

dK e A s Y d M e A a N q T u A í
Global strategies for local synergies

*Al coraje de ese paso al otro lado del océano.
A Ecuador, a lo que nos trajo y a lo que será...*



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dK e A s Y d M e A a N q T u A í

Global strategies for local synergies

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Photo: variety of fruit at Santa Clara Market, Quito, Ecuador.





Photo: walking through the masterpieces of Otavalo Market, Ecuador.





Photo: indigenous child on the project site, Cachimuni, Otavalo, Ecuador.



Photo: indigenous woman carrying corn bundles on her shoulders, Lago San Pablo, Ecuador



Photo: Marghenta with her traditional indigenous clothes, Cachimira, Cotacachi, Ecuador.





Photo: indigenous women working on site, Chaciviru, Otavalo, Ecuador.



Photo: old woman watching from her sofa the festival on the street. San Rafael de la Laguna, Ecuador.



Photo: indigenous woman with her child on shoulders, Gachiviri, Otavalo, Ecuador.





Photo: children playing with wooden pieces on the project area, Cachiviru, Ecuador.





Photo: entering into the Amazon Rainforest, Cuyabeno, Ecuador.





Photo: children playing in a small village of Amazon Rainforest, Cuyabeno, Ecuador.





Photo: the Pacific Ocean, Manta, Ecuador.





Photo: flying on the Amazon Rainforest, Baños de Agua Santa, Ecuador.





Photo: waterfall "Garganta del Diablo", Baños de Agua Santa, Ecuador





Photo: the Pacific Ocean, Montañita, Ecuador.





Photo: Quilotoa Vulcan and its crater, 3914 m.a.s.l., Ecuador.



Photo: San Rafael waterfall, 150 m of jump, Tena, Ecuador.



Photo: Cotopaxi Vulcan, 5897 m.a.s.l., Ecuador.





Photo: Cayambe Vulcan, 5790 m.a.s.l. Ecuador





Photo: Quito by night, view from Itchimbia park, Ecuador.

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Our Story

During the development of our project it has been fundamental to note tidily, from the beginning to 'the end', all the activities and meetings done. Meeting several people among which authorities and the population itself has been at the base of the entire process. Through this timeline is clear how complex has been the process for the realization of an architectural object, especially if in a foreign country.



1- This must be the place



8th of MAY 2015
Reach the project area
in the Community of
Cachiviru



14th of MAY 2015
Choice of the Parroquia
San Rafael and meeting
with it



21th of MAY 2015
Meeting in UCE to
stipulate an agreement
with San Rafael



26th of MAY 2015
Meeting with studio Al
Borde Arquitectos



29th of MAY 2015
1^o Reunion with the
community



3rd of JUNE 2015
Meeting with Mr.
Antamba to speak
about the normative

2-All together now!



3rd of JUNE 2015
1° Participatory workshop

7th of JUNE 2015
Meeting with planning director of Otavalo and Prefectura of Ibarra

9th of JUNE 2015
Officially signed the agreement with San Rafael



13th of JUNE 2015
Survey on site

17-18th of JUNE 2015
2° Participatory workshop in San Rafael



1st of JULY 2015
Meeting with the environmental engineer Mrs. Teran





2nd of JULY 2015
Meeting with the mayor
and engineers of
Otavalo



13rd of JULY 2015
3° Participatory
workshop



14th of JULY 2015
Realization of the
floating prototype



16th of JULY 2015
Getting certificates by
the municipality



17th of JULY 2015
Approval



30th of JULY 2015
Meeting with the Junta
Parroquial for dealing
the money



Recollecting Pro formas

Meeting with Carpenters

18th of AUGUST 2015
Reunion with GAD:
selection of winner
proformas

18th of AUGUST 2015
Transfer money to buy
all materials needed

24-28th of AUGUST 2015
CONSTRUCTION
1st week: preparation
of site

31-5th of SEPT. 2015
CONSTRUCTION
2nd week: starting of
construction

4-Came to the World



7-12th of SEPT. 2015
CONSTRUCTION
3^oweek



14-20th of SEPT. 2015
CONSTRUCTION
4^oweek



21-26th of SEPT. 2015
CONSTRUCTION
5^oweek: construction of
floating modules



28-2nd of OCT. 2015
CONSTRUCTION
6^oweek



5-12th of OCT. 2015
CONSTRUCTION
7^oweek: conclusion of
the entire project



13th of OCT. 2015
INAUGURATION!

5-The unbearable
lightness of conclusion

Abstract

Our thesis stems from a strong interest in the role of architecture in developing countries and by a thirst for knowledge, combined with the desire to experiment in the field, that led us to travel overseas in Latin America, Ecuador. We questioned ourselves several times about how architecture can be a resource and a useful tool to improve living conditions in the countries with considerable cultural and environmental resources, but also with socio-economic degradation, coming to strongly believe that the potential of a place are inherent in the history of the area, the city and its connective tissue, in people who live there and in their culture. It is through the exploitation "*de lo que hay con lo que hay*" (literally: of what is there with what is there) that you can make the assets of any given settlement best known and usable, knowing that tourism is a key resource to enable the socio-economic development of the local population, if appropriately involved in the activation dynamics and in the management of tourism-related activities. *Lo que hay* in the area of Lago San Pablo is a rural landscape heritage deserving of enhancement but contaminated by the urban model of the city that causes a substantial loss of identity and beauty; it is a strong contamination of the Lake; it is a marked lack of road connections; it is the strong ancestral culture of the Kichwa indigenous people who inhabit the territory; and it is the lack of tourism that weighs on the economy of the inhabitants. Landscape beauty, Kichwa culture and the strong cohesion of the community are the resources and the main tools of our project: we listened to the Genius Loci considering every aspect of indigenous traditions rooted on daily life, and we involved the people themselves in the entire design process, from design to construction. "Networking hubs for communities" is the strategy we provide for the creation of a master plan that embraces the Lake on three morphologically different levels (*agua, tierra y sol* with reference to the dominant elements of the Kichwa culture) on which we settle three concentric paths that combine points of landscape interest worthy of a historical and cultural enhancement, whether through an architectural intervention or not, and for whom we studied the journey by foot, by bicycle or on horseback. The goal is not only to strengthen the connective tissue and to directly involve the community so that it can be the main beneficiary of the economic effects induced by tourism, but above all make it aware of the social and economic value of their environmental and cultural heritage, stimulating it to its conservation and enhancement. Analyzing the various points of interest, we have identified those simply exploitable through their placement in a guided tour and those that need a little architectural intervention (from info-point for tourists at *Lechero de Pucará* in the *tierra* path, to the crafts exhibition center at *Sombreria en Angla* in the *sol*

path). This creates a three-dimensional network in which various hubs are interconnected with each other and they work because it is within the network that the local can really meet the global: the tourist has the opportunity to enter into the everyday life of a community, participating to a small craft workshop in an exhibition center run by the community itself and buying the product made with his own hands, contributing to sustain the population and to the enhancement of its culture.

KAYMANTA, that in Kichwa language means FROM HERE, is the first hub of this network that has been thought, designed and built with the local community, placed in Cachiviru, in the Parroquia of San Rafael de la Laguna (*agua* path). *Lo que hay* is not only the heritage, but mainly the people and its participation is the most important aspect! We believe that architecture must make use of a valuable resource: the community. The sum of individual actions, albeit of a certain quality, does not lead to the common good, while collective action is the real answer to the problem; this is why we strongly believe that participatory design is a key tool to strengthen a project where the voice is not only the one of the architect, but where all actors can be part of a unanimous chorus. We collaborated with the community of Cachiviru through participatory workshops aimed at supporting our project idea, facing not only architectural aspects but also the socio-anthropological "architect - community" relationship, quite different from the one of "architect - client" to which we are accustomed in Europe. The project we have developed is the requalification of a public space intended primarily as a meeting place for the community (designed and built with the community and run by the same) and secondly for the tourist. The other tool we used for developing the project is the auto-construction, that has always been considered a problem related to the growth of informal settlements, but seen in this case under a different lens: we speak about "*Minga*" that is a reality inherent to Kichwa culture, where the community members help each other in a participatory construction process; we speak about guided designed auto-construction, where the economic budget is lowered and the building hands increased. The project, started in May 2015 with participatory workshops, ended the 13th of October 2015 with its inauguration.

KAYMANTA is not only theirs, but it is also our starting point in a reality where we will continue to move as architects and citizens of the world.

KAYMANTA is a drop in the ocean but we like to think that, though small, has already caused its wave.

La nostra tesi nasce da un forte interesse nei confronti del ruolo dell'architettura nei Paesi in via di sviluppo e da una sete di conoscenza che, combinata alla volontà di sperimentare sul campo, ci ha portato a viaggiare oltreoceano in America Latina, Ecuador. Ci siamo interrogate più volte su come l'Architettura possa essere risorsa e strumento utile al miglioramento delle condizioni di vita in Paesi nei quali notevoli sono le risorse culturali e ambientali, ma diffuso è il degrado socio-economico, arrivando a credere fortemente che le potenzialità di un luogo siano insite nella storia del territorio, della città e del suo tessuto connettivo, nelle persone che vi abitano e nella loro cultura. È attraverso la valorizzazione "*de lo que hay con lo que hay*" (di quello che c'è con quello che c'è) che è possibile rendere il patrimonio di un dato insediamento maggiormente noto e fruibile nella consapevolezza che il turismo sia una risorsa fondamentale per permettere lo sviluppo socio-economico della popolazione locale, se opportunamente coinvolta nelle dinamiche di attivazione e gestione delle attività connesse al turismo stesso. *Lo que hay* nel territorio del Lago San Pablo è un patrimonio paesaggistico meritevole di valorizzazione ma contaminato dal modello urbano di città che provoca una sostanziale perdita di identità; è una forte contaminazione del Lago; è una marcata mancanza di connessioni stradali; è la fortissima cultura ancestrale degli indigeni Kichwa che abitano il territorio; ed è la mancanza di turismo che pesa sull'economia degli abitanti. Bellezza paesaggistica, cultura Kichwa e la forte coesione della comunità sono le risorse e gli strumenti principali del nostro progetto: abbiamo ascoltato il Genius Loci considerando ogni aspetto delle tradizioni indigene radicate nella quotidianità degli abitanti e abbiamo coinvolto le persone stesse nell'intero processo progettuale, dal disegno alla costruzione. "Networking hubs for communities" è la strategia che prevede la creazione di un Masterplan che abbraccia il Lago su tre livelli morfologicamente differenti (*agua, tierra y sol* con riferimento agli elementi Kichwa dominanti) sui quali s'insediano tre percorsi concentrici che uniscono punti d'interesse paesaggistico, storico e culturale meritevoli di una valorizzazione, che sia attraverso un intervento architettonico o meno, e per i quali abbiamo studiato la percorrenza a piedi, in bicicletta e a cavallo. L'obiettivo non è solo quello di rafforzare il tessuto connettivo e di coinvolgere direttamente la comunità affinché sia la principale beneficiaria delle ricadute economiche indotte dal turismo, ma soprattutto renderla consapevole del valore sociale ed economico del proprio patrimonio ambientale e culturale, stimolandola alla sua conservazione e valorizzazione. Analizzando i vari punti d'interesse, abbiamo individuato quelli valorizzabili semplicemente attraverso la loro collocazione all'inter-

