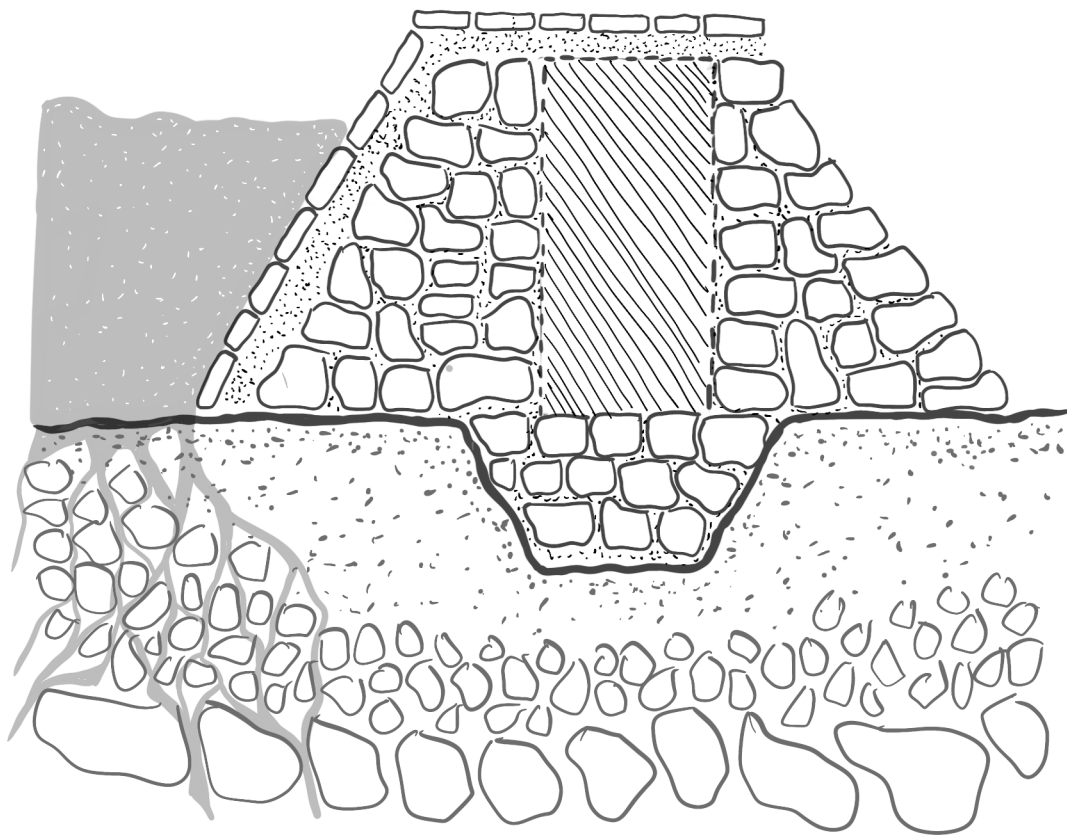


Figure 21 Cochas' Clay and Rock Containment wall Dam's Waterproof Concrete Containment wall



Figure 22 Interchange, Learning about Puquios, Water Springs, with Ana Machaca



Figure 23 Regenerate, Water Festival, Yarqa Aspyi

Extracting Water

3.4

My walk was critical to learn how two different ways to relate to Water exist in the same territory. While a big part of the community refers to Water as a cosmos, some infrastructures manage Water only as a resource.

Infrastructures provide connectivity. However, they can also segregate. The Peruvian government built a large Dam to provide access to Water to Huamanga, the capital of the region. The infrastructure was built in 2002 on top of an ancestral area, where a lagoon and a wetland were located.

The Dam stores 80 mcm in a Waterproof structure. The structure is a trapezoidal mound – the cross-section of the Dam – made up of four layers of different soil and rock types. These layers have a drainage function to ensure the Dam's stability and the protection of the waterproof core. The foundations are protected with a waterproof concrete injection that goes 10 meters below the ground.¹⁸ The engineers of the project did not want infiltrations. From their perspective, these were a sign of wasted Water and inefficiency. Hence, this extensive infrastructure doesn't feed the aquifer. Instead, it takes Water from other water bodies through concrete canals extended along different villages in the community.

The Dam does not provide Water to Quispillacta. In Quispillacta, most of the community doesn't have access to clean Water. They currently have access through water springs that only reach some of the community. The lack of sewer systems or treatment for the Water contaminates the inner aquifer and other water bodies. The lack of resources caused for the water

shortage has forced many community members to migrate, affecting the knowledge transfer of the community's ancestral practices.

The Dam broke all the ecological relations between the ancestral lagoon and the wetland, affecting the paths of the community to feed their animals. During the dry season, animals' and people's bodies have been found because they couldn't climb after falling. More than 20 years have passed since the construction of the Dam, and Quispillacta has never received benefits from the infrastructure. Ironically The Dam extracts more than 20% of its volume from the lagoons that the community have build.¹⁹

18 Corporación de Fomento y Desarrollo Económico y Social de Ayacucho (CORFA) and Consultores y Asesores AS Srl, "Proyecto Integral del río Cachi: estudio de factibilidad," Autoridad Nacional del Agua, December 1983, <https://doi.org/10/C779-I>.

19 MR, "Quispillacta: El pueblo donde las mujeres obtienen agua del cielo y la guardan en lagunas," Wayka.pe (blog), October 29, 2020, <https://wayka.pe/quispillacta-el-pueblo-donde-las-mujeres-obtienen-agua-del-cielo-y-la-guardan-en-lagunas/>.



Figure 24 Cuchoquesera Dam's Containment System. Unidad Comunicaciones, Gobierno Regional de Ayacucho, "Presas Cuchoquesera Llego a su maxima capacidad de almacenamiento", Thinglink, Accessed April 24, 2023, <https://www.thinglink.com/scene/918620094286790659>

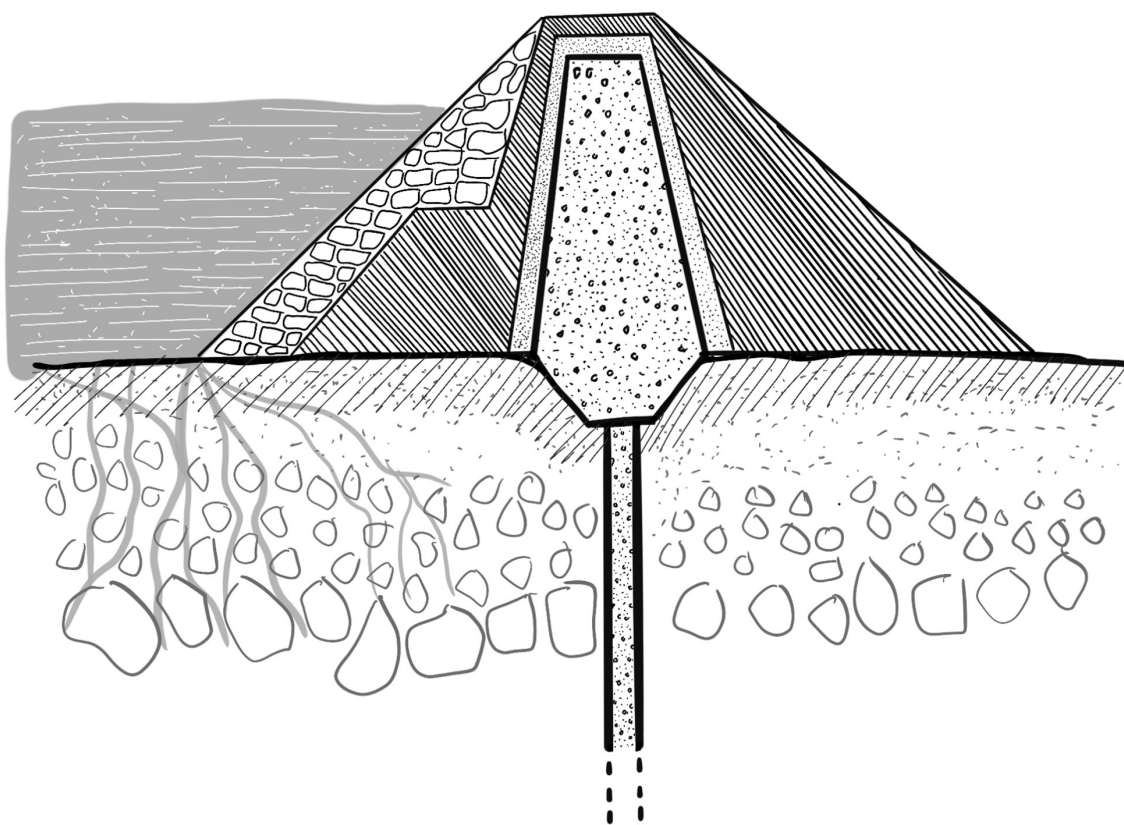


Figure 25 Dam's Waterproof Concrete Containment wall



Figure 26 Cuchoquesera's Dam. Ruben de la Torre, "Presas Cuchoquesera 80 MMC Estructura Mayor de la Irrigacion Cachi Ayacucho Perú", Mapio, Accessed April 24, 2023, <https://mapio.net/pic/p-36347730/>

An infrastructural Turn

3.5

Water access in Peru is an ongoing effort. On the one hand, Modern Infrastructures allow us to access vital resources but, in many cases, at the expense of affecting the cycles of nature. On the other hand, ancestral practices cannot cover the population's increasing demand. In Quispillacta, the Peruvian government has approved a plan to provide access to clean water in Union Potrero, a local village. Instead of planning the incoming infrastructures as another binary construction that benefits the modern vision in expenses to the ancestral, this thesis identifies an opportunity to embrace water's duality by asking how we can address the need for water access while also embracing the local water ancestral practices. What architecture emerges from this collaboration?

A paradigmatic shift in water infrastructures is necessary. This thesis proposes Cosmo-infrastructures as a new architectural paradigm that embraces water duality through a collaboration of ancestral and modern practices across time. Yaku Cosmo-infrastructures take and give water. They provide access to water while contributing to its cycle of regeneration. Yaku Cosmo infrastructures are an opportunity to preserve the ancestral practices of nurturing water, agriculture, crafts, and astronomy by engaging the participation of Water beings along their cycle.