no di un percorso guidato e quelli che invece hanno bisogno di un piccolo intervento architettonico di supporto (dall'info-point per i turisti al *Lechero Pucará* nel percorso della *tierra*, al centro espositivo artigianale della *Sombreria en Angla* nel percorso del *sol*). Si crea così una rete tridimensionale all'interno della quale vari hubs sono interconnessi tra loro e funzionano perché è proprio lì che il locale può incontrare il globale: il turista ha la possibilità di entrare nella quotidianità di una comunità partecipando a un piccolo workshop all'interno di un centro espositivo gestito dalla stessa e comprando il prodotto realizzato con le sue mani, contribuendo al sostentamento della popolazione e alla valorizzazione della sua cultura. KAYMANTA, che in lingua Kichwa significa DA QUI, è il primo hub di questa rete pensato progettato e costruito insieme alla comunità locale, collocato a Cachiviru, nella Parroquia di San Rafael de la Laguna (percorso del *agua*). *Lo que hay* non è solo il patrimonio, ma sono soprattutto le persone ed è la loro partecipazione la risorsa più importante! Crediamo che l'architettura debba servirsi di una risorsa preziosa: la collettività. La somma di azioni individuali, seppur di una certa qualità, non porta al bene comune, mentre un'azione collettiva è la vera risposta al problema; per questo motivo crediamo che il disegno partecipato sia uno strumento fondamentale per rafforzare un progetto dove la voce in campo non sia solo quella dell'architetto, ma dove tutti gli attori possano far parte di un coro unanime. Abbiamo collaborato con la comunità di Cachiviru attraverso workshop partecipativi volti a supportare la nostra idea progettuale, affrontando gli aspetti non solo architettonici ma anche socio-antropologici del rapporto "architetto-comunità", diverso da quello "architetto-cliente" al quale siamo abituati in Europa. Il progetto sviluppato riguarda la riqualificazione di uno spazio pubblico inteso prima di tutto come spazio d'incontro per la comunità (pensato, costruito e gestito dalla stessa) e secondariamente per il turista. L'altro strumento di cui ci siamo servite è l'autocostruzione, da sempre considerata un problema relazionale alla crescita informale di insediamenti umani, vista in questo caso sotto una lente diversa: parliamo della realtà della "*Minga*" insita nella cultura Kichwa, ovvero della costruzione dove i componenti della comunità si aiutano tra loro; parliamo di autocostruzione progettata e guidata, dove il budget economico è minimo. Il progetto, iniziato a Maggio 2015 con i workshop comunitari, si è concluso il 13 ottobre del 2015 con la sua inaugurazione. KAYMANTA non è solo il loro, ma è anche il nostro punto di partenza all'interno di una realtà dove continueremo a muoverci in quanto architetti e cittadine del mondo. KAYMANTA è una goccia nell'oceano ma ci piace pensare che, seppur piccola, abbia già provocato la sua onda.

Intro - the occasion(s)

How did we find ourselves in Ecuador?

A series of lucky events and courageous choices led us to the other side of the ocean. First of all the international mobility agreement in between Politecnico di Milano and Universidad Central del Ecuador (Quito), thanks to which we have experimented on a “new ground” for almost a year, facing a completely different reality in respect to Europe. What we brought with us in Ecuador is for sure our background, related to our personal interests and to the academic experience matured during almost five years of studies at Politecnico di Milano, that gave us a certain point of view on architecture and society:

the concept of Genius Loci, as to say the importance of “listening to the place” where we design something; the ability of thinking MACRO even if the final architectural product is *micro*, that means starting with a urban masterplan and ending with the architectural detail; the capacity of team-working and the importance of sharing and discuss ideas listening to the others, in this case the community; the technical skills related to design and an idea of what “sustainable” means to us. What we missed from our academic experience was the possibility of “close the circle”: we had always designed theoretical academic projects without having the chance of building up our ideas in the real world and this was exactly what we expected to do in Ecuador.

In Quito we had the chance of working in AlBorde studio, led by young emerging architects, where we did a construction internship experimenting with recycled materials according to their personal interesting life philosophy and we also built up little projects regarding furniture and office restoration.

They also introduced us in the world of participatory design through their projects and many books of their library we had the possibility to read:

if in Europe the relation of the architect is mainly with the client, in Latin America we can also speak about a relation with the community, that is often involved in the process from design to construction through participatory workshops; it was a completely new world for us and we found it very brain-stimulating and for sure AlBorde contributed to open our mind giving us the possibility to do something practical and not just theoretical.

A part from our internship experience, we found opportunities even in the FAU of Universidad Central del Ecuador; in particular the program of “*Vinculación con la Sociedad*” gave us the chance of choosing a place, studying and analyzing it, designing a project and collaborating with a local community, experimenting in this way in the field of the participatory project.

They proposed us three places where we could operate: *Barrio San Roque* (a dangerous neighborhood of Quito where the social dimension has a great relevance on architecture due to the fact that the government proposed the demolition of the main historical market and the community is fighting against it); *Barrio Atucucho* (a neighborhood of Quito grew informally on a mountain’s slope far from the urban center, where the scarcity of basic services and the lack of urban regulation are the main problems); and *Lago San Pablo* (beautiful natural rural landscape populated by indigenous Kichwa communities with a strong handicraft tradition but with a spread economic degradation, located in the province of Otavalo, region of Imbabura, 200 km north of Quito).

We finally chose the Lake because of the landscape beauty that makes it a sort of natural paradise that from our first impression is unluckily not valorized at all: the communities around the Lake grew in an informal way and the buildings are more similar to urban constructions than to rural ones; additionally we didn’t find a lot of tourists as one could expect from such a significant place and we started to ask ourselves why?

Furthermore we were fascinated by the chance of collaborating with a native Kichwa community that could show us a different point of view on society and life, enriching without any doubt our project.

What we present in this book is the result of the whole process, from analysis to design to construction.

Come ci siamo ritrovate in Ecuador?

Una serie di fortunati eventi e coraggiose scelte ci ha portato dall'altro lato dell'oceano.

Prima di tutto l'accordo di mobilità internazionale tra il Politecnico di Milano e la Universidad Central del Ecuador (Quito), grazie al quale abbiamo avuto la possibilità di sperimentare su un "suolo nuovo" per circa un anno, affrontando una realtà completamente diversa da quella Europea.

Quello che abbiamo portato con noi in Ecuador è stato senza dubbio il nostro bagaglio culturale, relazionato ai nostri interessi personali e all'esperienza accademica maturata in quasi cinque anni di studio al Politecnico di Milano, che ha contribuito a darci un certo punto di vista sull'architettura e sulla società:

il concetto del Genius Loci, cioè l'importanza di "ascoltare il luogo" in cui vogliamo progettare qualcosa; l'abilità di pensare MACRO anche se il prodotto architettonico finale sarà micro, vale a dire iniziare da un masterplan urbano ad una scala territoriale per arrivare al più piccolo dettaglio architettonico di progetto; la capacità di lavorare in gruppo e l'importanza di condividere e discutere le nostre idee ascoltando gli altri (in questo caso la comunità); le capacità progettuali e un'idea di cosa "sostenibile" significa per noi.

Quello che però è mancato nell'esperienza accademica è stata la possibilità di "chiudere il cerchio": abbiamo sempre pensato e disegnato progetti accademici teorici senza avere la possibilità di costruire le nostre idee nel mondo reale ed è questa la più grande opportunità che speravamo potesse offrirci l'Ecuador.

A Quito abbiamo avuto la possibilità di lavorare nello studio di architettura AlBorde, diretto da giovani architetti emergenti, dove abbiamo svolto un tirocinio di costruzione sperimentando con materiali riciclati in linea con la loro interessante e personale filosofia di vita, costruendo piccoli progetti d'arredo e riabilitando parte dello studio. Inoltre con AlBorde siamo entrate un po' nel mondo per noi nuovo del disegno partecipato, attraverso i loro progetti e i libri della loro libreria che abbiamo avuto la possibilità di leggere: se in Europa la relazione dell'architetto è principalmente con il cliente, in Sud America possiamo anche parlare di una relazione con la comunità, che è spesso coinvolta nel progetto dal disegno alla costruzione attraverso workshops partecipativi. L'esperienza in questo studio di architettura è stata stimolante sotto molti punti di vista e senza dubbio ha contribuito ad aprirci la mente, dandoci inoltre la possibilità di fare qualcosa di pratico e non solo teorico.

Altre importanti opportunità ci sono state date dalla FAU dell'Universidad Central del Ecuador; in particolare il programma di "*Vinculación con la Sociedad*" ci ha

dato la possibilità di scegliere un luogo, studiarlo e analizzarlo, progettare qualcosa in quel dato luogo e collaborare con la comunità locale, sperimentando in questo modo nel campo del progetto partecipato.

Ci sono stati proposti tre luoghi diversi e interessanti: il *Barrio San Roque* (un quartiere di Quito abbastanza pericoloso dove la dimensione sociale ha un impatto particolarmente grande sull'architettura, dovuto al fatto che il Governo ha deciso di demolire lo storico mercato locale e la comunità sta tuttora lottando contro questa scelta politica);

il *Barrio Atucucho* (un quartiere di Quito che è cresciuto in modo informale lontano dal centro urbano, dove la scarsità di servizi basici e la mancanza di regolazione urbana sono i maggiori problemi);

e il *Lago San Pablo* (incantevole paesaggio naturale rurale nella provincia di Otavalo, regione di Imbabura, 200 km a nord di Quito; popolato da comunità indigene Kichwa, caratterizzato da una forte tradizione artigianale e da un diffuso degrado economico).

Alla fine abbiamo scelto quest'ultimo luogo per la sua bellezza paesaggistica che lo rende una sorta di paradiso naturale ma che non è valorizzata al massimo: tutte le comunità attorno al Lago sono cresciute in modo informale e gli edifici sono più simili a delle costruzioni urbane che ricordano l'idea che queste comunità hanno di "città" e che non si integrano nel paesaggio nel quale sono inserite; inoltre non abbiamo trovate la quantità di turisti che ci si aspetterebbe di trovare in un posto del genere e abbiamo iniziato a porci determinate domande.