IV

Yaku Cosmo-Infrastructures

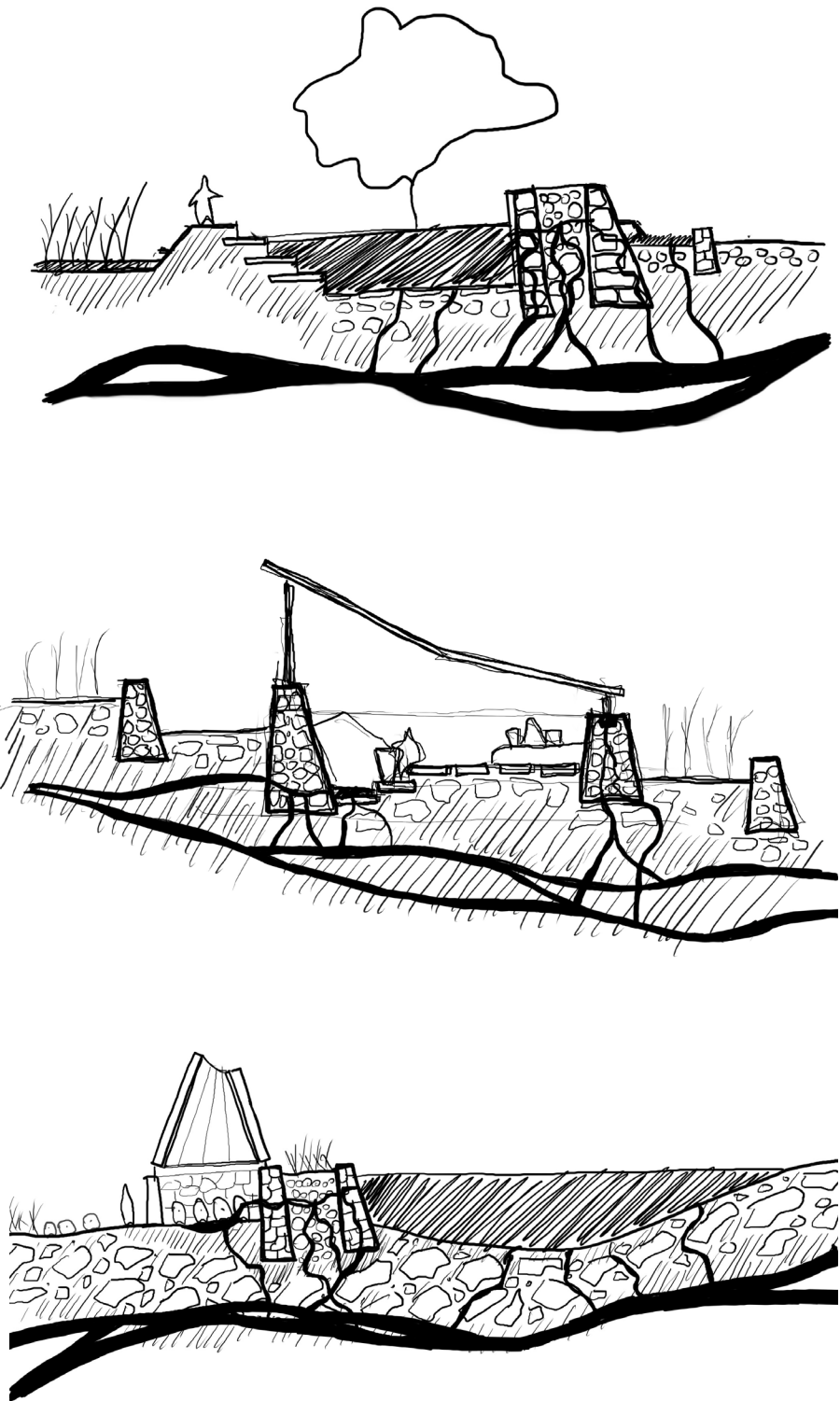


Figure 27 Yaku Cosmo-Infrastructure sketches

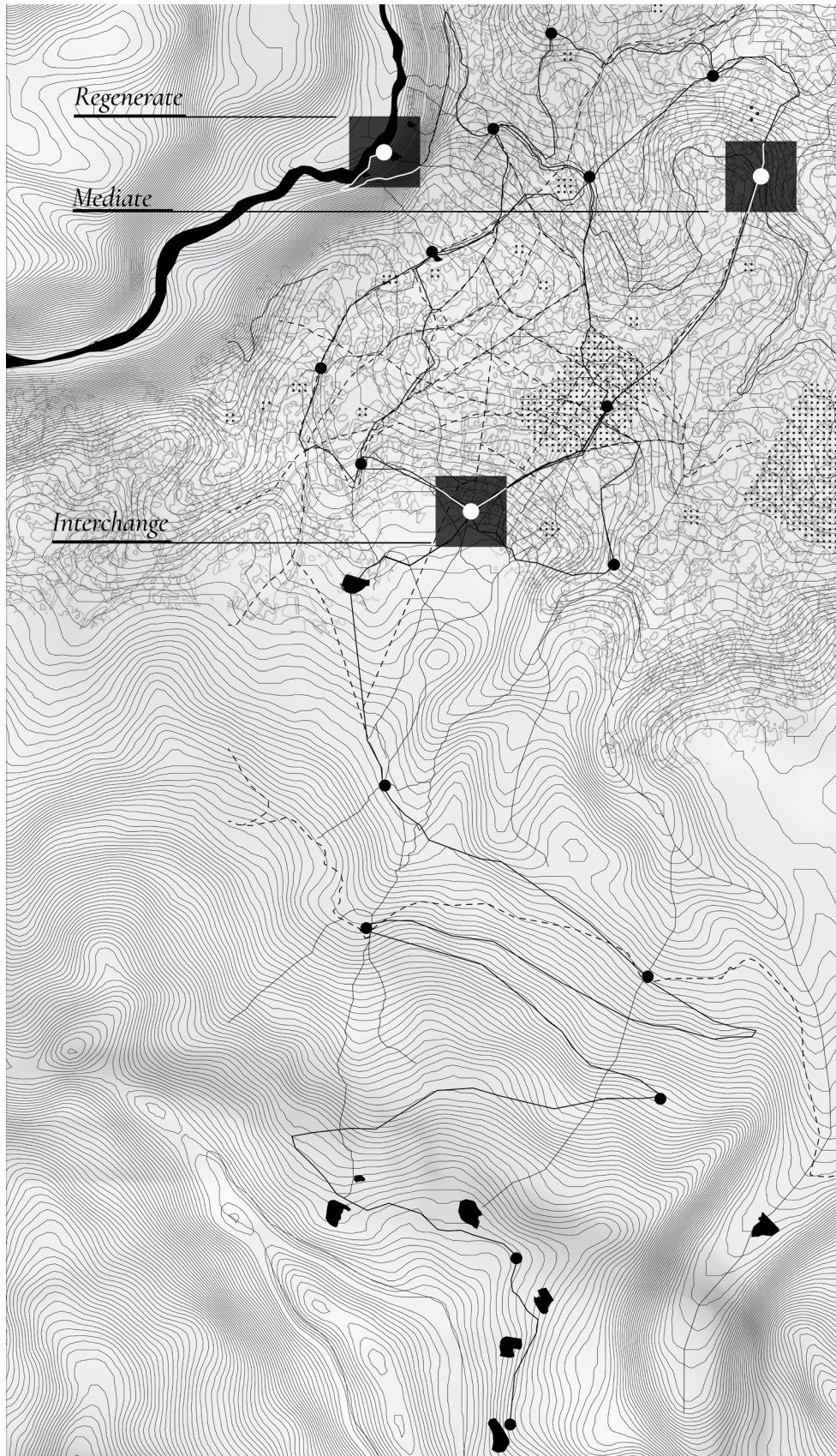


Figure 28 Path to Nurture Water

A Learning Path

4.1

Union Potrero has a beneficial sectionality because it has different water systems: Lagoons, wetlands, and water springs along its variety of altitudes that will facilitate access to water for the community.

This project proposes to Cosmo- infrastructures to mediate, interchange, and regenerate water in collaboration with their local ecology through a learning path that articulates the transect between the lagoons and the River to learn about Nurturing Water. The path is fluid; it changes across seasons, integrating stations as learning spaces. They promote embodied learning experiences about water harvesting, astronomy, agriculture, and crafts; by interacting with the ecology of water: people, plants, animals, and stars while moving along the landscape.

The act of walking shapes the landscape in the Andes. While walking, Crispin, a member of ABA, told me, “This path, the wider of Quispillacta, is the path where the spirits walk. Everything has a path, the rain, the hail, the sun, and so on.” In Quispillacta’s cosmology, the landscape is composed of a set of paths where the forces of nature are expressed and the path of each being is its territory”. As my mother always says, “Water has its path. Before passing, you have to ask permission to enter their territory”. Architecture appears as a conversation with the ecology of beings at the intersection of paths in the landscape.



Figure 29

Walking with Ana Machaca trough the main paths in Union Potrero, Quispillacta



Figure 30 Walking through the paths of Water, Ruqruca Waterfall, Chuschi, Quispillacta

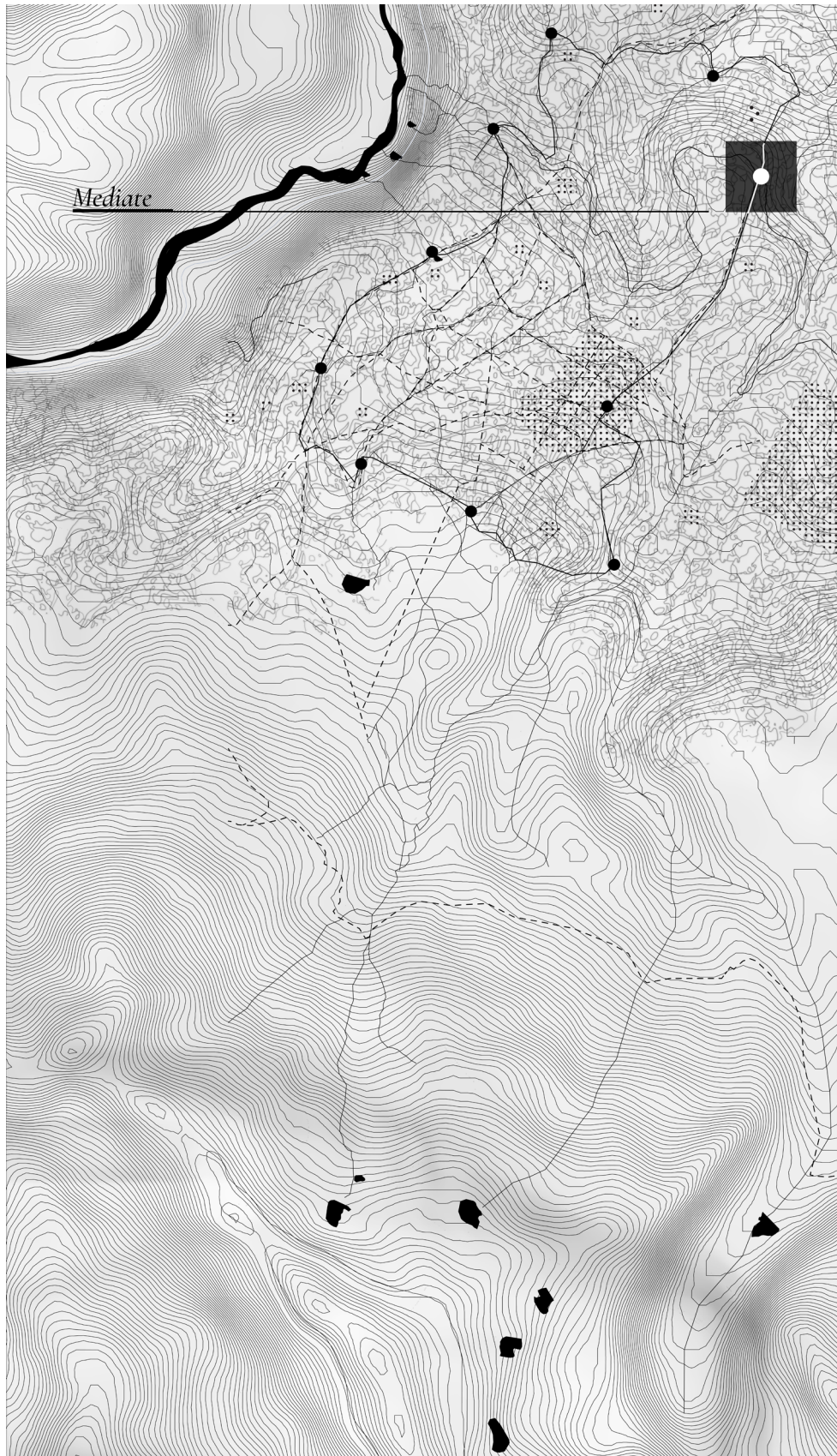


Figure 31 Learning Path_Mediate

Mediate

4.2

October 2024

The agricultural year begins with water slowly moving in the sky. Clouds coming from the Amazon rainforest arrive at Quispillacta. Water cosmo-infrastructures change over time. Here the cosmo infrastructure will work as a water tank to nurture the agricultural plots and an open classroom where the community gathers and learn about planting methods according to the altitude.

The classrooms occupy the natural depressions of the agricultural plots in the village, where the rain walks seasonally. Learning from the architecture of the lagoons, a stone retaining wall is positioned to define the space and serves as a board for the community to organize their weekly calendars and discuss the tasks of the day. The wall is stacked over one of the many ancestral rocks in the land that is used as a landmark to define the temporal boundaries of the area. The rocks are carved and will serve as places to exchange seeds during the dry season. As Marcela explained to me, the exchange of seeds only happened over natural surfaces.

January 2025

When water comes from the sky in the form of rain, it fills the classrooms that now work as temporal water tanks providing access to water for the agricultural plots in the area. Yaku cosmo-Infrastructures mediate the infiltration of rainwater into the ground. They slow down its flow to nurture the aquifer. The containment wall bleeds internally, slowly nurturing the

aquifer. When the tank overflows, the water canal is filled and washes the ancestral rock, taking the seed that the community leaves as an offering and walking with them to new destinations, diversifying the crops in other villages.

January 2028

After three years, the soil of the water tank is saturated. Marcela explained that it takes three years to consolidate a lagoon when the soil is saturated. The community uses native plants to “call water,” plants that capture water and humidify the soil. Besides, they plant Berros that clean and enrich water to improve crops’ quality. Rainwater fills the aquifer again, but this time, it will remain as a small lagoon that will nurture the area permanently.

After one is consolidated, new cosmo-infrastructures will appear in other locations, decentralizing access to water. Building new classrooms will promote the transfer of techniques to future generations.

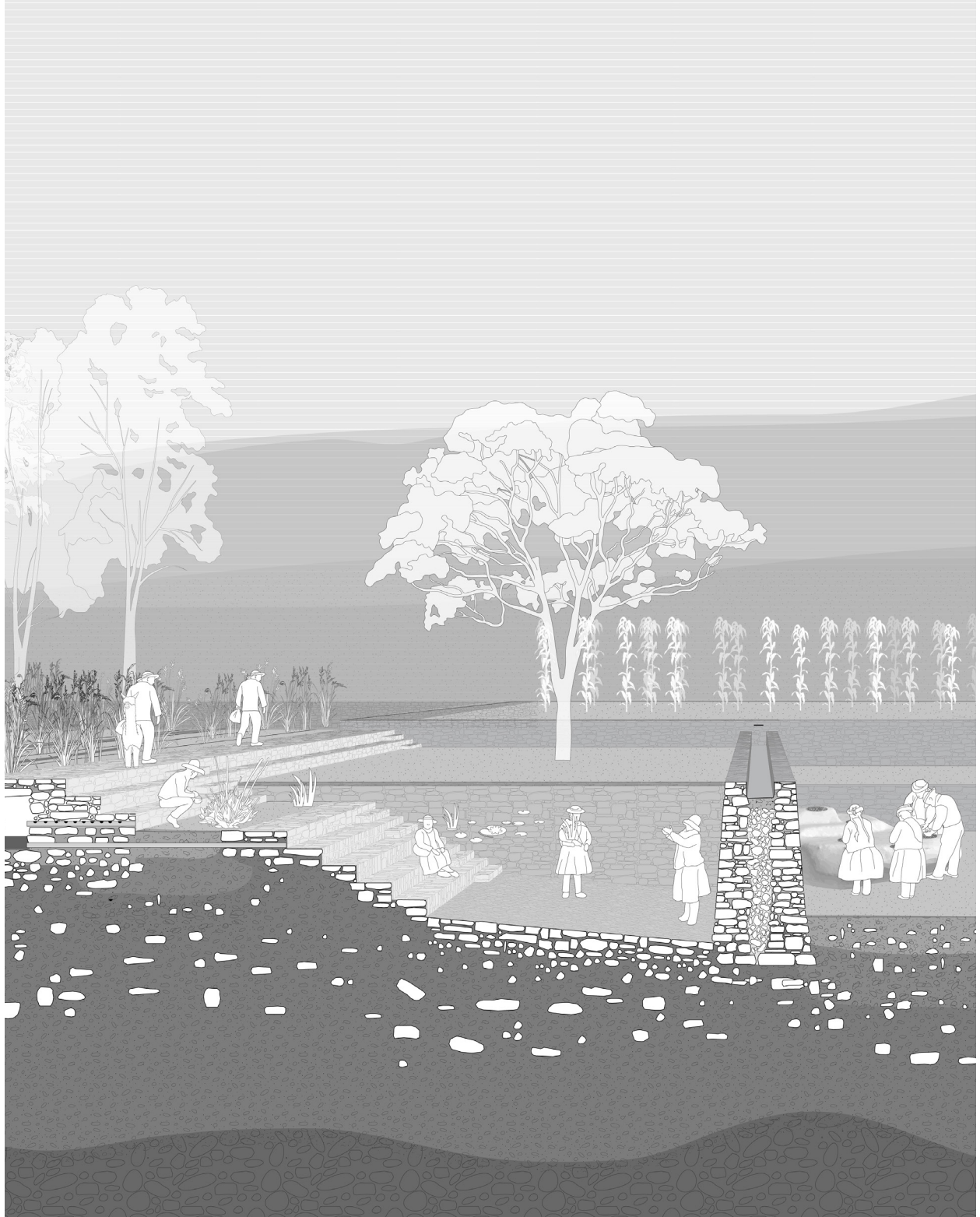
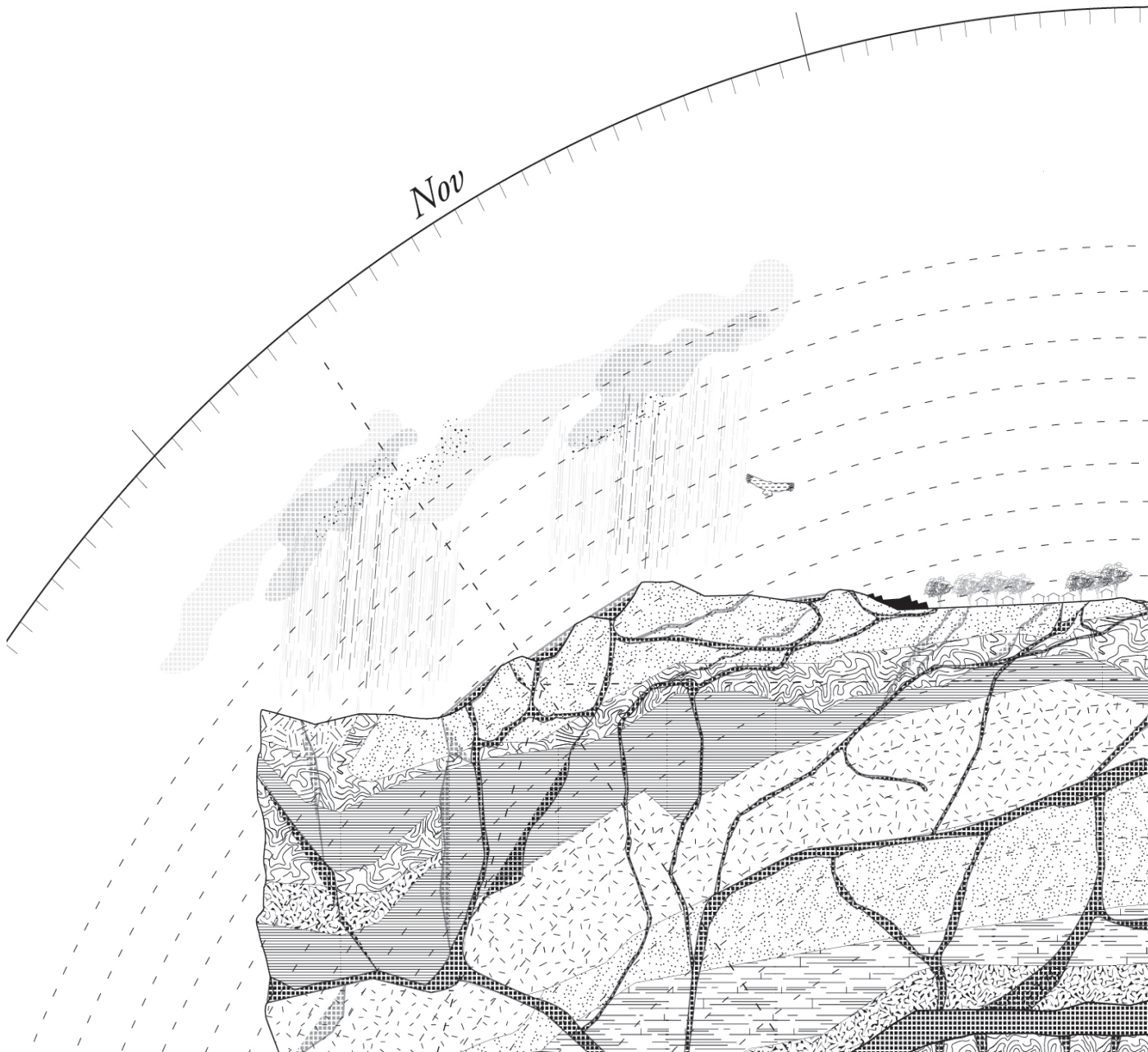