Infine siamo state affascinate dalla possibilità di collaborare con una comunità indigena Kichwa che avrebbe potuto mostrarci un punto di vista diverso sulla società e sulla vita stessa, arricchendo senza dubbio il nostro progetto, come poi è stato.

Quello che presentiamo in questo libro è il risultato dell'intero processo, dall'analisi al progetto alla costruzione.



This must be the place

Photo: landing in Quito, 23rd of March 2015, Ecuador



Theoretical framework: Genius Loci

Nullus locus sine genio, or rather “none Place is without Genio”: is what wrote, in his Comment to the Eneide, Servio, Latin relator who lived between the IV and the V sec. A.C. He was referring to a concept that for his contemporaries was obvious, the one of “Genius loci”, that could be literally translated as the “spirit, the tutelary deity” of a Place. In any case, to really understand what is the “Genius Loci”, it is necessary to analyse also the different meanings that this expression assumed during the time, encompassing various disciplinary fields such as literature, philosophy, religion and, last but not least, architecture and anthropology. Without any doubt, the “Genius Loci”, founds its roots in the classic idea of places’ sacredness, that can be found in the Latin culture as well as in the Greek one. In particular, in the ancient Greece, the “Daimon”, the daemon, was interpreted with a different meaning from the actual one: it was a spirit, present in each human being, with the aim of helping him in fulfil his own destiny. And here is the connection with the Platonic philosophy, according to which each person comes to World because is called to do it, having been assigned to him a precise task to be accomplished. But the “Daimon” was not just assigned to people, but to all the things possessor of a soul that includes also Places; here is the relation with the Latin culture.

For the ancient Romans, the “Genius Loci” indicates that every being has its ‘Genius’, its guardian spirit. This spirit gives life to people and places, accompanies them from birth to death, and determines their character. In this way, Places were recognized in an analogue situation to human being: they had to be respected, loved and valorised as real divinities, becoming personification of the natural elements. The Genius Loci was identified in natural places as well as in built locations: the *conditio sine qua non* was the only condition through which to these places was recognised a particular ‘force’ and capacity of influencing people that lived there. Hereafter, with the diffusion of Christianity, the cult towards pagan divinities and supernatural entities, such as the “Genius Loci”, obviously changes its features and appearance, but without never definitely disappear. It was always kept unchanged, in all the cultures and during different historical periods, the necessity, for man, to personify places and natural elements. Going on in time, we arrive to Romanticism, in which is re-discovered the fascination for the landscape and, mainly, the idea that each place has determined features that is necessary to discover and valorise in order to enter into a complete syntony with them. The romantic experience of “Grand Tour” is a concrete demonstration of this attempt of re-discovering the “character” of a place, through the study of its traditions and cultures.

And it is exactly this romantic meaning of “Genius Loci”

that can help in understanding its actual use, mainly in the architectural field.

“Genius Loci: Towards a Phenomenology of Architecture” it is the title of an important essay published in 1979 and wrote by the architect Christian Norberg-Schulz. For him, “Genius Loci” is the essence of a Place, its environmental character, that the architect, engineer, designer have to understand and respect, to be able to build in this place in an harmonic way without overturn its characteristics.

Christian Norberg-Schulz wrote this book with the precise purpose of filling the gap until then presents: create a phenomenology of Architecture. Certainly influenced by the existentialist climate that pervaded Europe and deeply interested in the intimate problems, he studied architecture and especially its way of integrating into the territory and the ways in which this can turn it into place.

And the Place is the centre of his reflection, seen as a site with a precise identity and a distinct character, always recognisable, that is able to raise up, in everyone who crosses or sees it, emotions, sensations and suggestions not repeatable.

Fundamental for Schulz is the distinction between natural and man-made place, both divided in the categories of romantic, cosmic and classic. The term “natural place” denotes a series of environmental levels, from continents and countries down to the shaded area till an individual tree. All these “places” are determined by the concrete properties of earth and sky. The term “man-made Place” denotes a series of environmental levels, from villages and towns down to houses and their “presencing” (being). It’s romantic what impresses and scares, expresses the chthonic forces of nature and for this reason touches the deepest aspects of the human psyche. This typically happens for landscapes and northern cities like Prague. The cosmic landscape is vast, the gaze is lost in the infinite and indistinct horizon as that of the desert. The sky high and perfect seems necessarily expression of a cosmic order. Is not a coincidence that these are the landscapes that inspired the monotheistic religions. An example of artificial cosmic place is the charming city of Khartoum born in meeting point between the Blue Nile and the White Nile. The classical landscape is typically the Greek or Italian one: various, with a human scale, opposed to the romantic microcosms, or the cosmic macrocosm. With Place, Schulz means a totality made up of concrete things having material substance, shape, texture and colour. Together these things determine an “environmental character” which is the essence of place, its Genius Loci. Although places change permanently and never have a fixed structure; their ‘Genius Loci’ do not necessarily change and remains the same.

Therefore, even the time cannot delete the 'Genius Loci'; Places preserve their identity during a certain period of time as *stabilitas loci*, and the existential contents of the human kind remain the same in a broad period of time.

For Norberg-Schulz "Genius loci" has two connotations: meaning and structure. Meaning is the subjective aspect of Genius Loci. The meaning of any object consists in its relationships to other objects, that is, it consists in what the object 'gathers'. A thing is a thing by virtue of its gathering. On the other hand, structure relates to the objective aspect of 'Genius Loci' denoting the formal properties of a system of relationships. However, man is part of a world: he is in the world and belongs to a totality that comprises nature and its components. In this way, meaning necessarily implies a world. Such a character is never simple, and in our time it is certainly full of complexities and contradictions, but this does not mean that it is without structure or meaning.

But how can we catch the Genius Loci of a Place?

"Genius loci" is manifested as location, spatial configuration, and characterizing articulation. To preserve the genius loci, is actually respecting these factors: the type of settlement and way of building as well as characteristic motif. If the primary structural properties are respected, the general atmosphere or Stimmung will not get lost. In other words, "To protect and conserve the 'Genius Loci' in fact means to concretize its essence in ever new historical contexts."

Thus, a work of architecture 'keeps' that essence through building. "Architecture means to visualize the 'Genius Loci', and the task of the architect is to create meaningful places, whereby he helps man to dwell." The man dwells when he can accomplish the basic psychic functions of "orientation" and "identification". Dwelling therefore implies something more than "shelter"; it implies that the spaces when life occurs are Places.

In this way, the task of architect is taking care of the things, and expressing the self-realization of the place through the works of architecture. Like saying that, if you thoroughly investigate, every place carries with it the signs of "what it is" or "what it wants to be or become". The latter is a typically Roman expression, as mentioned above, and it is connected to all that is that it wants to be. Not by chance, an architect very much appreciated by Schulz like L. Khan, asks what a particular material wants to be.

For Schulz, as he makes clear, this is not a natural determinism, he does not argue that in certain place longer exists just a single possible architecture but that, however, this architecture must be compatible with the place.

In this way, the work of the architect, historian, or semiotic of the landscape becomes, in this case, a very delicate work of perceptive "digging", that should be able to identify in the deep sedimentation hidden in the Place, shreds of memories, narratives, relationships, identities, in order to recover its Genius Loci and, if possible, help it to revive.

Schulz concludes his thought penetrating directly into the aspects of Urban Planning. His is a strong attack towards the cities of the twentieth century arose through the reckless revivals of large-scale models of the masters of architecture. The result has been to create non-places that, as explained by Kevin Lynch, lead necessarily, according to a Marxist scheme of structure and superstructure, to alienation.

Schulz's theory seems to give to the contemporary city the loss of meaning of the place and, in the debate on the meaning of the cities in our time, it is equally interesting to introduce the work of M. Augé, who, in his text "Non-Places: introduction to an Anthropology of Supermodernity", expresses precisely the significance of non-place. The neologism non-place defines two complementary concepts but absolutely distinct: one is related to spaces built for a very specific purpose (usually transport, transit, commerce, leisure and recreation) and the other one is about the relationship that exists between the individuals and those same spaces.

M. Augé defines non-places as opposed to the anthropological places, so all those spaces that have the prerogative of not being identitarian, relational and historical. Are part of the non-places both the structures necessary for the accelerated movement of persons and goods (highways, interchanges and airports), as well as means of transport, large shopping centres, refugee camps, ect. Non-places are only focused on the present and are highly representative of our age, which is characterized by the absolute precariousness (not only in the field of work), by the provisional condition, by the transit and the passage and by a solitary individualism. People pass in non-places but no one lives there.

Hence, those who builds or restores buildings, who projects urban centres, who plans a territory, should have the duty, first and foremost, to weave an intimate and profound relationship with the Place. They should put themselves in a situation of listening, groping to perceive the invisible behind the visible or, to paraphrase an old adage of Anaxagoras, "to get in touch with the essence of that spike fragment of the Earth on which he is called upon to intervene". And this is exactly what we tried to do in San Pablo Lake. Yes, because the Places call, evoke, chase and when they want, they let to be discovered, even intimately.





Listening to the place: Lago San Pablo

Following Norberg-Schulz theoretical philosophy we believed that a simple urban analysis was not enough to really understand and “listen” the spirit of the place. We wanted to catch something more, that is not perceived with the eyes or readable on maps. We believe that an holistic and multidisciplinary approach, at which many voices can take part, could enrich the general analysis, the process and the final result.

In practical terms we organize our methodology in three big steps: what we perceive (subjective), mainly related to our sensations and feelings walking around the lake, listen to the others (subjective), in which different voices are listened to get a wider panorama, and an objective analysis (objective), based on official documents and interviews. Santiago Gomez, professor at FAU and involved in the new urban regulation of Otavalo gave us a big help in this primary phase.

Discovering, walking, watching, talking and listening are the key words that followed us in this big adventure.

Photo: San Pablo Lake and Imbabura Vulcan, Otavalo, Ecuador.