Figure 32 Yaku Cosmo- Infrastructure to Mediate

Figure 33 Learning Path Transect

2024 Oct



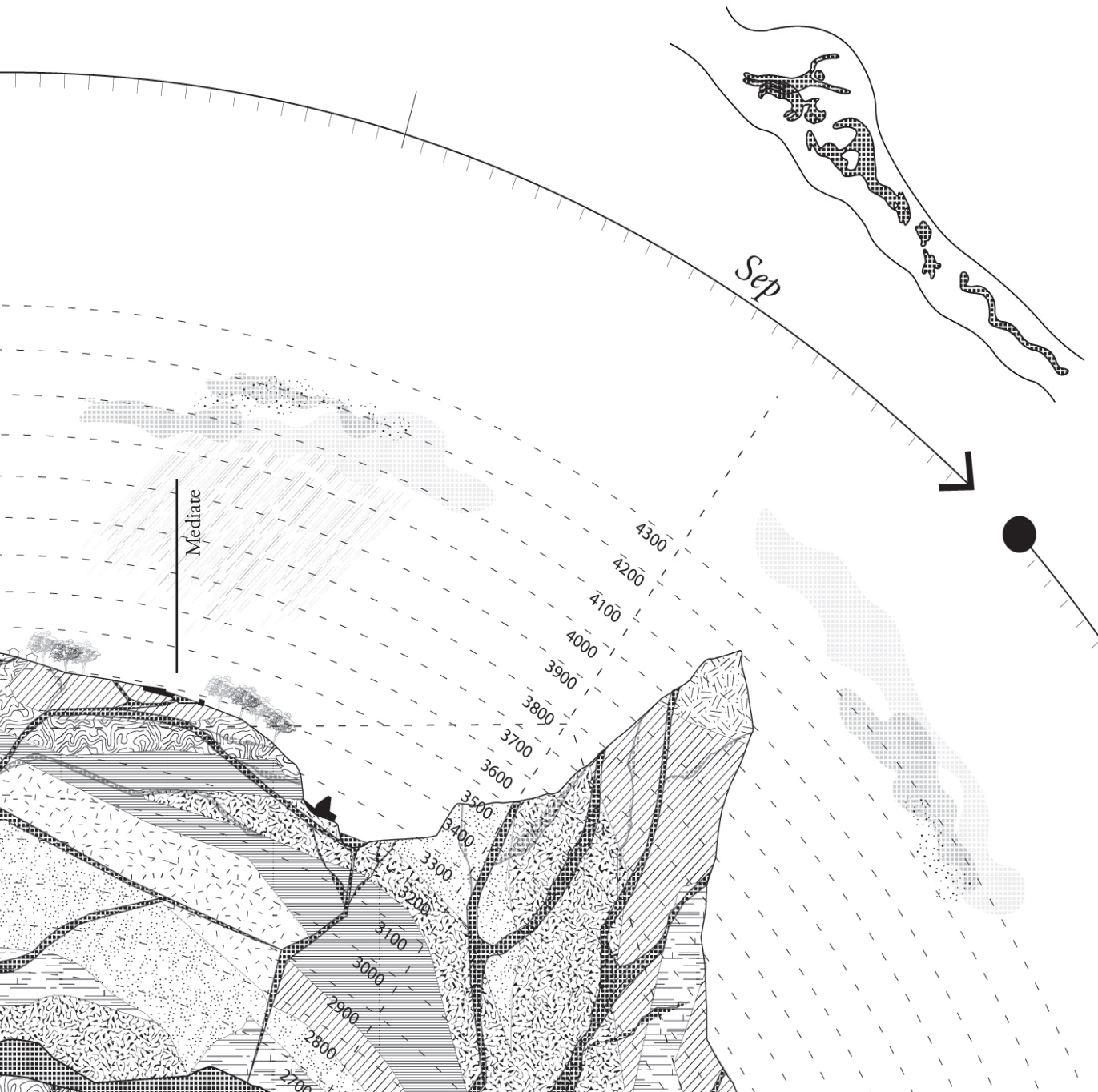


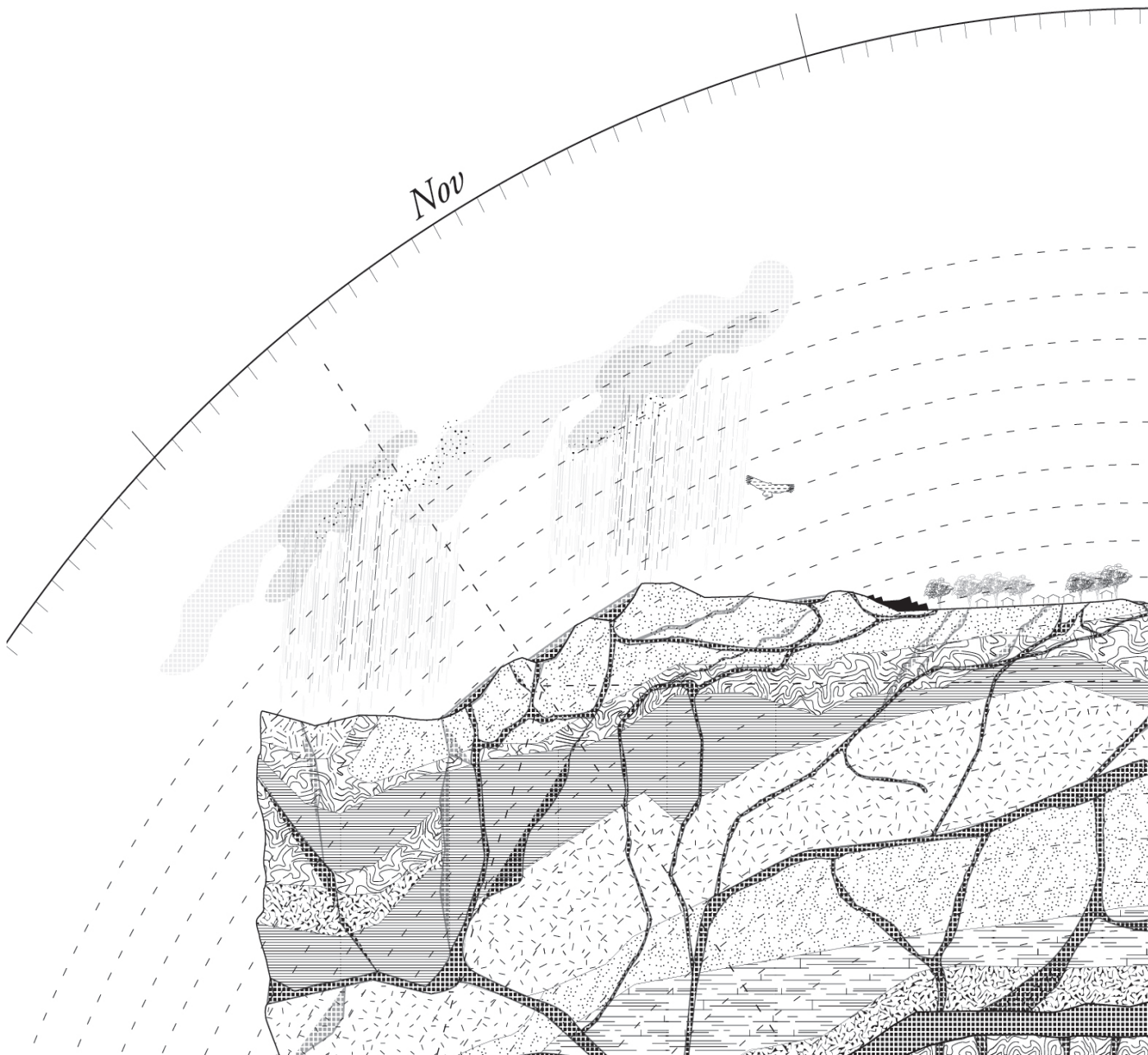


Figure 34 Mediate First Section



Figure 35 Learning Path Transect

2028
Oct



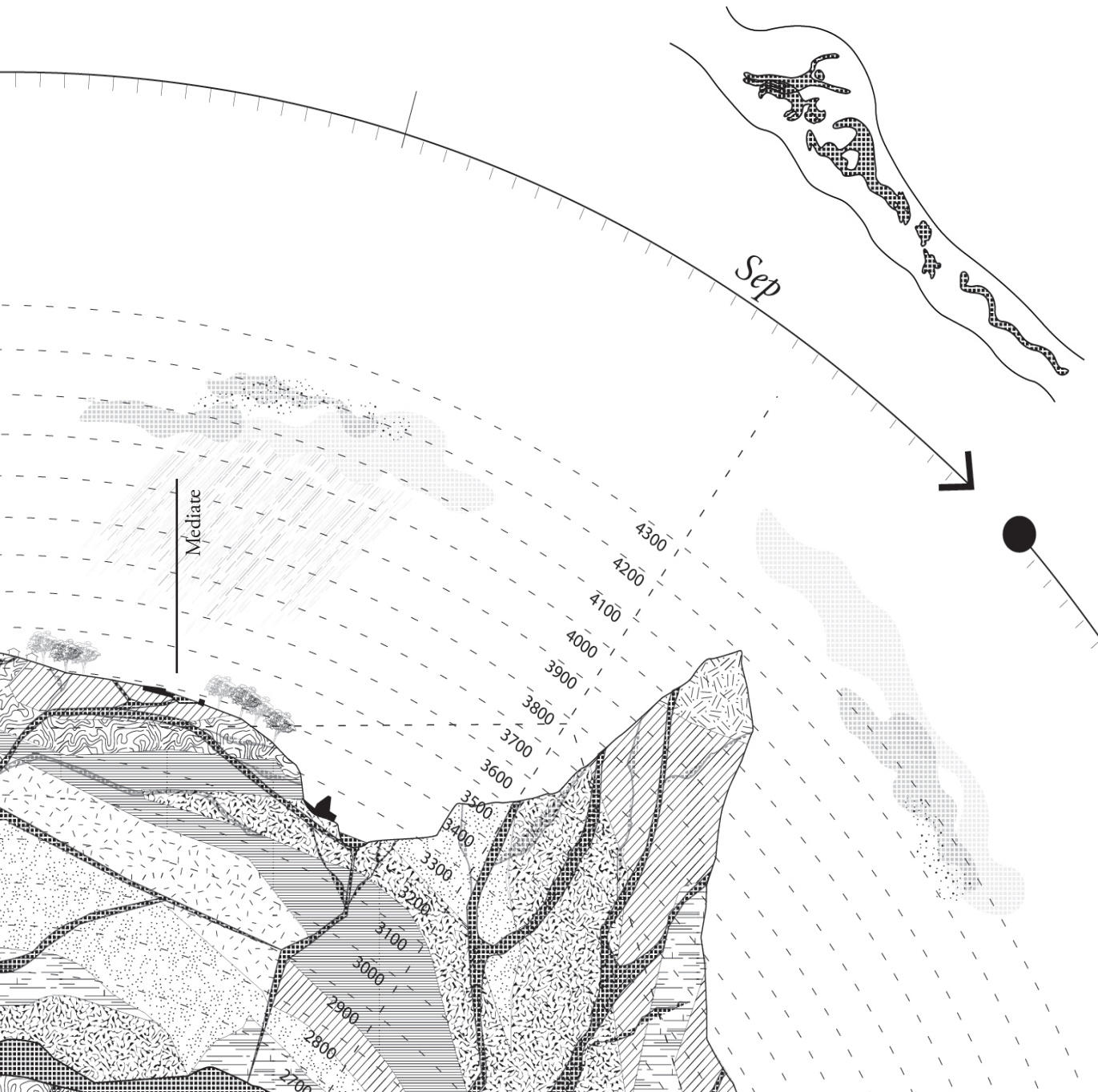




Figure 36

Mediate Second Section



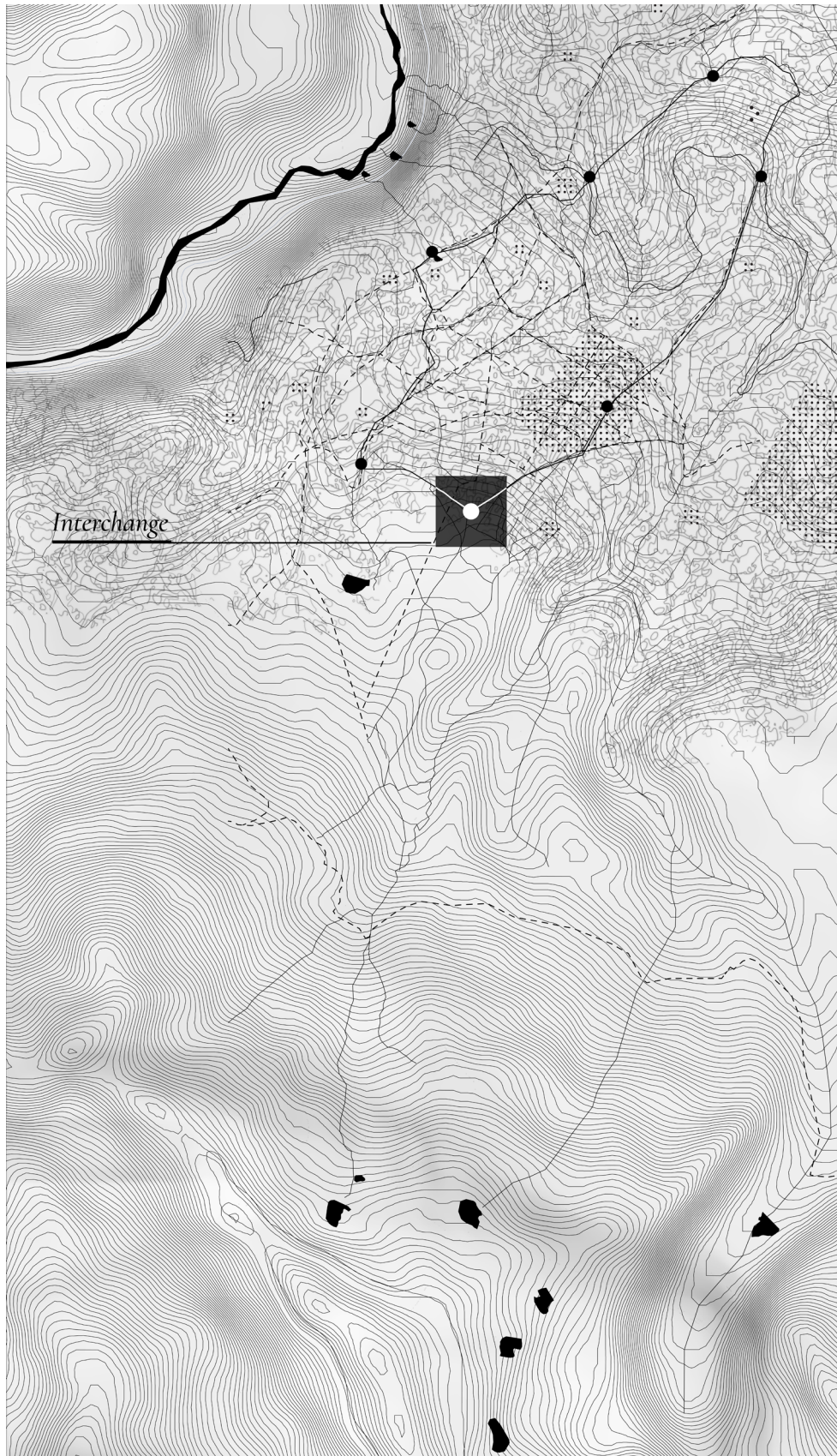


Figure 37 Learning Path_Interchange

Interchange

May 2025

Water flows into the mountain's veins, and Cosmo-Infrastructures help to capture and store Water from the main water spring in the community.

4.3

Here, the Yaku-Cosmo-Infrastructures adopt retaining walls that slow down the rainwater flow. The walls have different thicknesses, infilled with geological layers that allow interchanging Water between the sky and the land.

The walls create terraces, learning from the agricultural practices that slowly absorb rainwater through its layers, nurturing the aquifer and growing Quinoa, and other native crops. The walls also contribute to creating spaces where the community can learn craftsman practices in a Clay Workshop. As Marcela explained to me Marcela, clay is fluid, a water matter. Water makes and dissolves sedimentary rocks over millions of years through a constant interchange with the earth. Clay appears as a result of this cycle.

In Andean cosmology, Matter is alive, in constant interchange with ecology. When I was walking with Marcela, she pointed to a water stream and explained that Water has a waist, and concrete is too rigid to let Water flow as it wants. "We prefer to use clay as it is fluid. It expands with the sun and contracts in the cold. Clay takes the shape of Water."

August 2022

Before going to Quispillacta, I walked in Cusco, visiting ancient water temples. During my travel, I studied the Huacas, sacred places, and objects related to Water. I learned from these experiences that vessels, mountains, and temples were different scales of the same sacred process. The process of infiltrating Water. A process that nurtures the soil to allow life in the Andes. The clay workshop learns from this experience to create a space that interchanges Water and Matter to nourish the ecology.

May 2025

The architecture of the workshop challenges the infrastructural aspiration of high efficiency. As a cosmo-infrastructure, the workshop does not only take Water; it also gives Water back to the ecology. The roof is made with Ichu, a native plant that captures Water in its fibers, slowing down the rainwater flow. Most of the Water will be poured into the infrastructural walls, providing Water for the space but also infiltrating Water into the aquifer after being filtered in its geological infill.

The workshop consumes Water from the aquifer and from the sky, interchanging them to craft and nurturing it with minerals that will go back to the earth through the main canal, which infiltrates Water back to the aquifer.

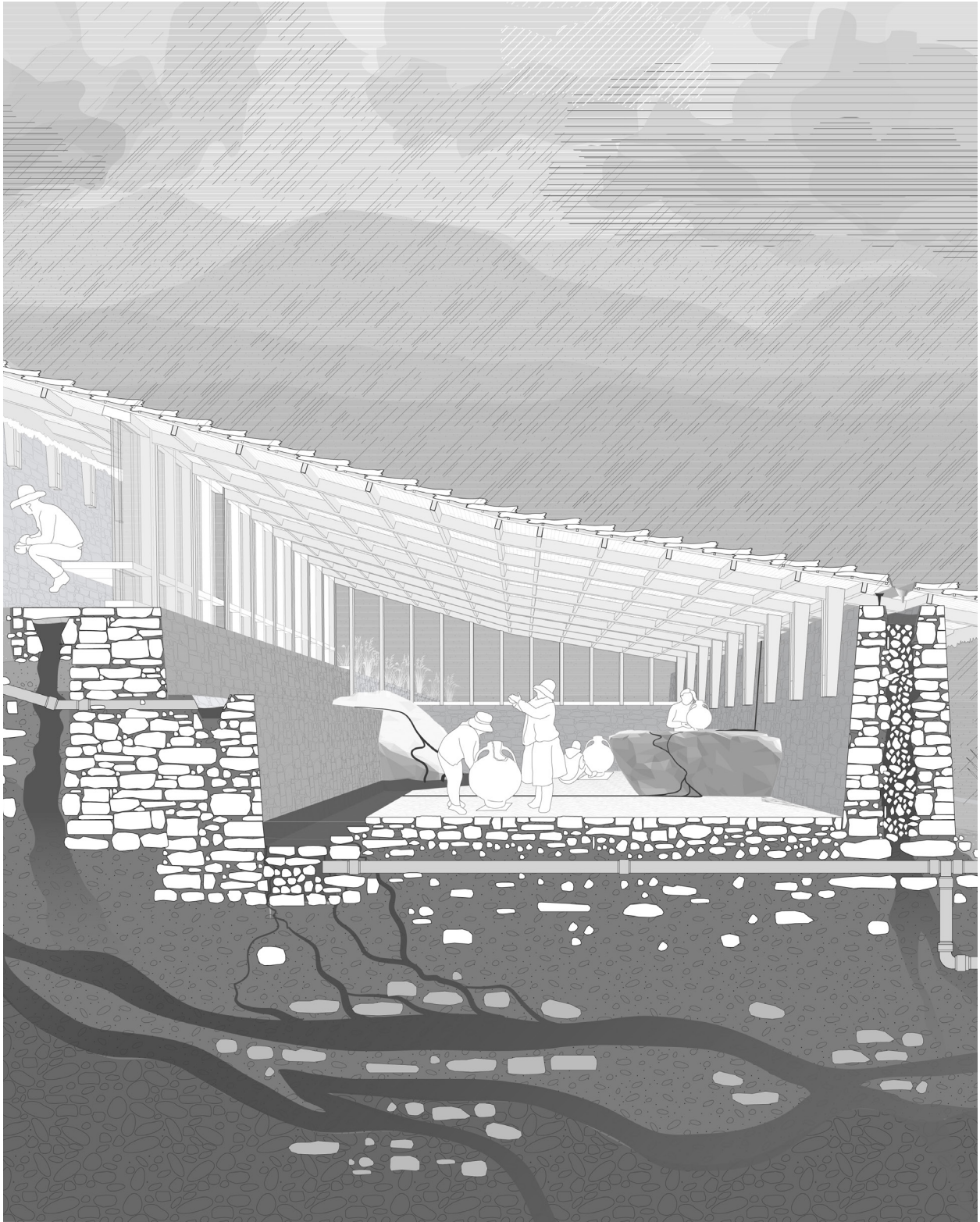


Figure 38 Yaku Cosmo- Infrastructure to Exchange



Figure 39 Mountain as a vessel, Saqsaywaman, Cusco

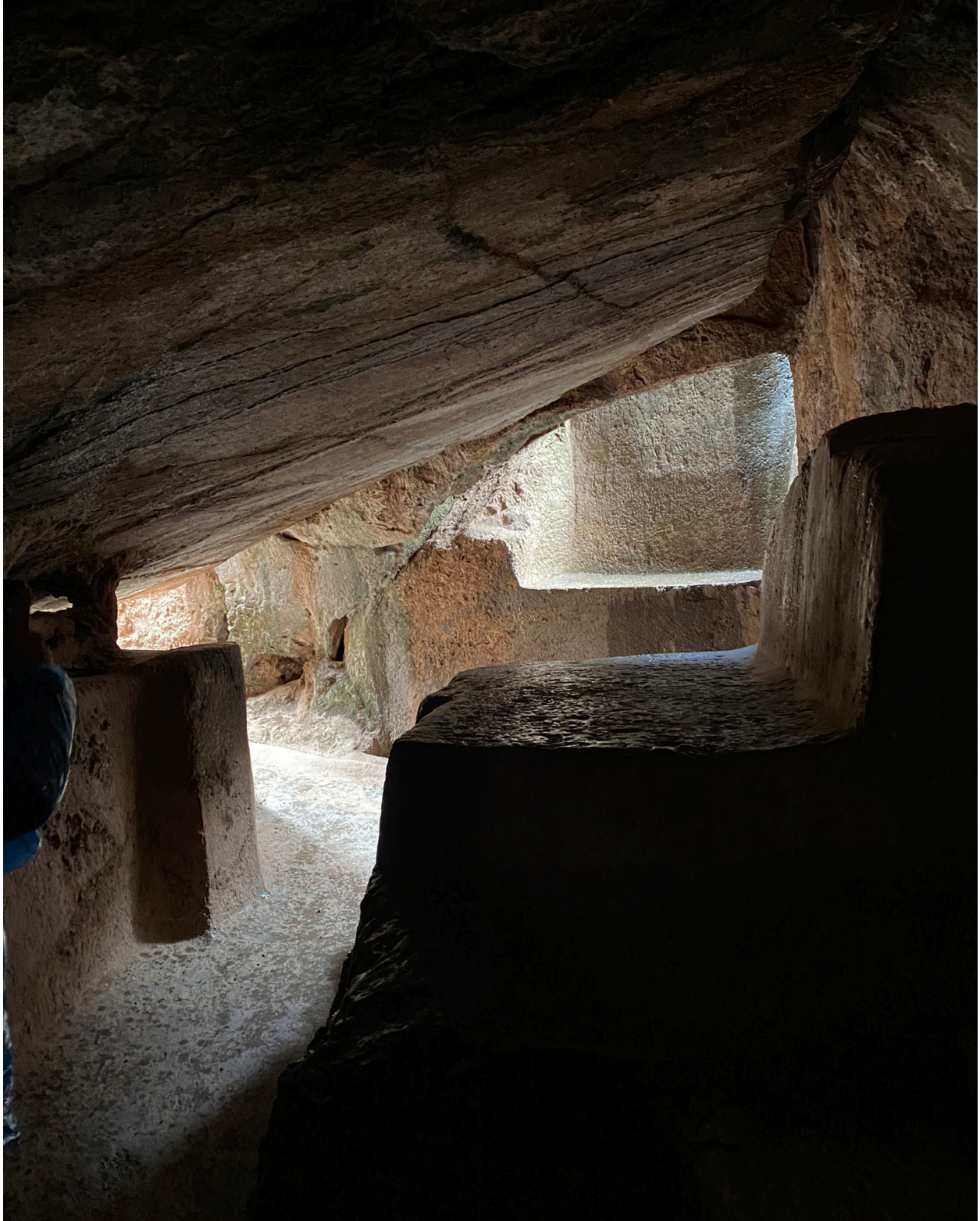


Figure 40 Water Temple that infiltrate Water as a sacred ritual, Qenqo, Cusco



Figure 41 Sedimentary rocks showing its liquid condition in a deep time scale



Figure 42 Sedimentary rocks showing its liquid condition in a deep time scale



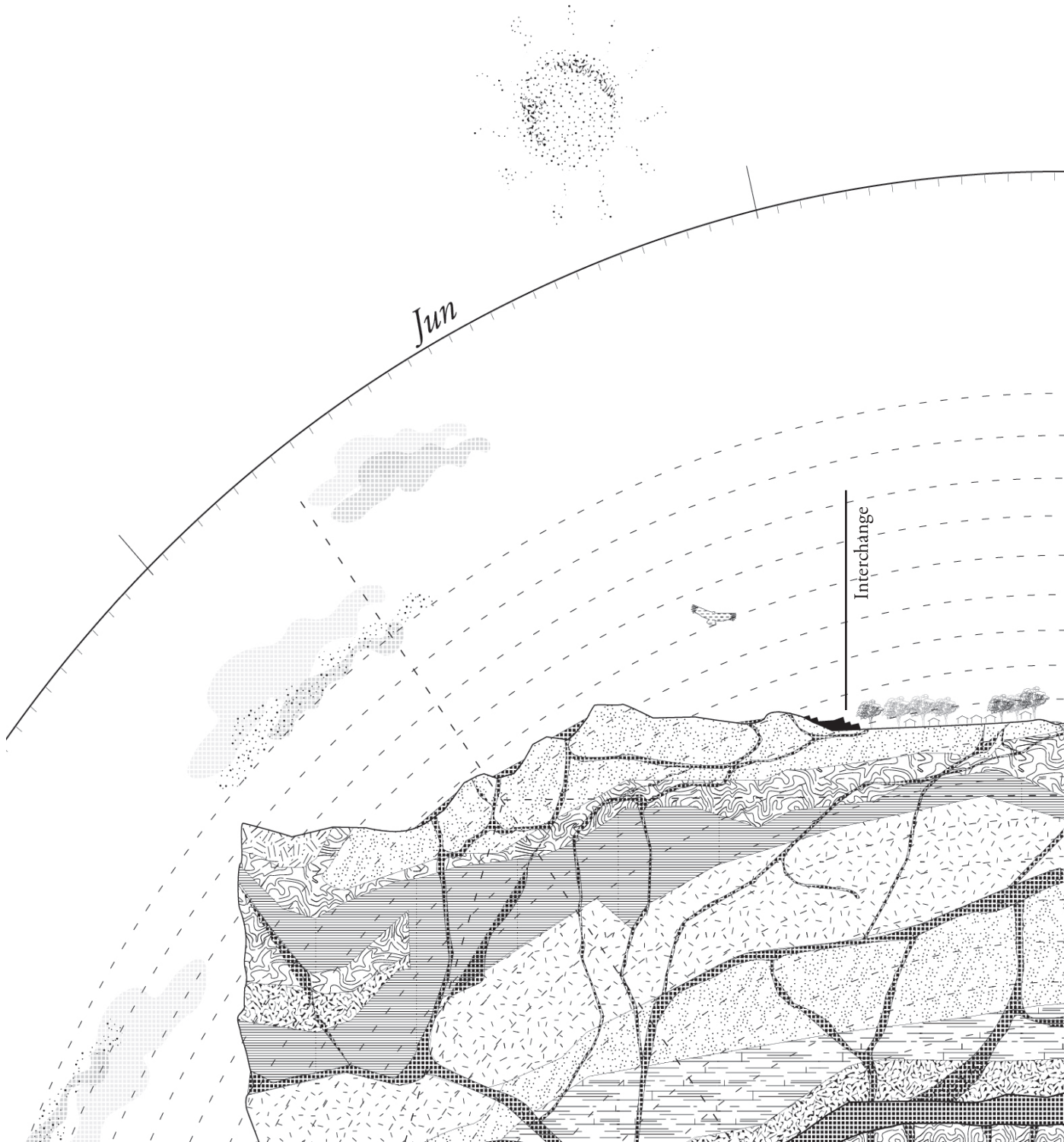
Figure 43 Marcela explaining me about the properties of Clay, Quispillacta, Ayacucho