Where we are

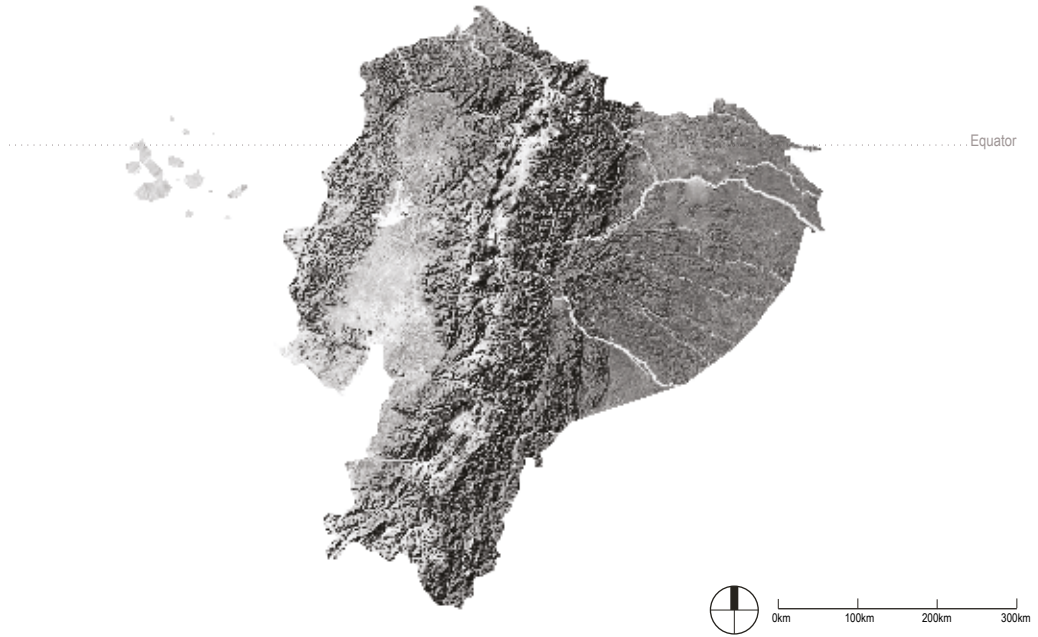
Ecuador is a representative democratic republic in northwestern South America, bordered by Colombia on the north, Peru on the east and south, and the Pacific Ocean to the west. It is one of the 17 megadiverse nations of the World with one of the highest grade of biodiversity on the planet (majority of the Earth species and a high number of endemic species).

Imbabura is one of the seven regions of Ecuador and is divided in six cantons. The capital is Ibarra. The people of the region speak Spanish and the Imbaburan Quechua language.

San Pablo lake is the biggest lake of the country. It is located in the oriental cordillera of Andes at 00° 07' 34" N and 78° 14' 32" W, at 100 km north from Quito inside the canton of Otavalo which is divided into 10 Parroquias. The ones that surround the Lake are: Otavalo, San Rafael, San Pablo, González Suárez and Eugenio Espejo. To be in an urban area, Otavalo presents one of greater population densities of the region of Imbabura, despite not being the capital. The Lake presents a high population in the N-W part and medium population in the rest of the surrounding area. There is evidence of a large area, especially around the Lake, that has been particularly eroded by processes of urbanization and unsuitable crops (rurbanization), while most of the canton is occupied by shrub vegetation. Regarding the climatic zones, they are 6 and change according to the altitude (moderate and dry, moderate and humid, moderate and very humid, moderate and semi-humid, cold and semi-humid); the area of the Lago San Pablo is included in a Equatorial moderate-humid and Equatorial moderate semi-humid area. Among the mayor volcanoes of the area, in the outskirts of Otavalo there are several minor hills that do not exceed 500m height. The hydrography is numerous and it is composed by rivers of permanent and intermittent course; some of them feed the Lago San Pablo. Most of the touristic attractions of the canton are placed in the surroundings of Lago San Pablo and are mostly naturalistic strictly connected to the landscape beauty and handcraft tradition of the area.

Photo: Children playing in the waters of the lake, Parque Araque, San Pablo, Otavalo, Ecuador.

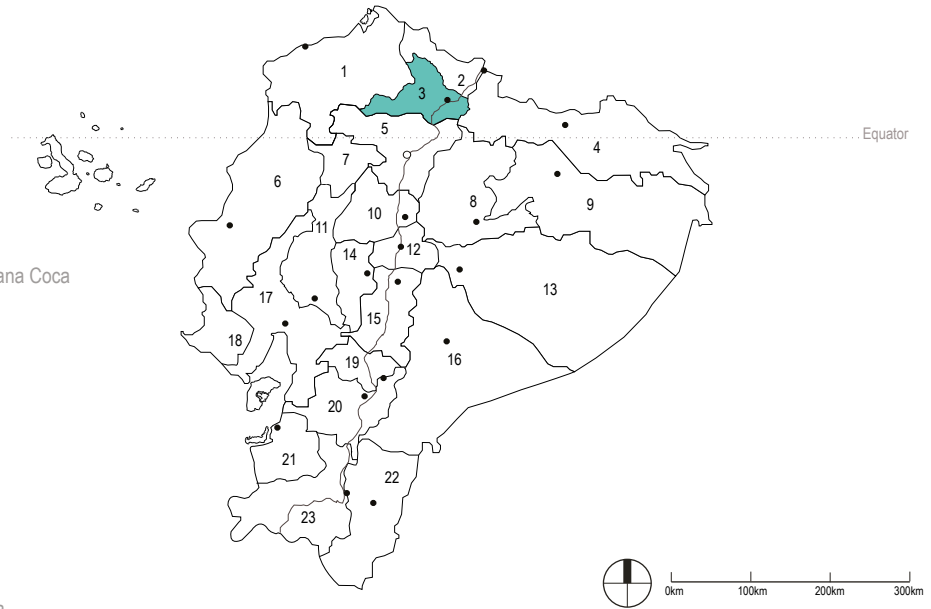
Ecuador



Panamericana Cut




LEGEND

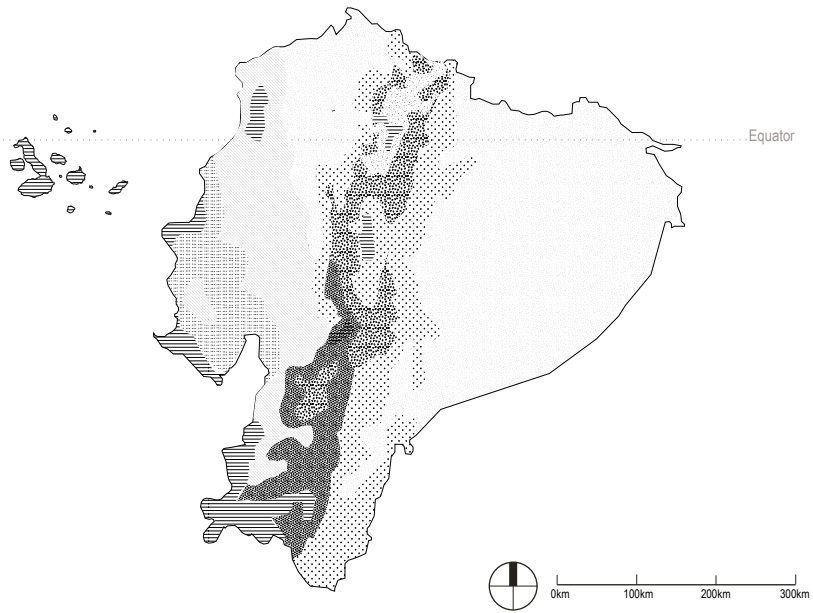
- 1 Esmeraldas - Esmeraldas
- 2 Carchi - Tulcán
- 3 Imbabura - Ibarra
- 4 Sucumbios - Nueva Loja
- 5 Pichincha - Quito
- 6 Manabi - Portoviejo
- 7 Santo Domingo
- 8 Napo - Tena
- 9 Orellana - Puerto Fco.Orellana Coca
- 10 Cotopaxi - Latacunga
- 11 Los Rios - Babalhoyo
- 12 Tungurahua - Ambato
- 13 Pastaza - Puyo
- 14 Bolivar - Guaranda
- 15 Chimborazo - Riobamba
- 16 Morona Santiago - Macas
- 17 Guayas - Guayaquil
- 18 Santa Elena -
- 19 Canar - Azogues
- 20 Azuay - Cuenca
- 21 El Oro - Machala
- 22 Zamora Chincipe - Zamora
- 23 Loja - Loja
- Panamericana highway
- Capital
- Main cities



Climate Regions

LEGEND

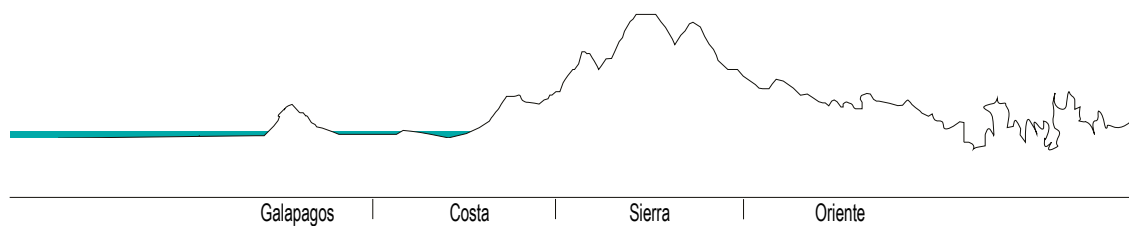
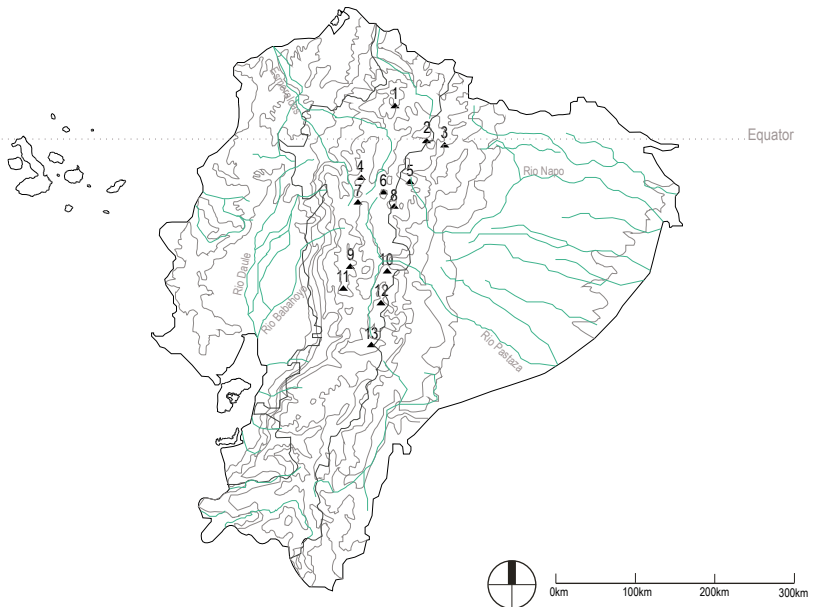
-  Tropical Lluvioso
-  Tropical Monzon
-  Tropical Sabana
-  Dry
-  Tempere permanently humid
-  Temperate periodically dry
-  De Paramo