Figure 44 Clay Stream, shapes by the force of Water, Quispillacta, Ayacucho

Figure 45 Learning Path Transect

2025 *May*



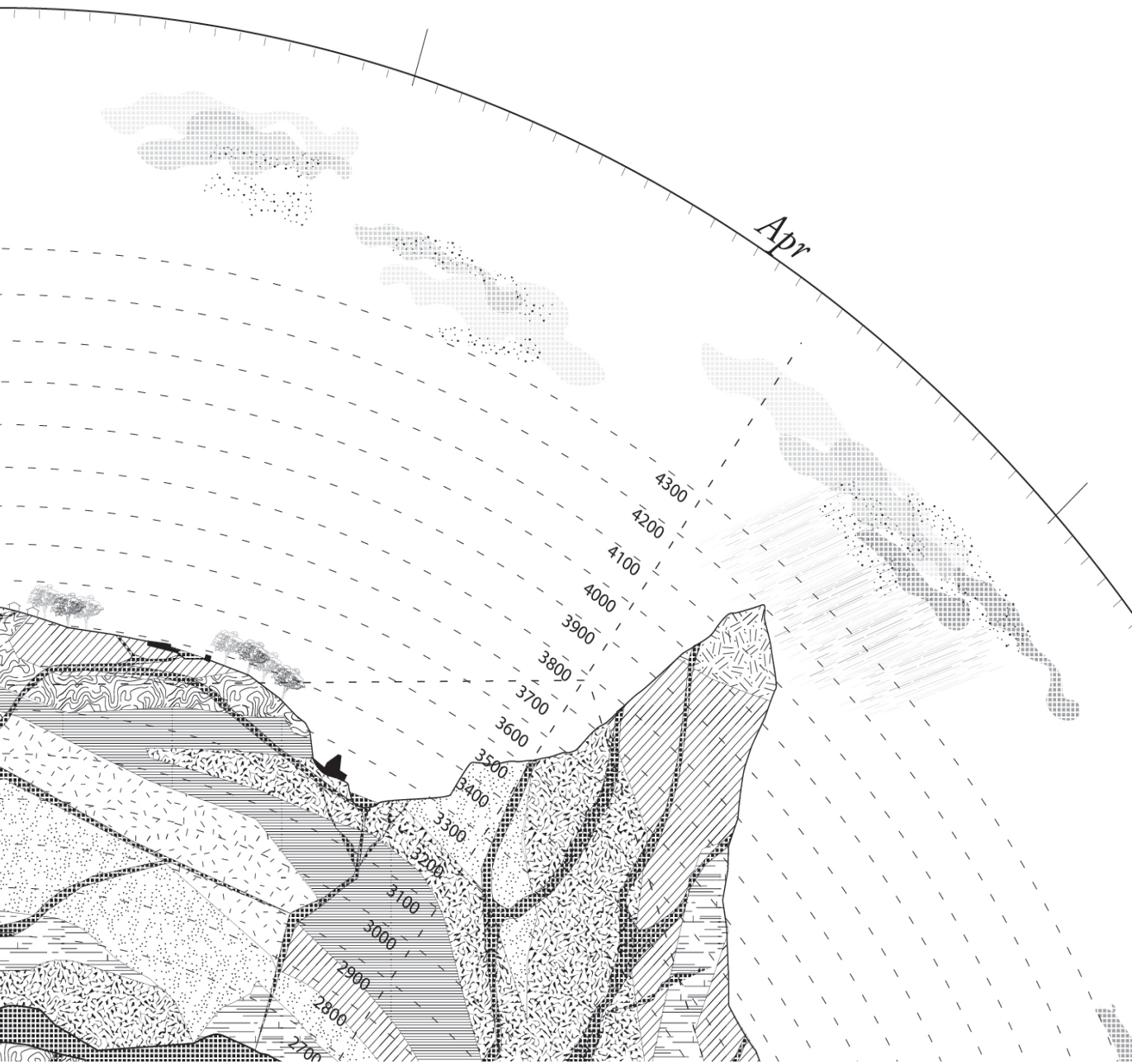




Figure 46 Interchange first Section

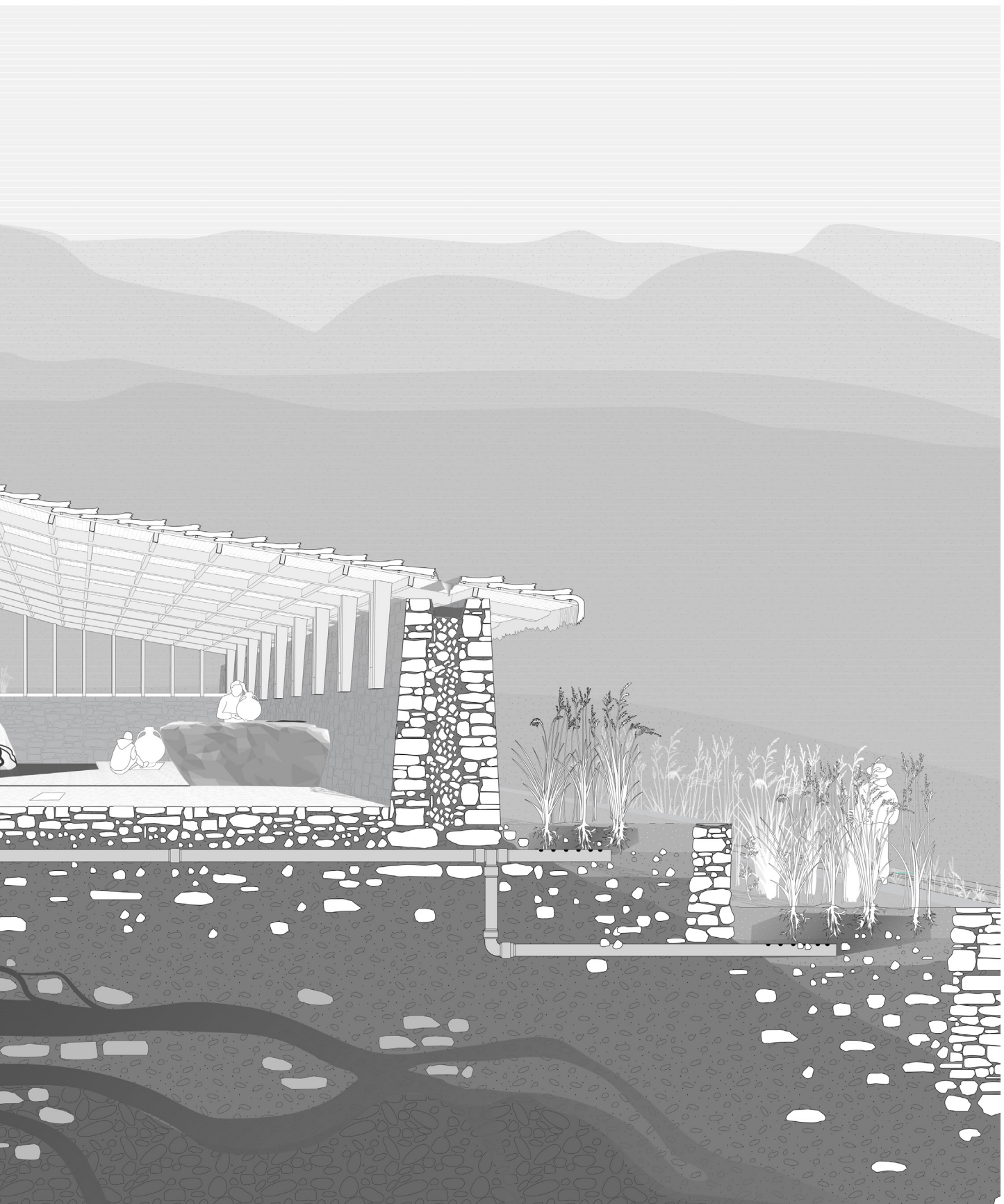
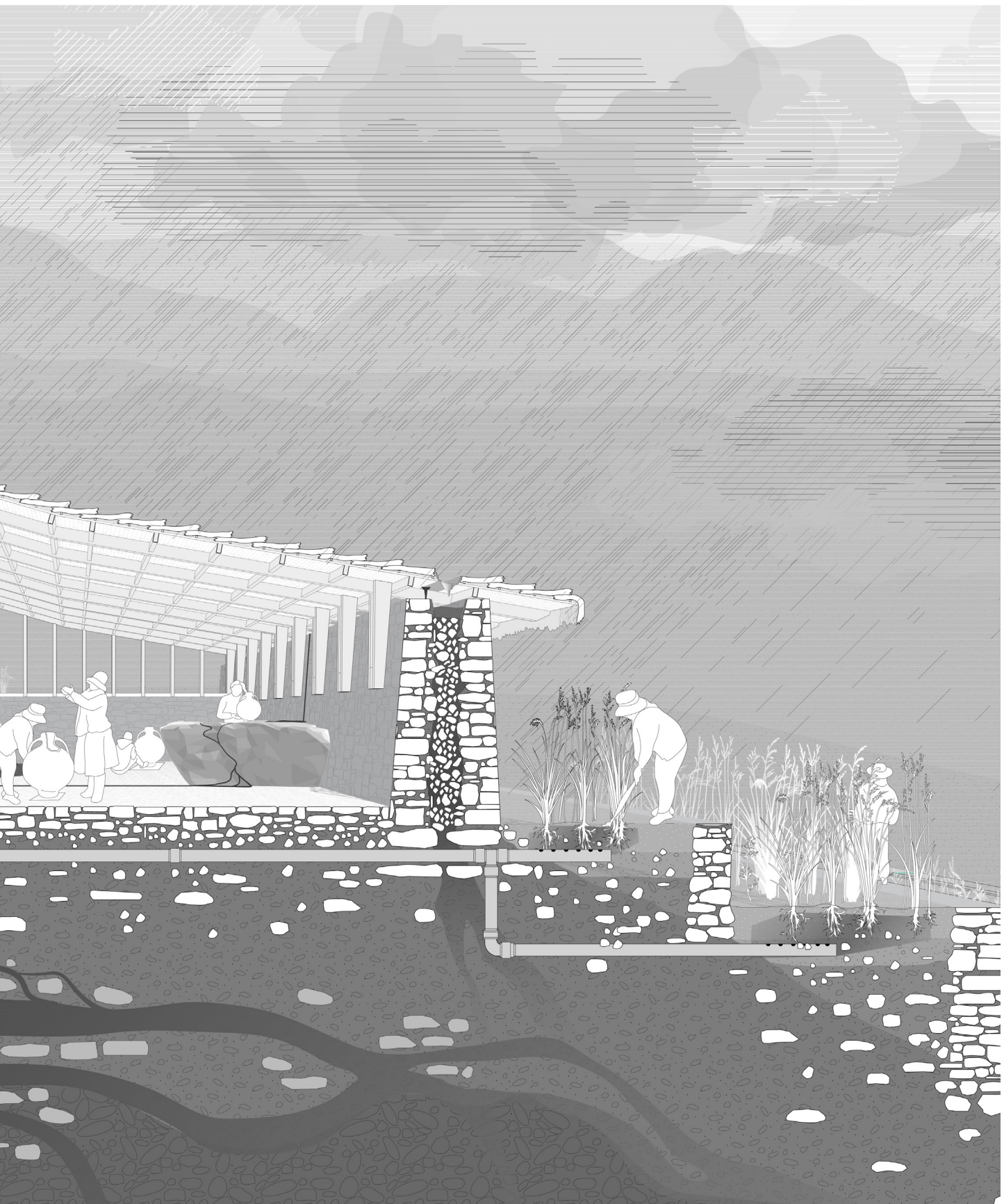




Figure 47 Interchange Second Section



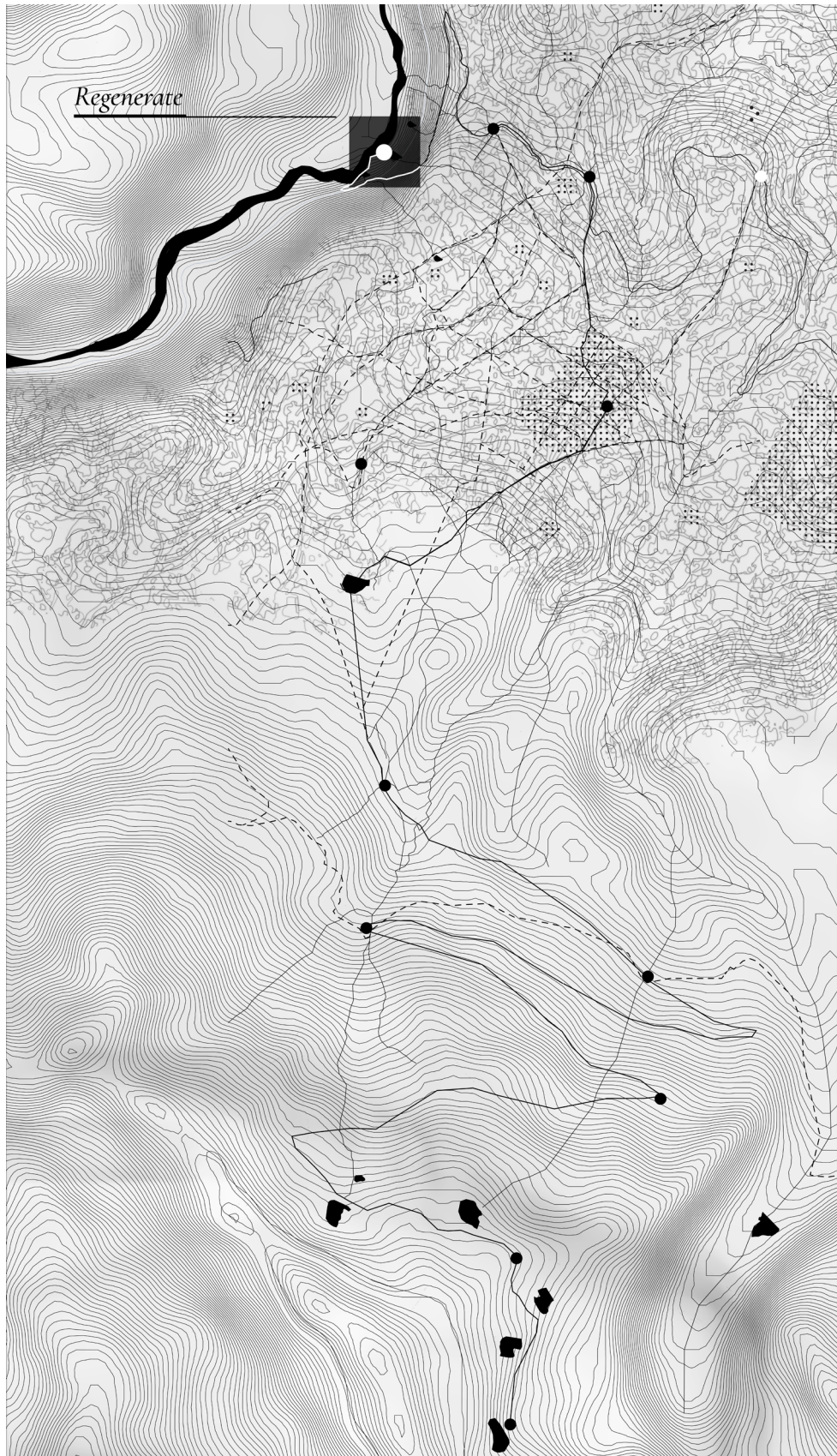


Figure 48 Learning Path_Regenerate

Regenerate

July 2025

4.4

It is time to regenerate Water. It is the dry season, and the mountain has brought Water back to the surface, emerging through Qochas (Water springs), nourishing bodies of Water: people, animals, and crops. During the regeneration period, the community prepares the path of Water, cleaning canals and water infrastructures for Yaku's return.

This project proposes a Cosmo-Infrastructure that appears at the end of the main canal, a water treatment plant to clean wastewater before it goes back to the river to other villages in lower altitudes. It cleans water through constructed wetlands that slow the water flow, provides oxygen and filters Water.

As Marcela explained me, native plants have many roles in nurturing Water. The project proposes using Carrizos and Berros that provide oxygen and filtered Water. Cleaned Water will be finally collected in a pond that will work as a reservoir for the community.

This cosmo-infrastructure not only treats Water but also contributes to bringing it back to the cosmos as it will work as a new station for the water festival.

September 2022

Yarqa Aspyi is the water festival where the community celebrates the regeneration of life with the return of Yaku. As Marcela explained, “Yarqa Aspyi, more than a celebration, is the intensification of relationships among all the water beings: people, animals, plants, and stars participate.” The celebration is a pilgrimage from the town’s central square to the main Puquio (Water Spring). During the pilgrimage, the community cleans and maintains the water infrastructures to allow Water to walk during the incoming year.

This project proposes to integrate these cosmo-infrastructures into the pilgrimage by housing a water temple. During the festival, the community walks from the lagoons to the river. On their way, they organize to maintain the water infrastructures to allow Water to walk during the incoming year. The festival’s destinations are spaces of encounter for the Ayllu during the festival. The path connects Water temples as destinations for the community to sing, dance, chew coke, and drink. The project proposes to use the pond’s spillway area to create seasonal water temples as a Cosmo Infrastructure that relates to the ritual aspect of Water.

The temple contributes to the regeneration cycle by housing the community’s interaction as an embodied manifestation of Water. In the Andean Cosmology, the body is another scale of the water ecology. During the festival, Matawayta is a sacred plant that carries the spirit of Water. It

only grows in places with Water that the Runas identify as sacred. Magda explained that the community holds the spirit of Water by wearing the plant. On that day, every movement, interaction, and observation is a manifestation of Water that allows the community to plan the incoming year.

This temple is also an observatory of water beings. Animals participate in nurturing Water. At the end of the festival, we saw a condor flying in front of us. Condors are sacred animals in the Andes. His presence meant that Water accepted our offering. Frogs are animals that the community observes to predict the cycles of rain. The ponds provide a humid environment ideal for frogs, facilitating their observation. Their croaking announces the early arrival of the rain. By listening to them, the community knows the first early rain is coming.

September 2025

It is time to bring Water to the cosmos. Yachaqs, wise people, teach how to observe the return of the Rio Mayu. For the Quispillacta community, there is a river in the sky, the milky way, that Runas, people in Qechua, call “Rio Mayu.” The community has observed the relationship between Water and the cycles of celestial bodies since ancient times. Marcela Machaca explained Marcela taught me that architecture is relational in Andean Cosmology. When we visit an ancient temple in Quispillacta, she describes it as “a conversation with Rio Mayu” as its canal and niche are aligned with it. She

still notices a present connection where we used to frame the past as it is no longer functional. The temple is aligned with the path of Amaru. Temple's niche is still used to celebrate that connection. It reminds the community that celestial bodies are essential to nurturing Yaku.

This new temple will work as an observatory as the roof is oriented following the path of Rio Mayu. The community observes the brightness of the "Llama eyes" to read the frequency of rain in the incoming year. On September 24th, the constellation of the llama will be reflected on the temple's flooded floor. It will allow the community to learn and practice the observation of celestial bodies. By observing the return of Rio Mayu, the community knows that Yaku has been regenerated and the life cycle has started again.

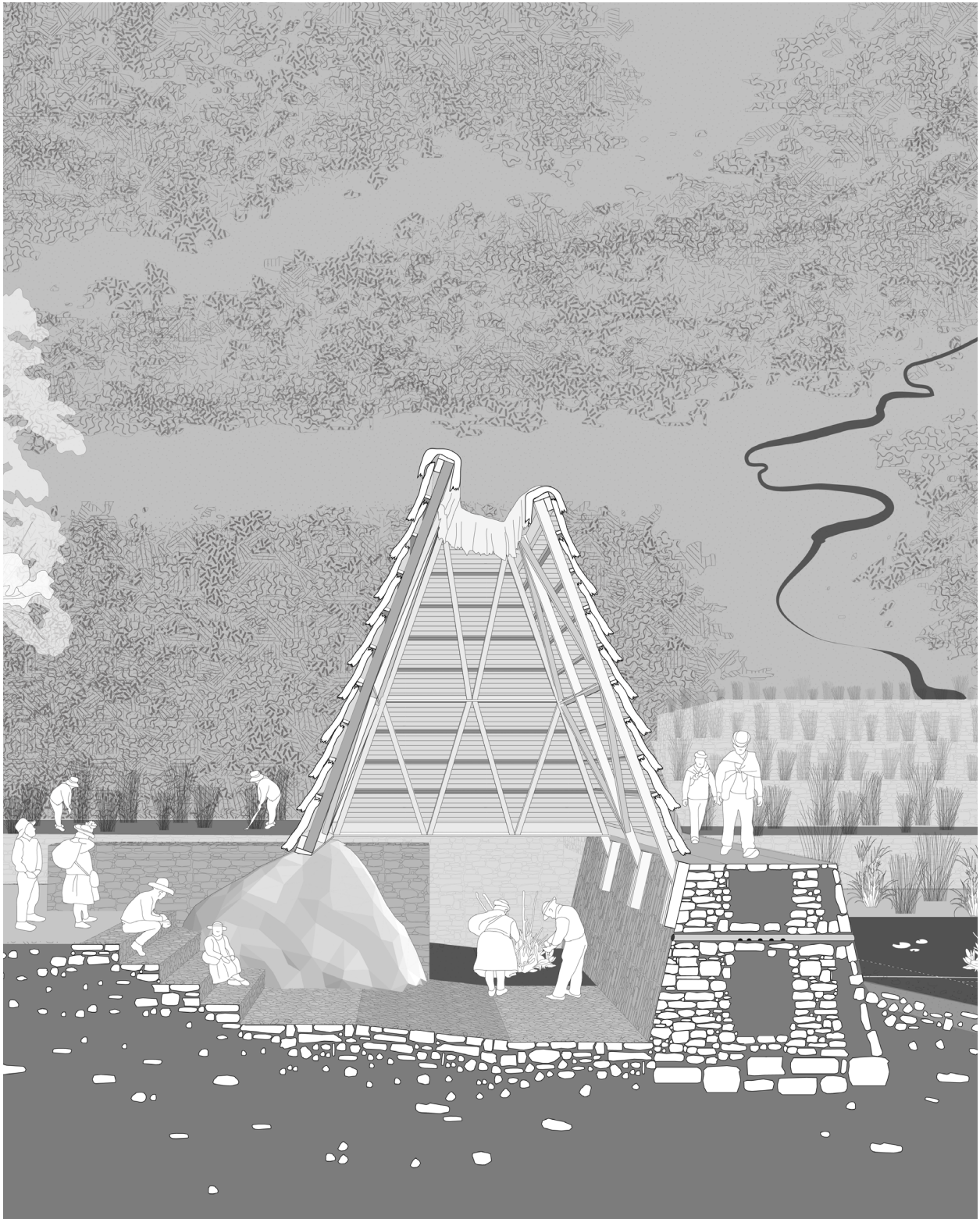
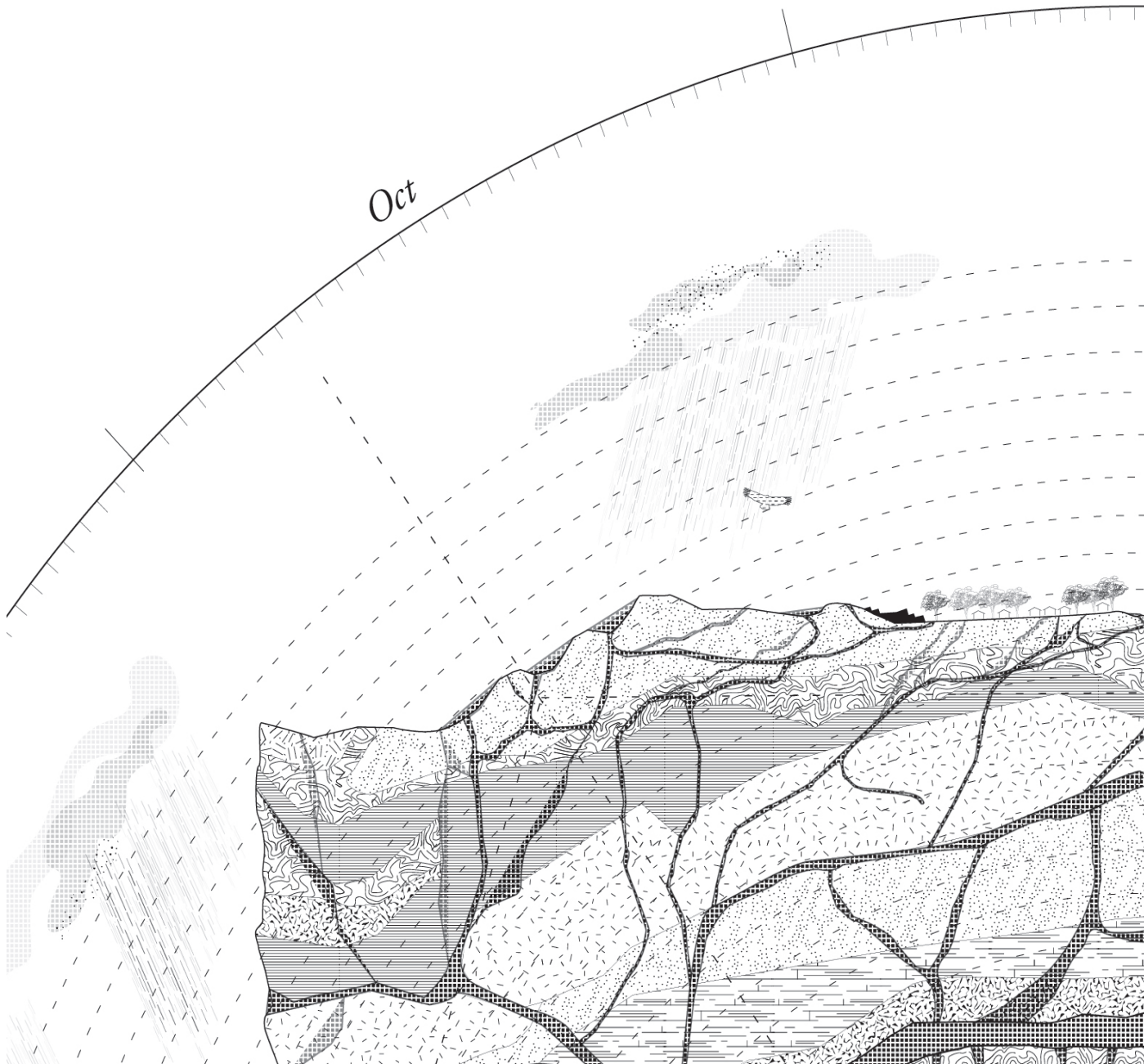
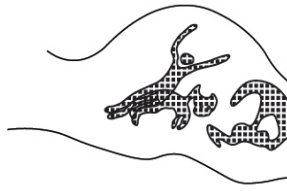