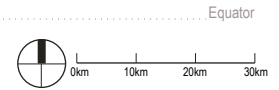
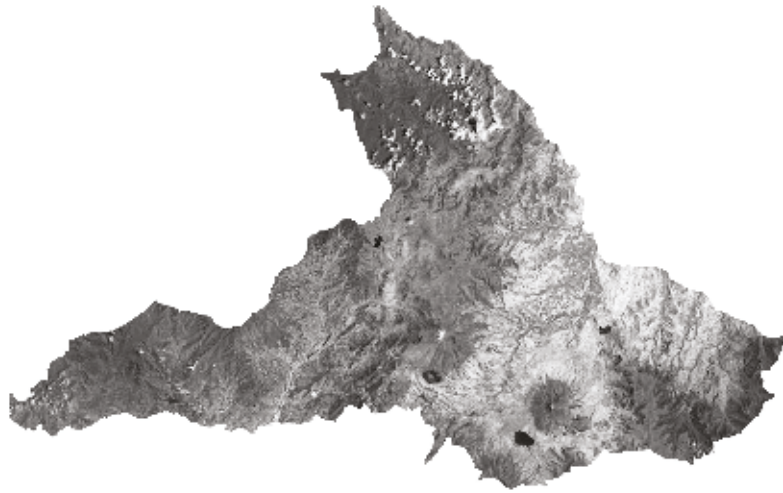
Land of Volcanoes

LEGEND

- 1 Cotacachi Volcano 4944 mt
- 2 Imbabura Volcano 4630 mt
- 3 Reventador Volcano 3562 mt
- 4 Pichincha Volcano 4784 mt
- 5 Antisana Volcano 5758 mt
- 6 Corazon Volcano 4790 mt
- 7 Illinizia Volcano 5248 mt
- 8 Cotopaxy Volcano 5897 mt
- 9 Carihuairazo Volcano 5020 mt
- 10 Tungurahua Volcano 4609 mt
- 11 Chimborazo Volcano 6310 mt
- 12 Altar Volcano 5320 mt
- 13 Sangay Volcano 5230 mt
- Rivers

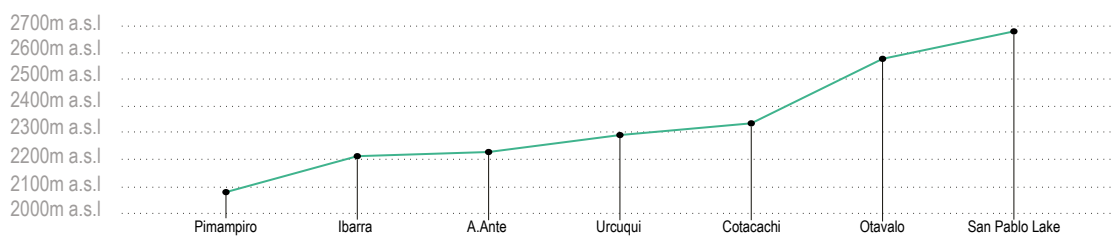
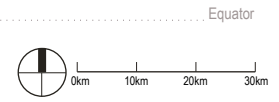
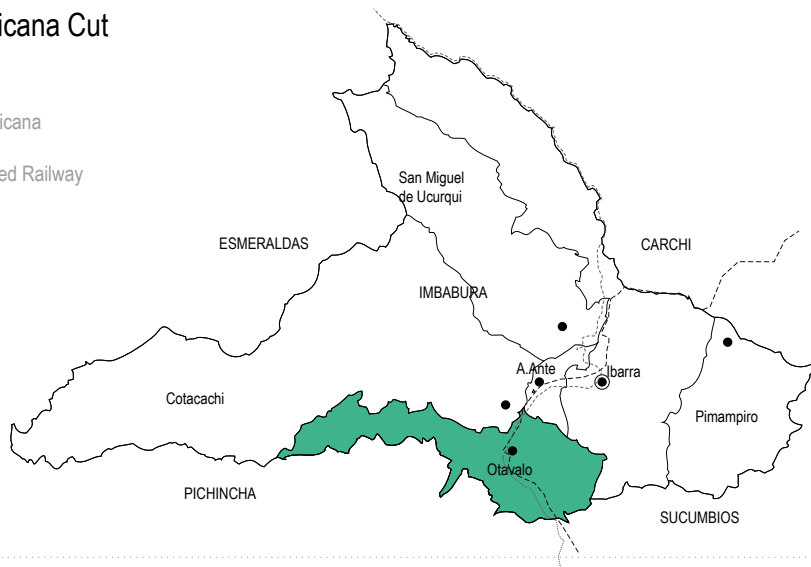


Imbabura



Panamericana Cut

- LEGEND
- Panamericana
 -Railway
 - Abandoned Railway



Attractions

LEGEND

Landscape:

Ecological Reserve Cotacachi Cayapas

Ecological Reserve Cayambe - Coca

Ferrocarril

1 Mountain Yanaurco de Piñan

2 Piñan Lake

3 Terme de Chachimiro

4 Valle del Chota-Playa de Ambuqui

5 Mirador de Yuracruz

6 Yauarcocha Lake

7 Valle del Intag

8 Cotacachi Volcano

9 Cuicocha Lake

11 Loma Guayabillas

13 Imbabura Volcano

15 Cascada Peguche

16 Parque Condor

17 San Pablo Lake

19 Casa Hacienda Zuleta

20 Mojanda Lake

21 Cerro Fuya Fuya

22 Mojanda Volcano

23 Puruhanta Lake

History-Culture:

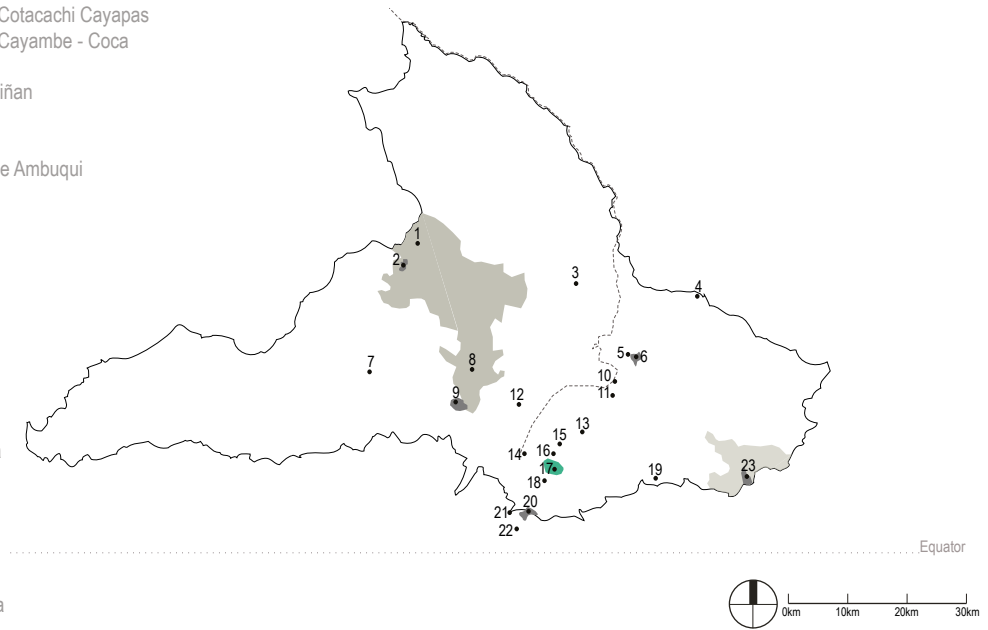
10 Centro Historico Ibarra

12 Ciudad de Cotacachi

Artcraft-Trade:

14 Feria Artesanal Otavalo

18 Titora Sisa Produccion



Landscape Values

LEGEND

1 Imbabura Volcano 4600 mt

2 Cotacachi Volcano 4944 mt

3 Mountain Yanaurco de Piñan 4535 mt

4 Mojanda Volcano 4290 mt

5 Piñan Lake

6 Cuicocha Lake

7 Mojanda Lake

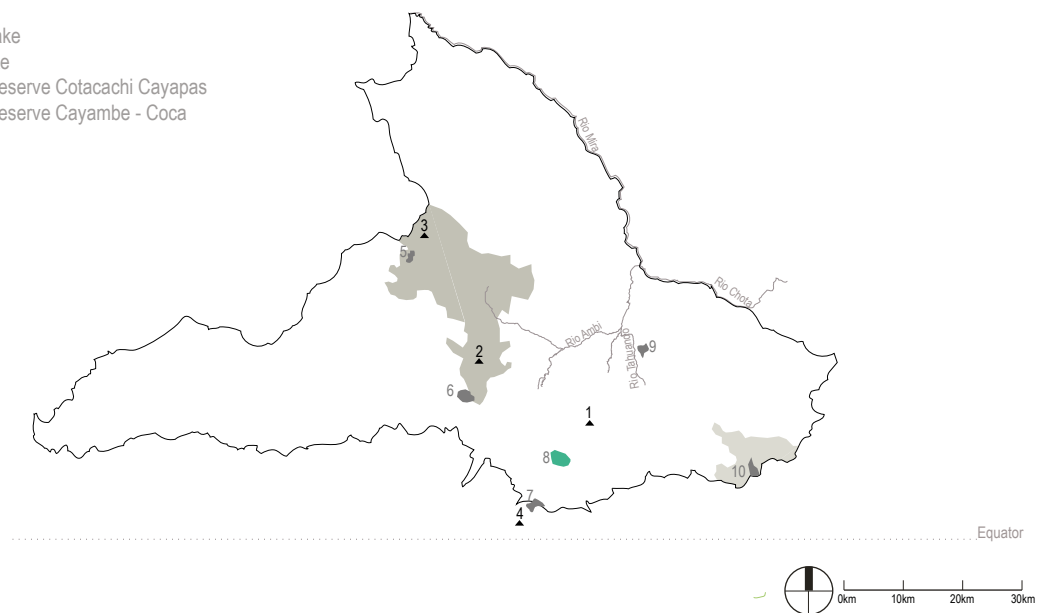
8 San Pablo Lake

9 Yahuarcocha Lake

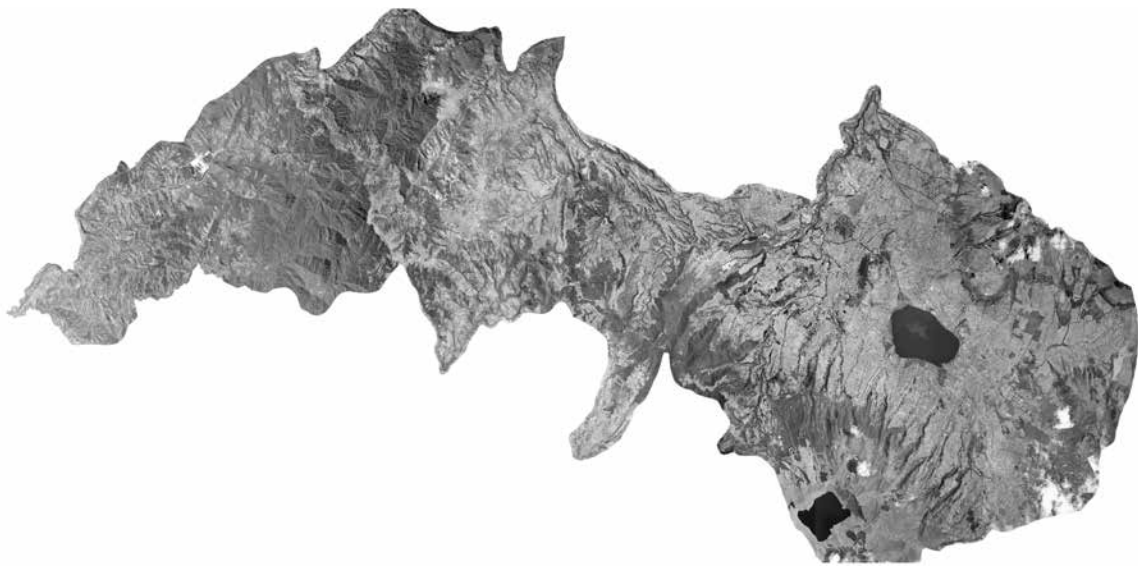
10 Puruhanta Lake

Ecological Reserve Cotacachi Cayapas

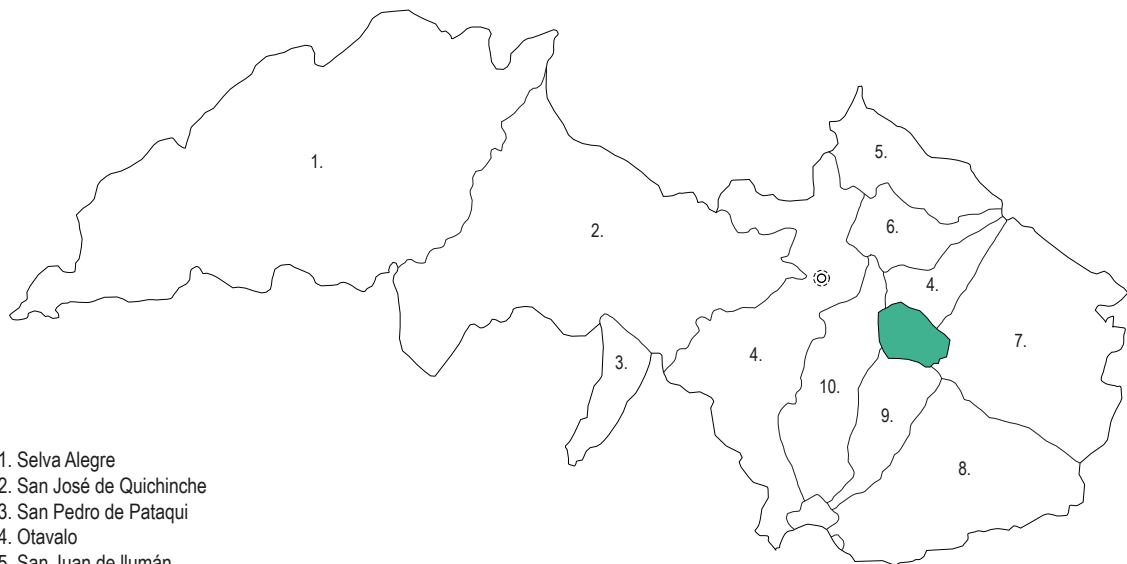
Ecological Reserve Cayambe - Coca



Otavalo



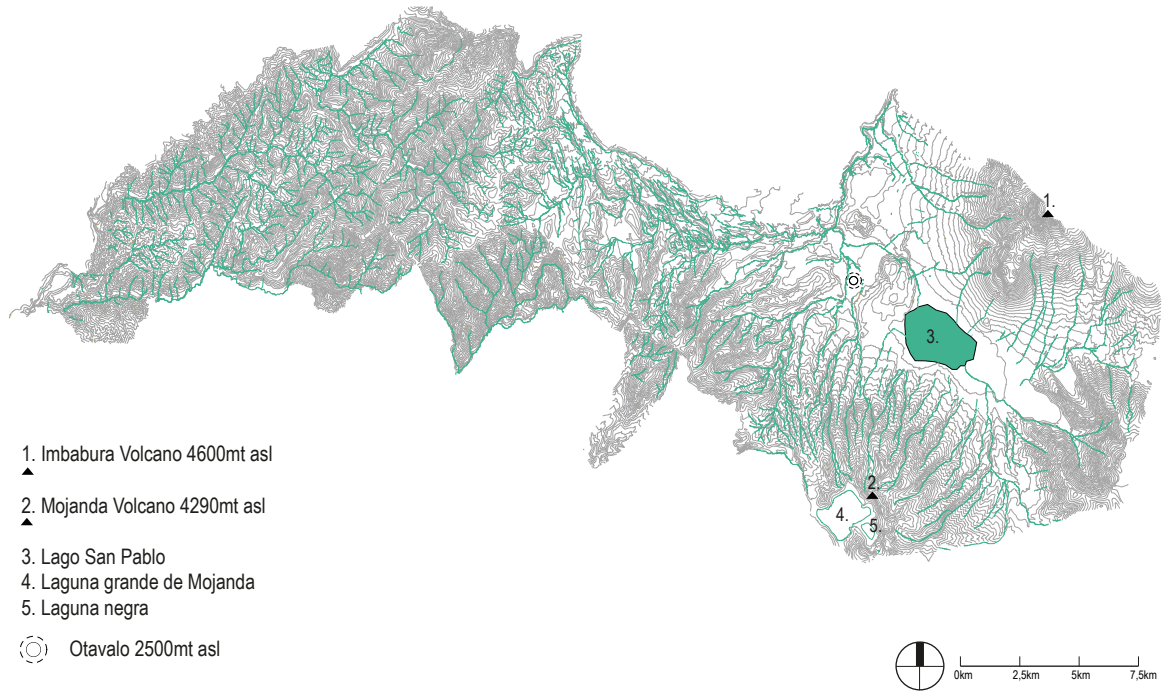
Parroquias' territorial division



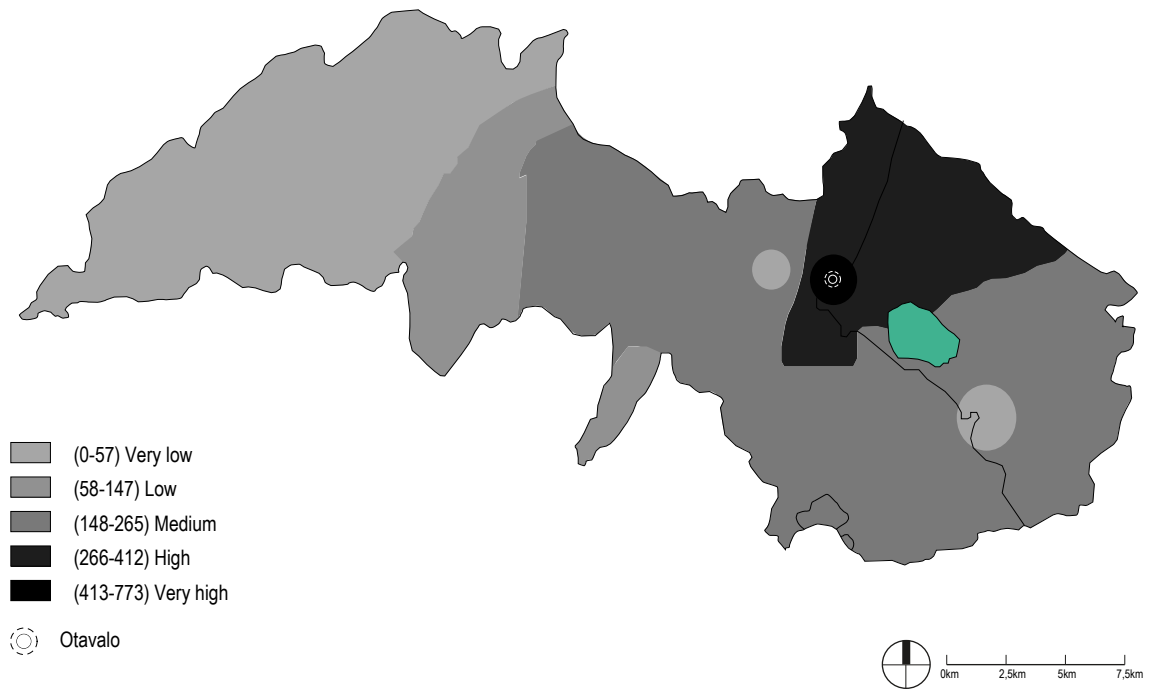
- 1. Selva Alegre
- 2. San José de Quichinche
- 3. San Pedro de Pataqui
- 4. Otavalo
- 5. San Juan de Ilumán
- 6. Dr. Miguel Egas
- 7. San Pablo del Lago
- 8. González Suárez
- 9. San Rafael
- 10. Eugenio Espejo
- ⊙ Otavalo