Figure 49 Yaku Cosmo- Infrastructure to Regenerate

Figure 50 Learning Path Transect

2022 Sep



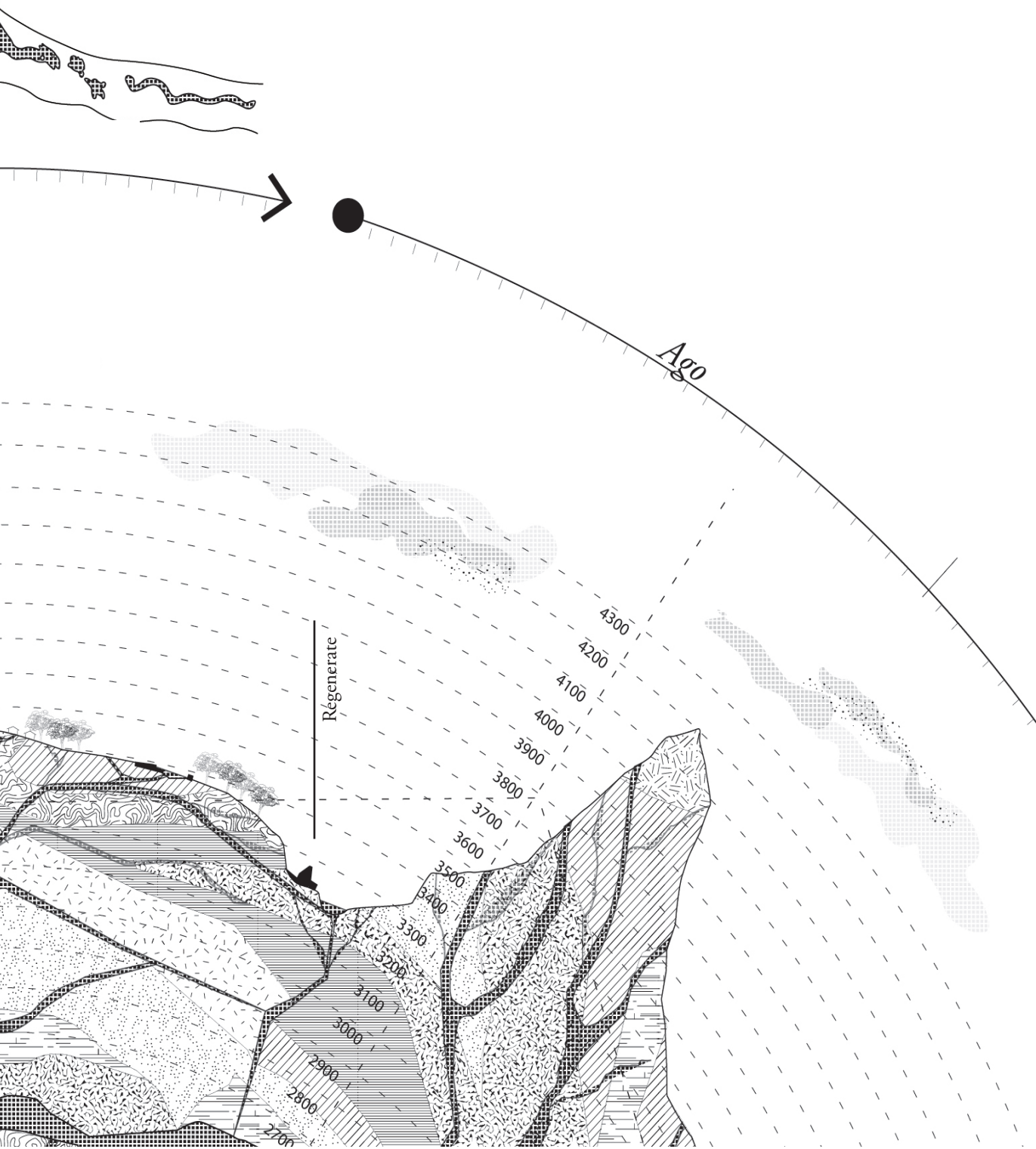




Figure 51 Pilgrimage along the path of Water, Yarqa Aspyi



Figure 52

Runas (People) carrying plants that manifest the spirit of Water, Yarqa Aspyi



Figure 53 Water Temple as a station for the festival, Yarqa Aspyi



Figure 54 Musicians playing “La Pasion del Agua”, Yarqa Aspyi



Figure 55

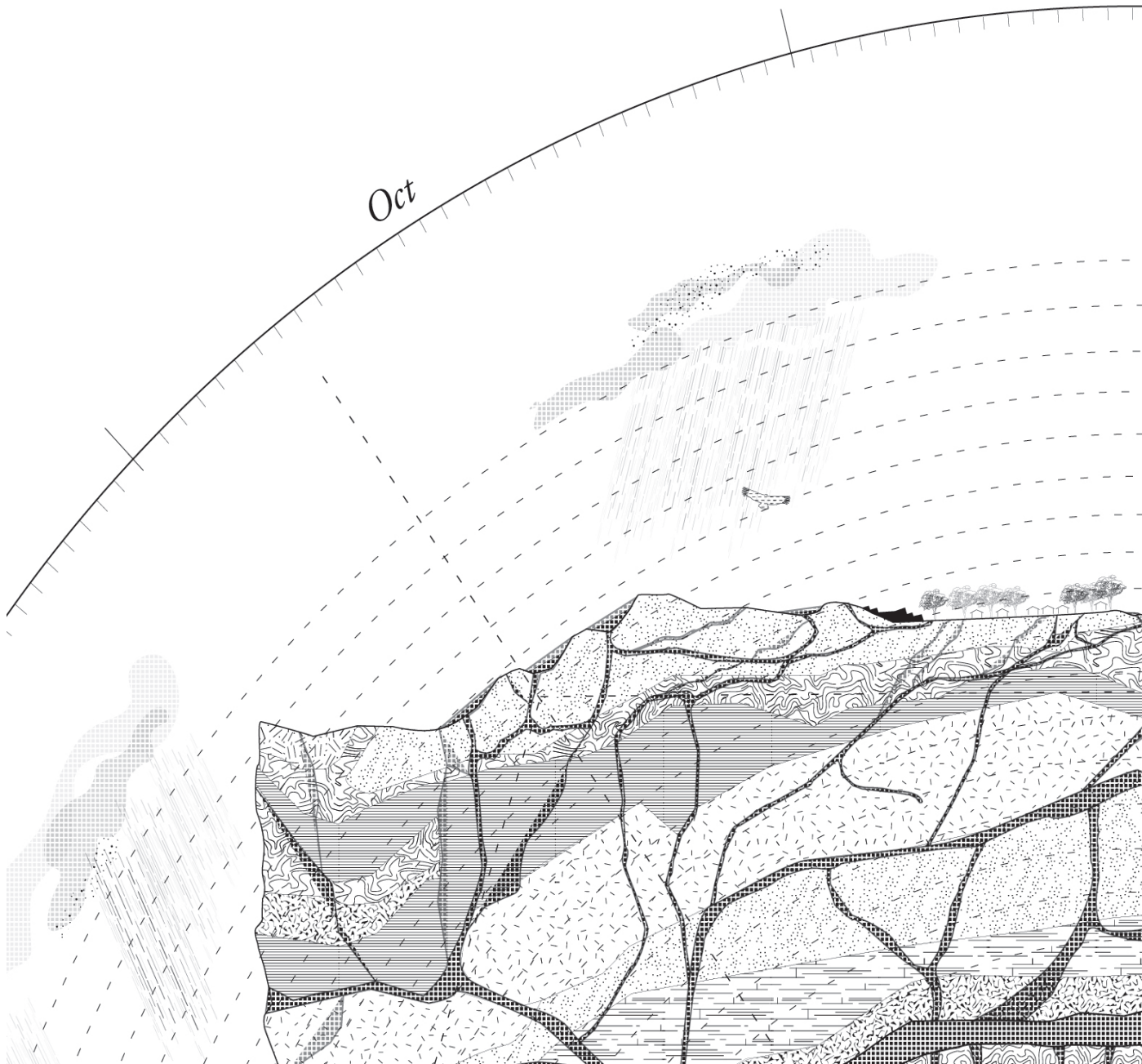
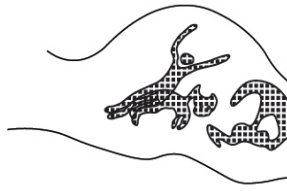
Offering to the main Puquio, Water Spring, Yarqa Aspyi



Figure 56 End of the festival, Gathering and communal meal, Yarqa Aspyi

Figure 57 Learning Path Transect

2025 Sep



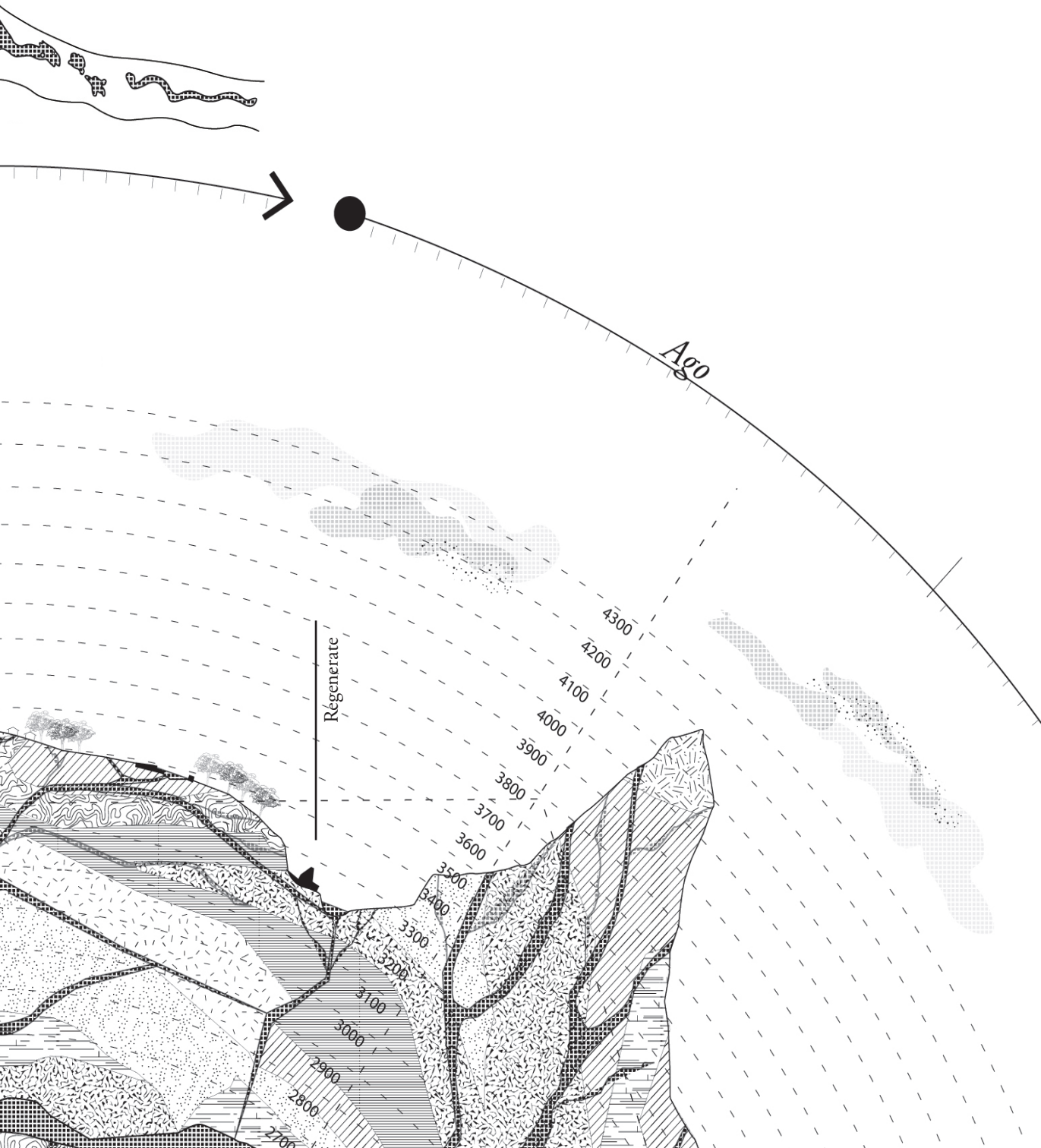




Figure 58 Regenerate, Water Festival

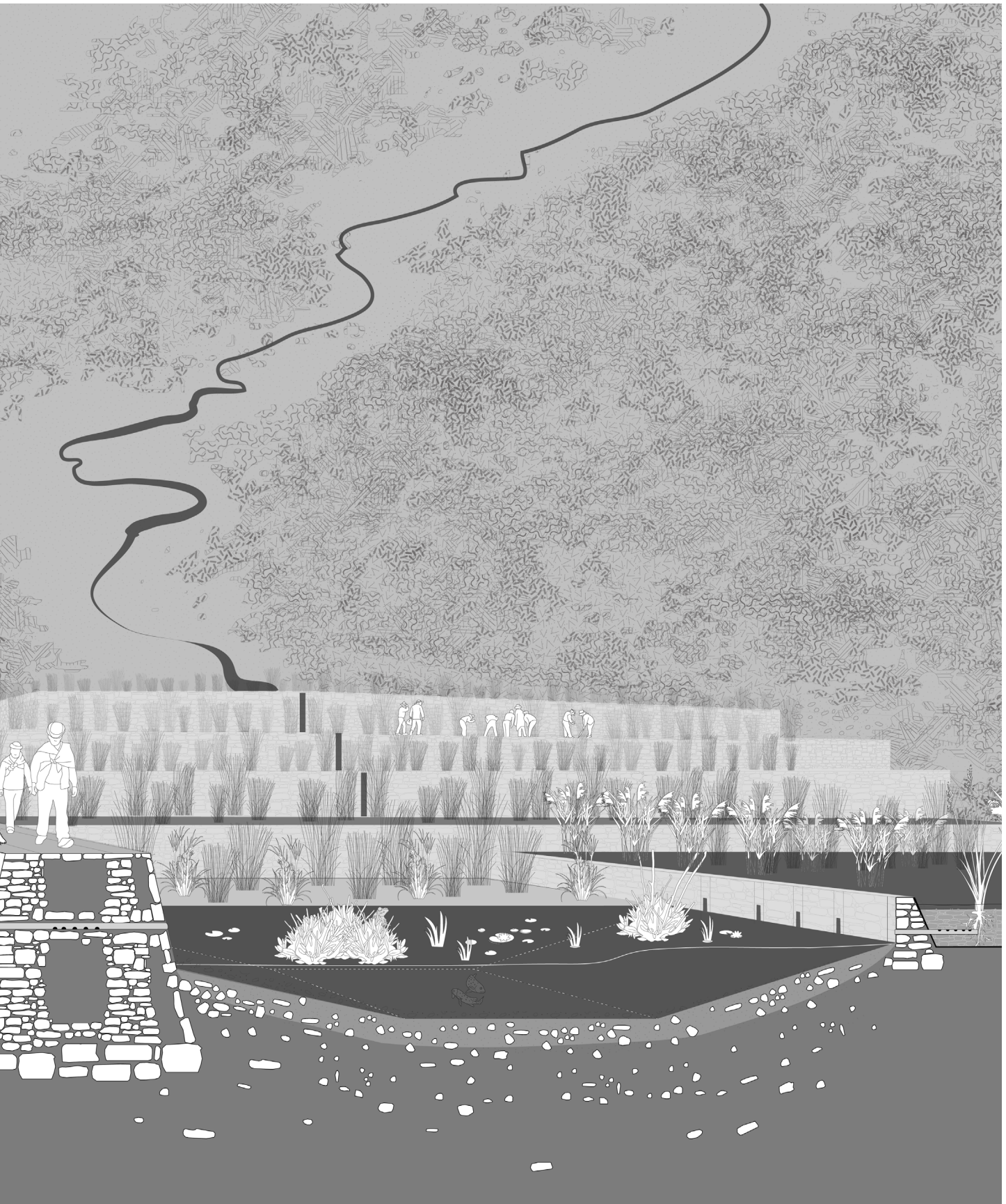




Figure 59 Magda teaching me how Architecture allows to converse with Celestial beings



Figure 60

Ritual niche aligned with the path of Rio Mayu (Milky Way)

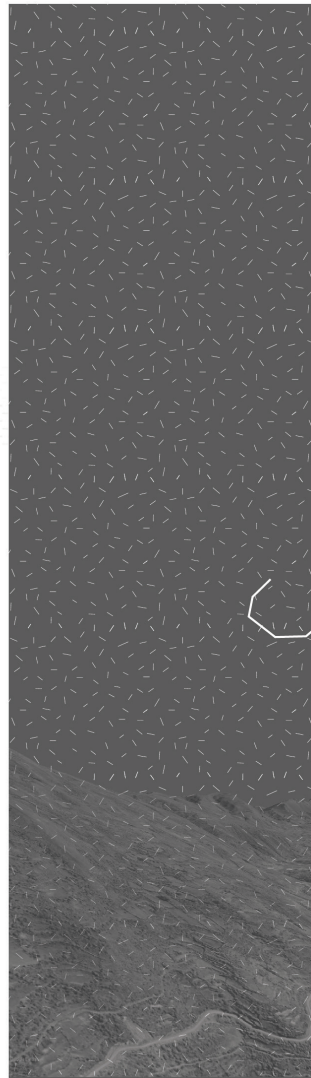
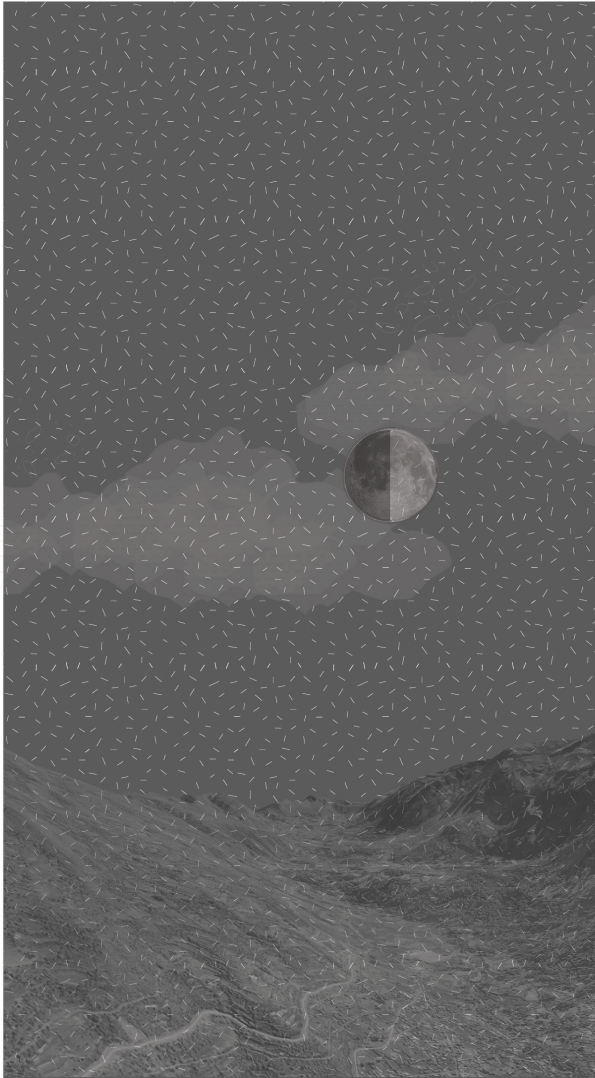