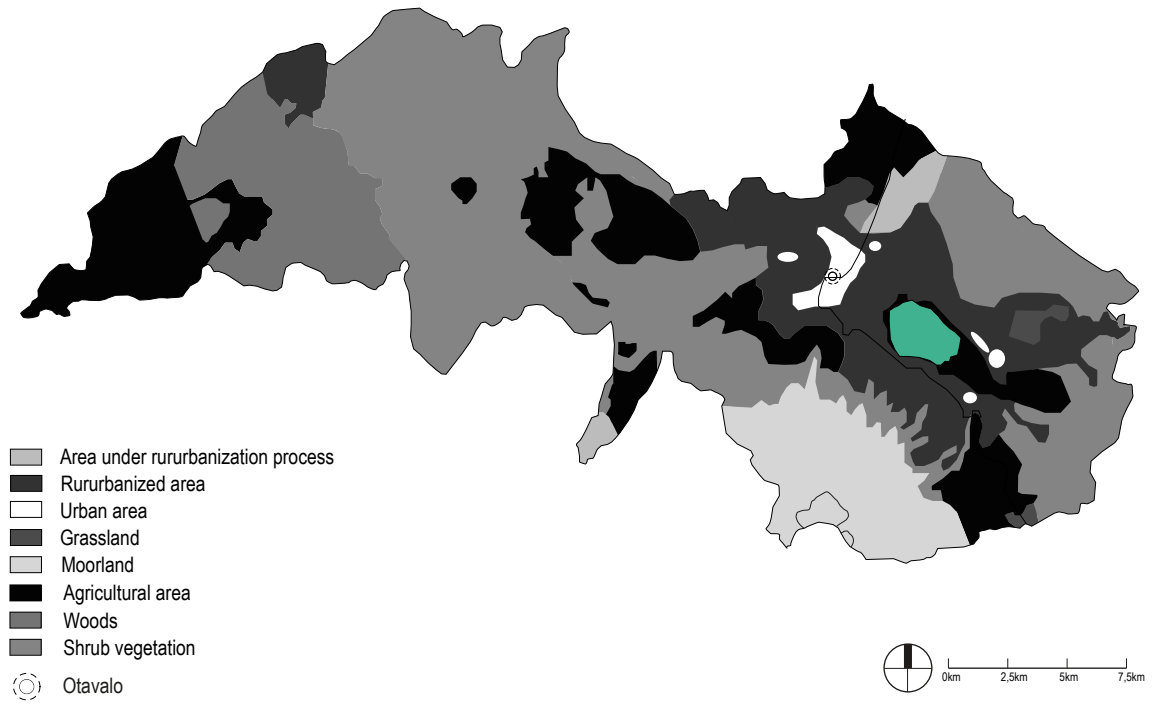
Geomorphology



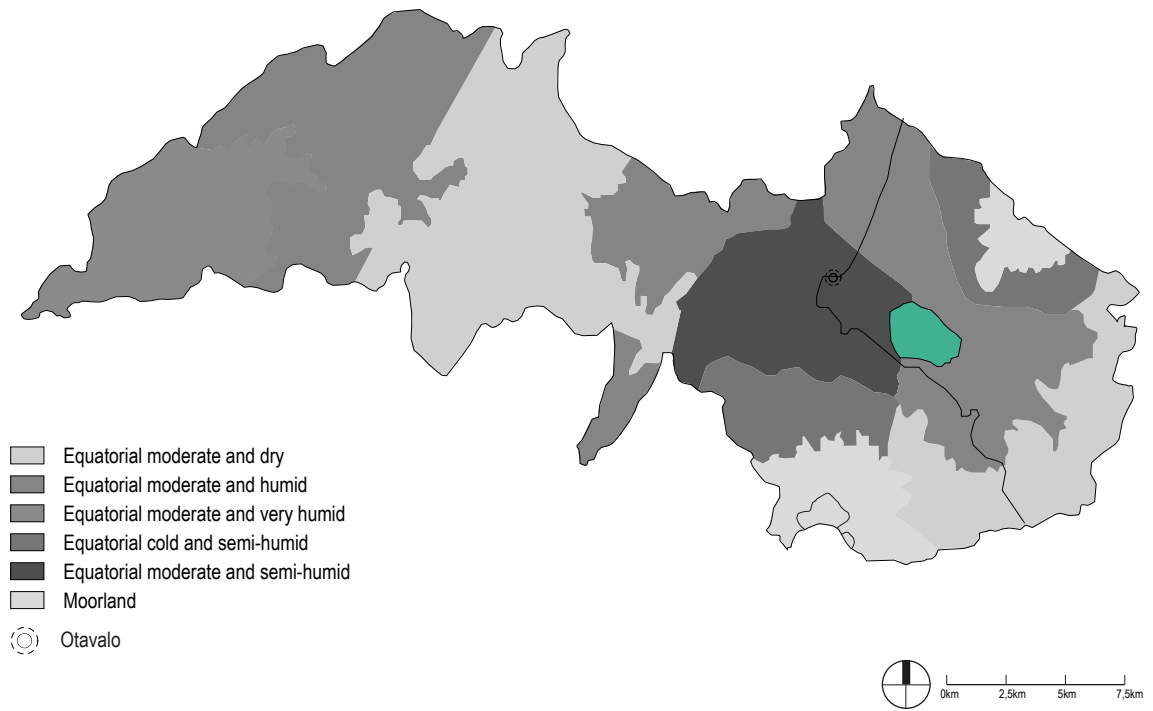
Population density



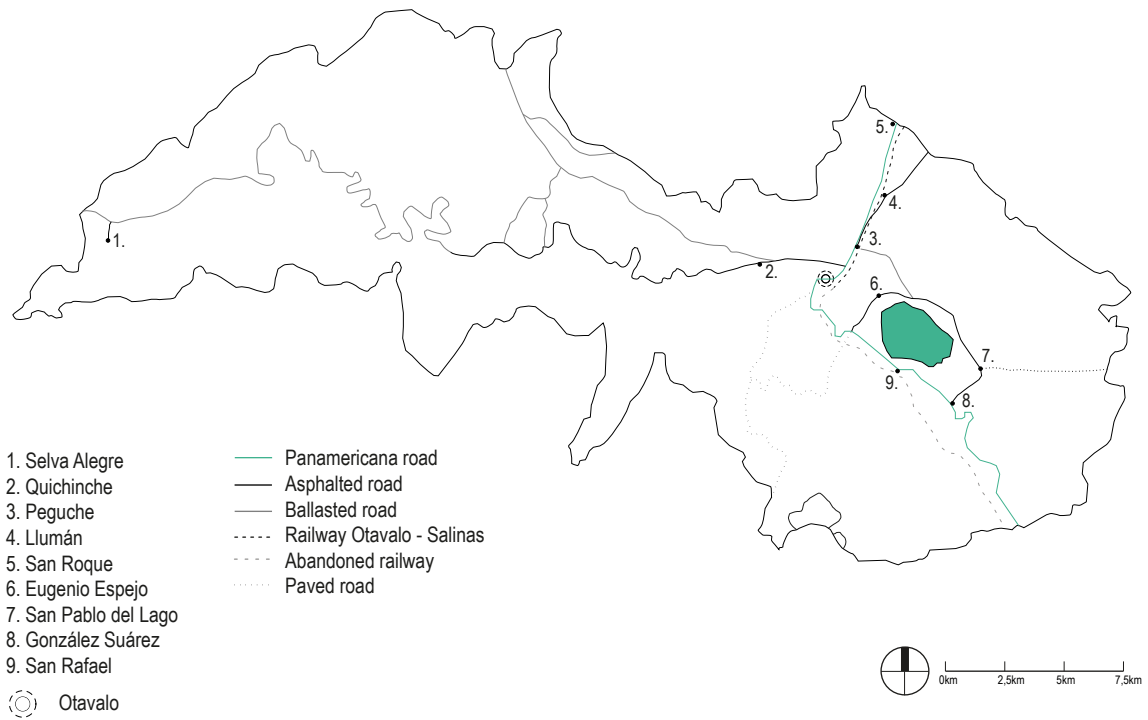
Use of soil



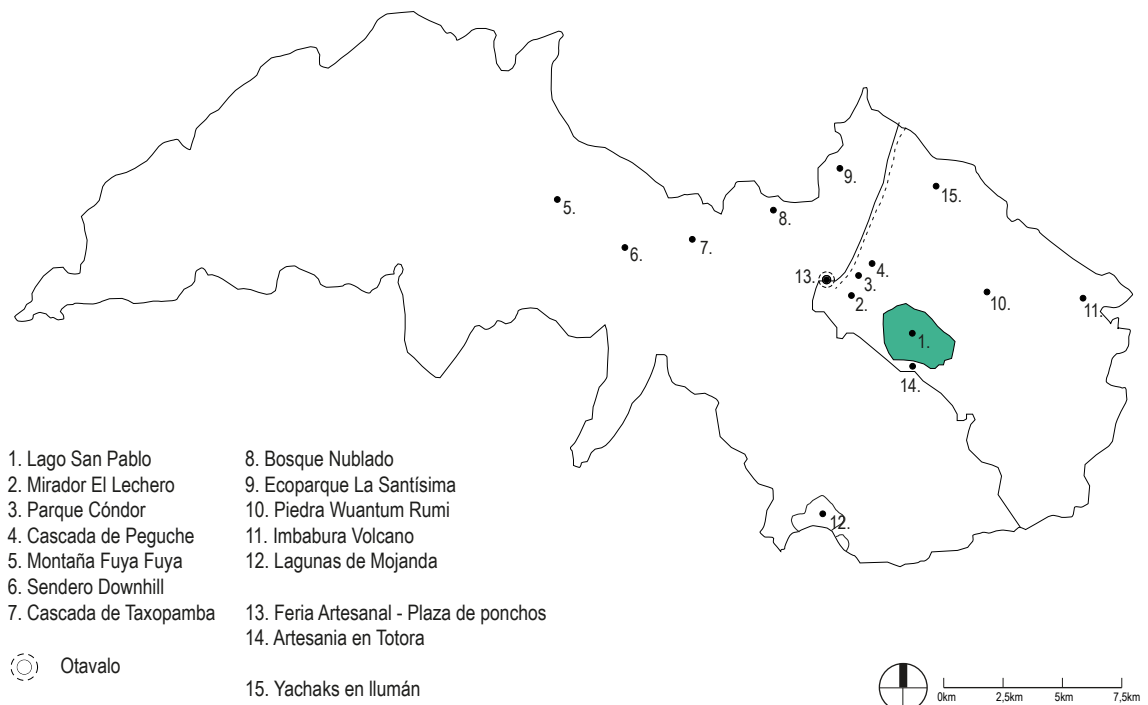
Climatic zones

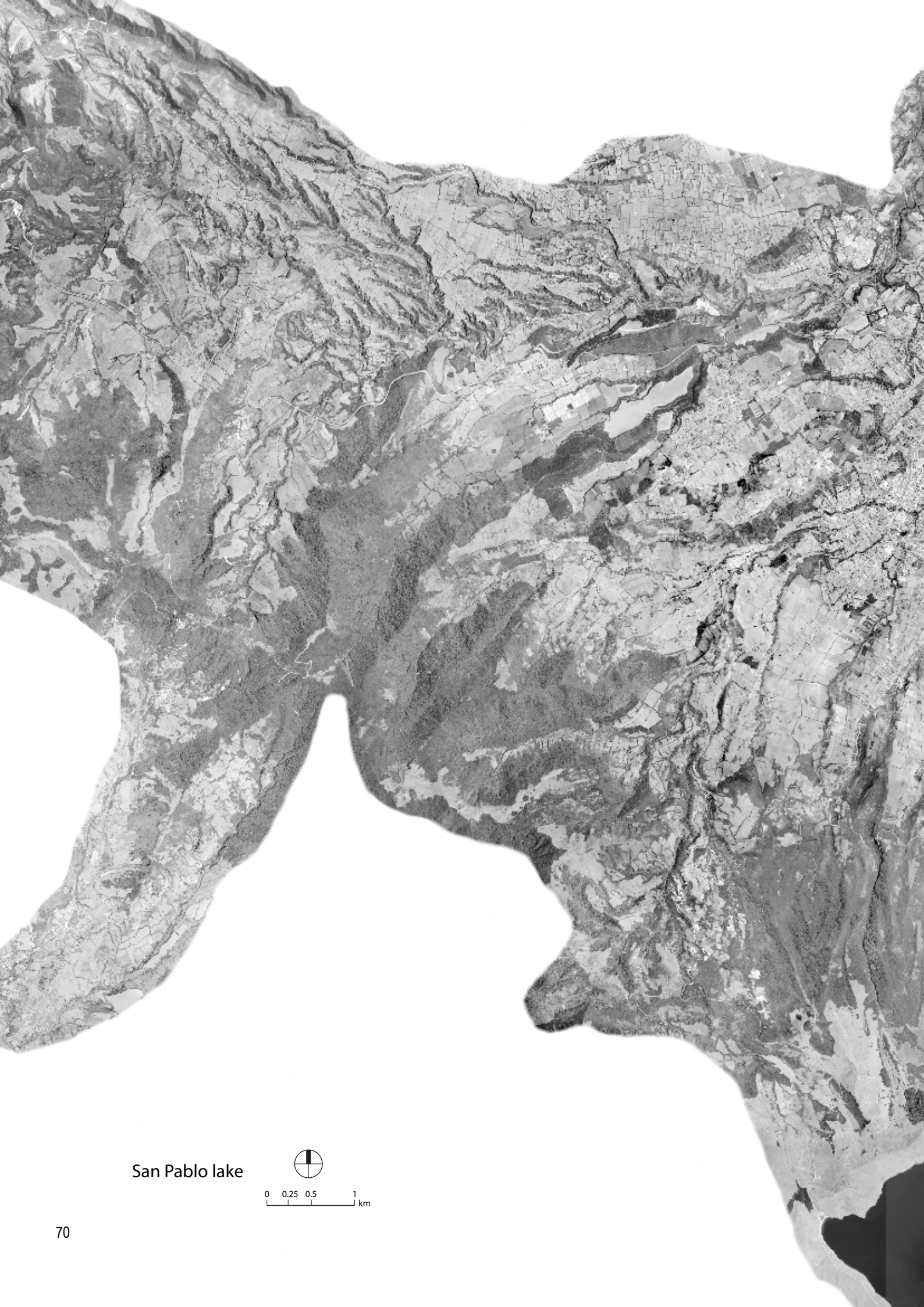


Mobility and Connections

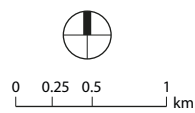