Figure 61 Water Celestial Bodies

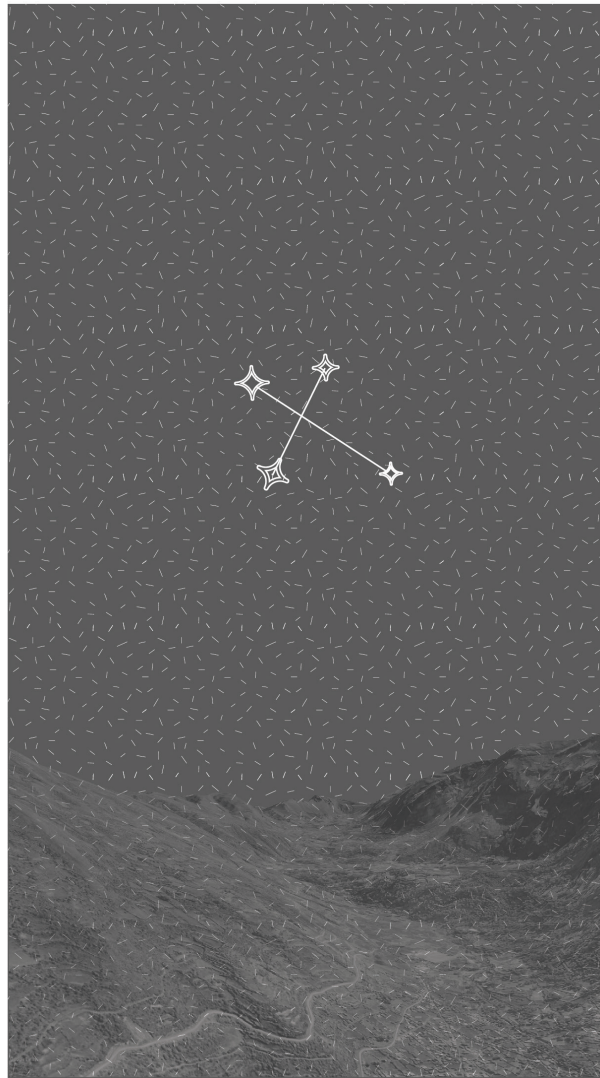
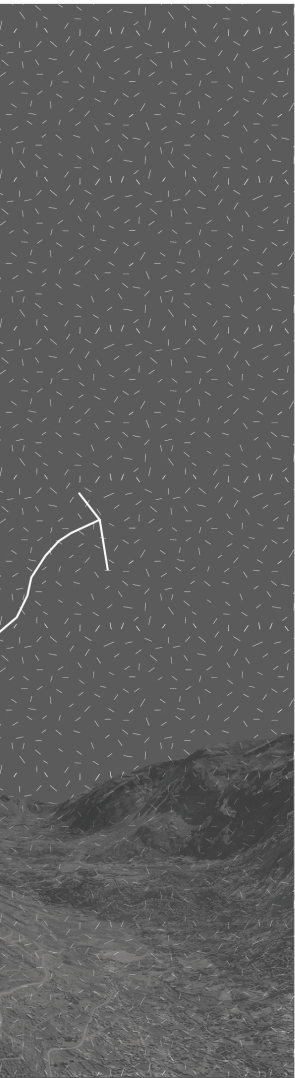




Figure 62 Regenerate, Water Spill, Observation of Frogs

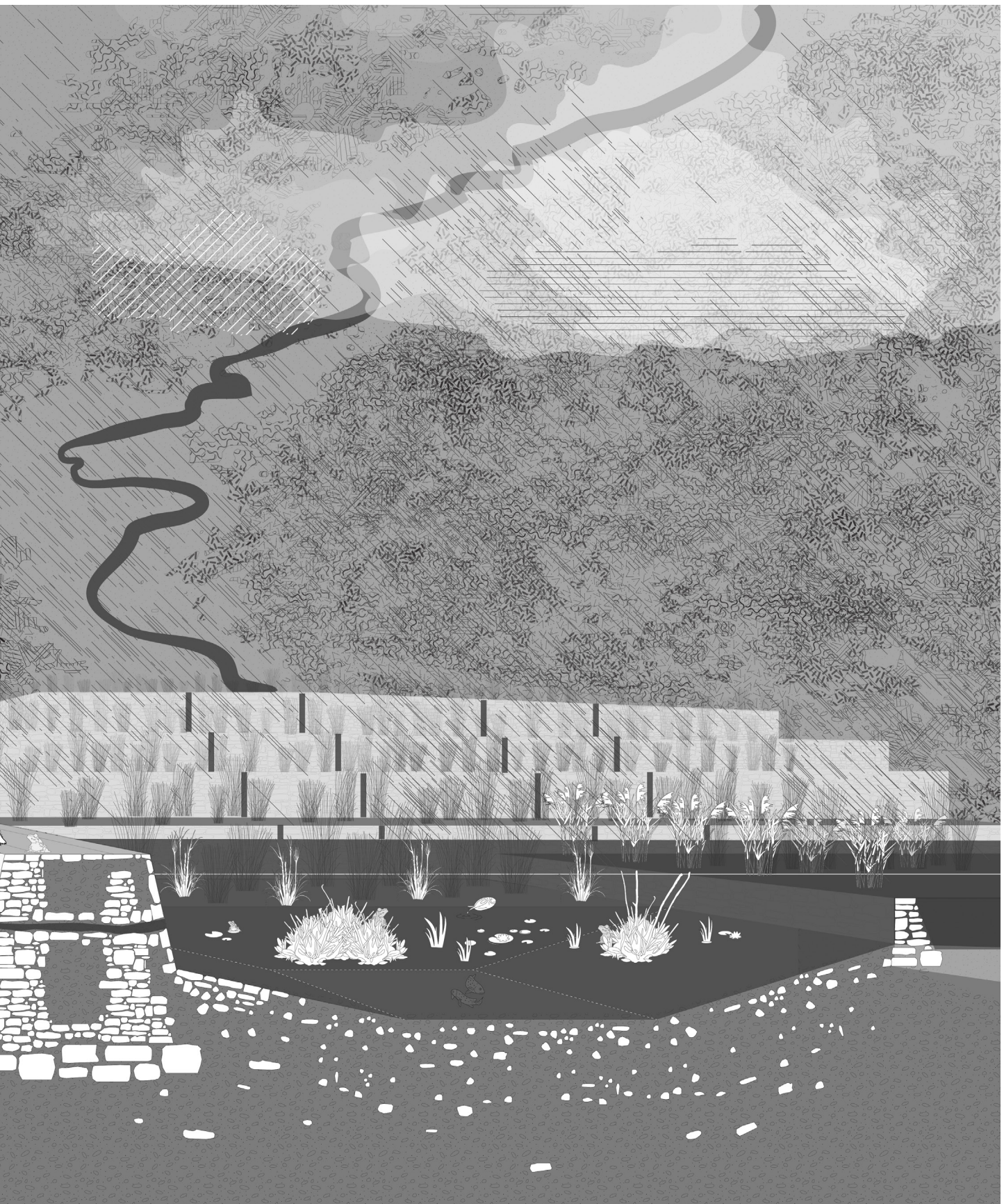
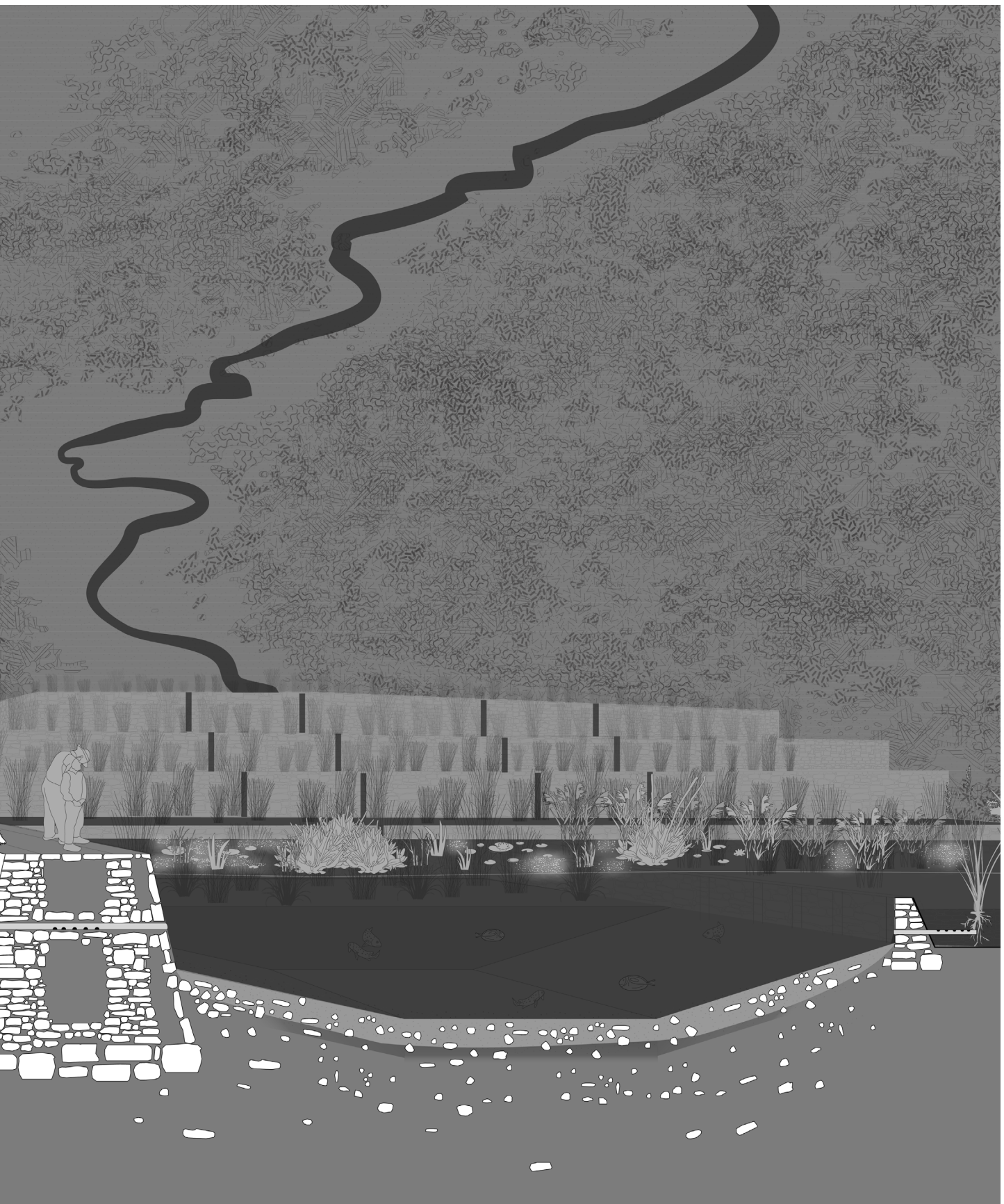


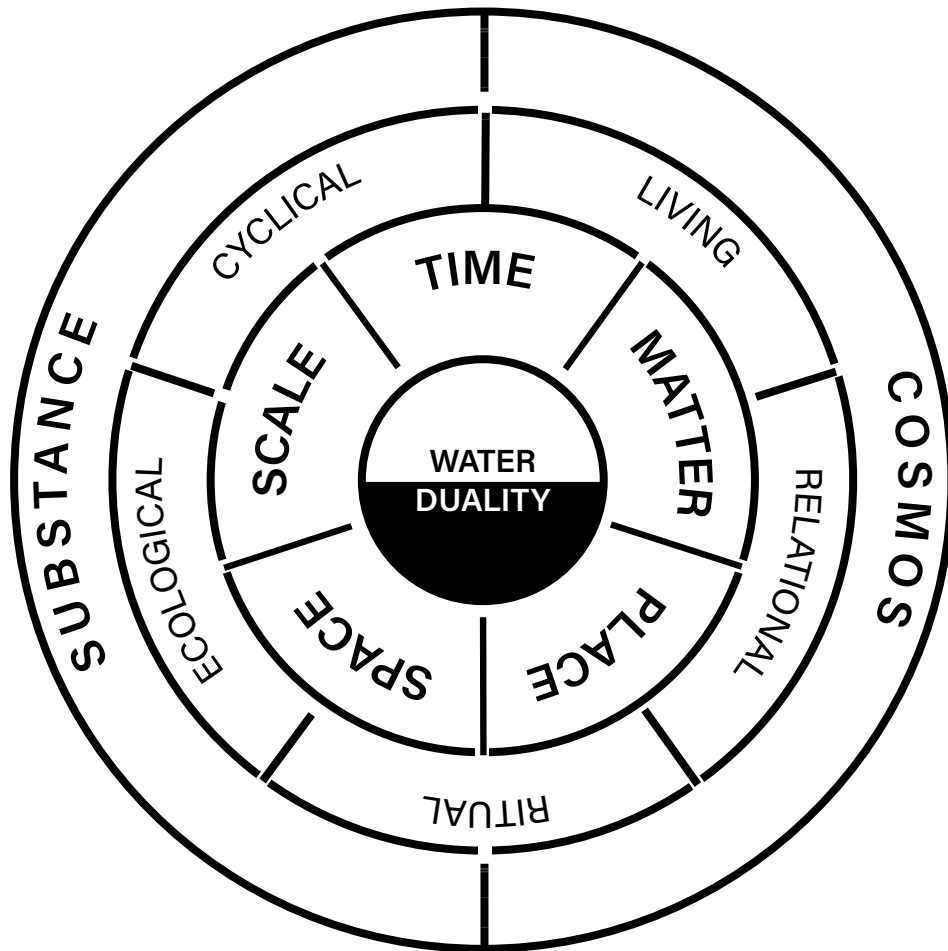


Figure 63 Regenerate, Observation of Rio Mayu



V

Thinking Across Worlds



YAKU COSMO-INFRASTRUCTURES

Figure 64 Yaku Cosmo-Infrastructures Diagram

After this path, I learn that Water has no single meaning. What we have is a pluriverse of Water. Learning from the Duality of Water invites us to expand our perspectives about Water and nature. My findings and explorations respond to a set of conditions that are particular from the Andes but contribute as a methodology to learn and engage with other ways of seeing that challenge the canonic binary divisions between Water and land, architecture and landscape, and, most importantly, humans and nature.

Yaku Cosmo-Infrastructures is the result of exploring this collaboration across systems of knowledge where Architecture can contribute to creating spaces of encounter that bridge the gaps in the translation process across communities and time, exploring sustainable ways to relate with Water.

We live in a world of many worlds, with multiple natures, that our discipline cannot keep framing through a singular lens. We cannot address a planetary crisis with the same approach that caused the problem. A collaboration across worlds is urgent. Thinking Architecture across worlds is urgent.

This thesis is an early exploration of a long-term compromise that I have as an architect to learn to think with others. An acknowledgment that architecture exists beyond our discipline and new modes of practice can emerge if we are willing to co-create with other modes of relating to the world.

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