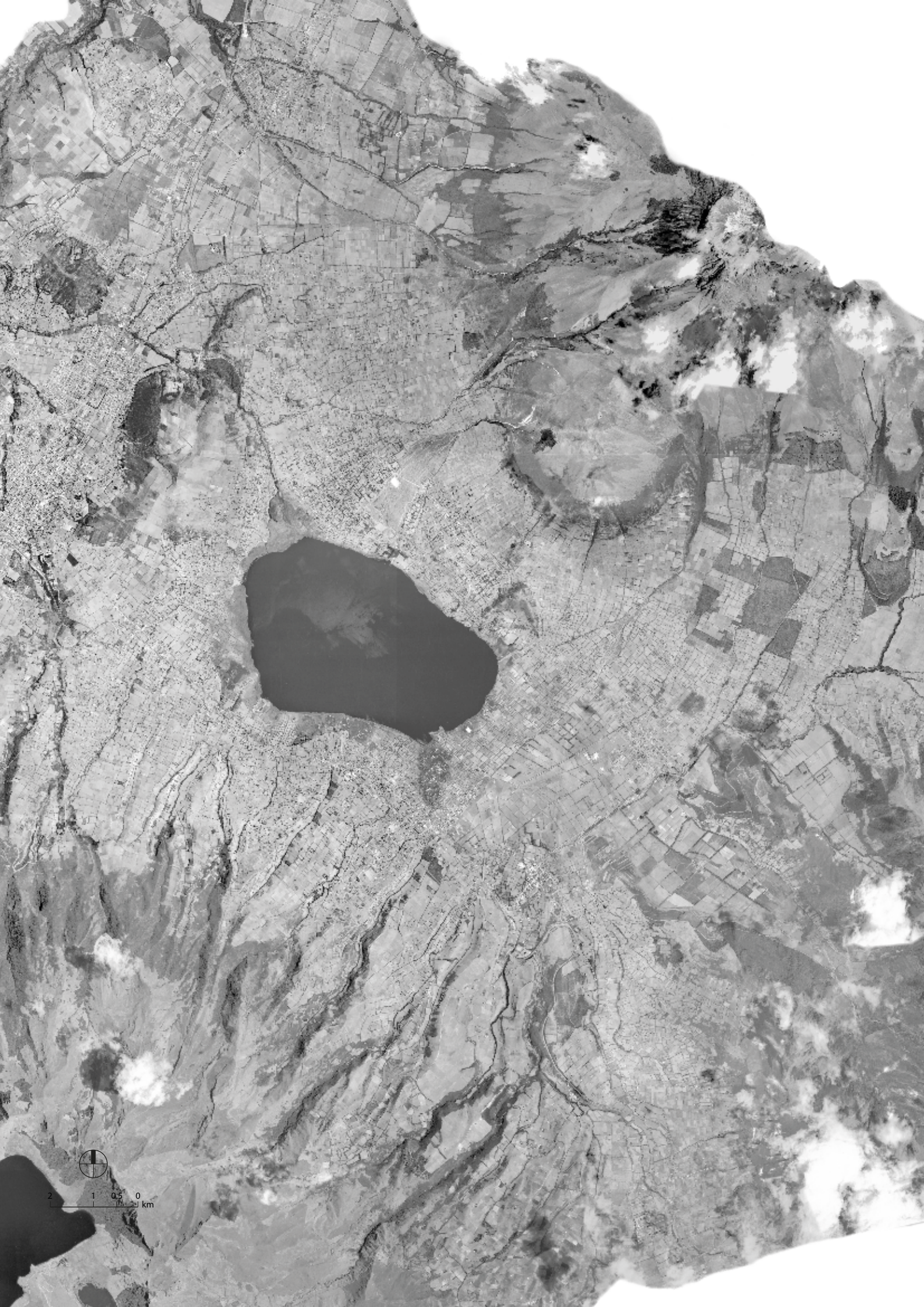
Touristic attractions





San Pablo lake





2 1 0.5 0
km



What we perceive

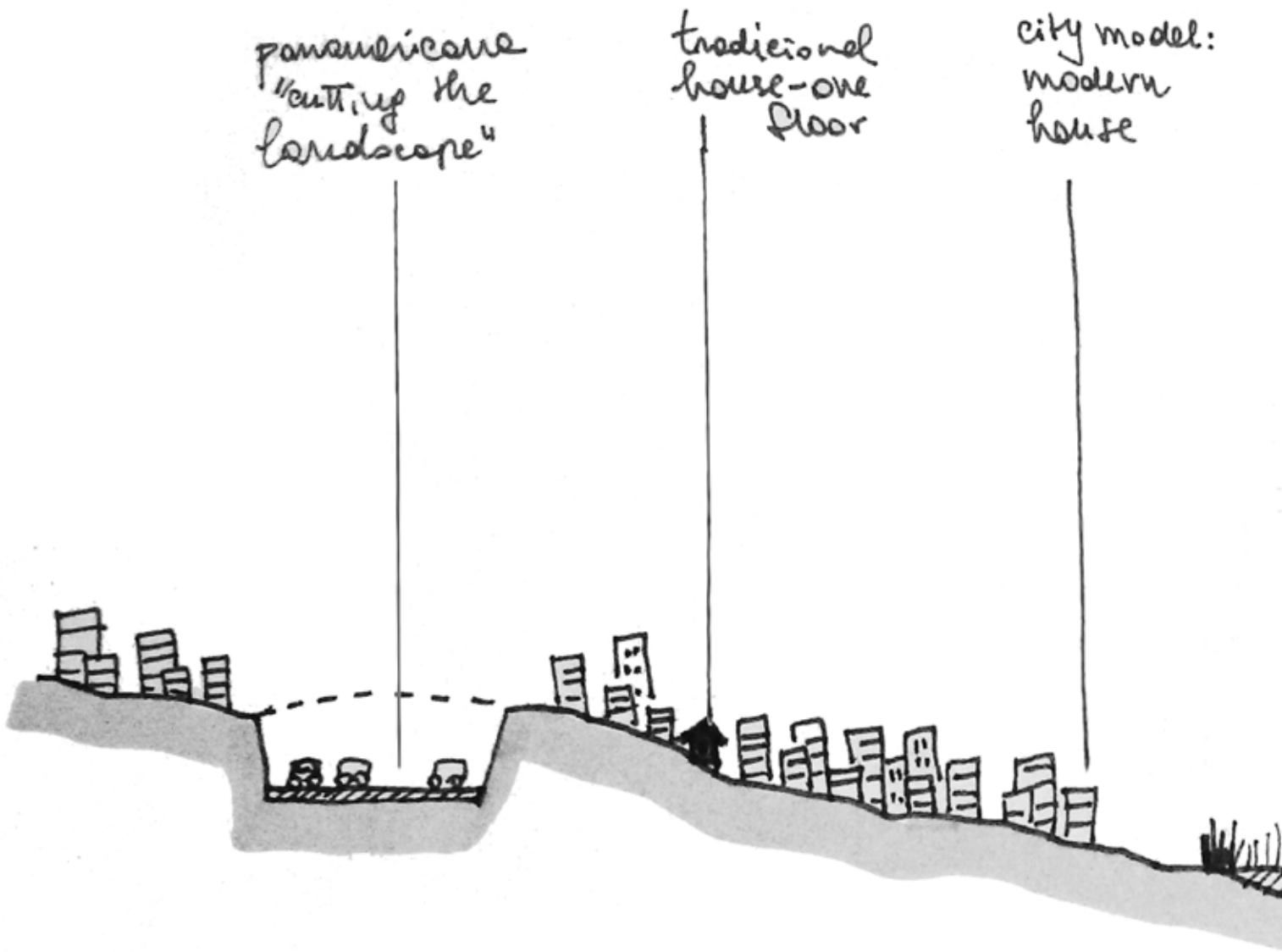
The study of the Place began from our perception and feelings of the Lake and its surrounding. From the Panamericana we walked along the main road that follows the shore of the Lake crossing all the six Parroquias.

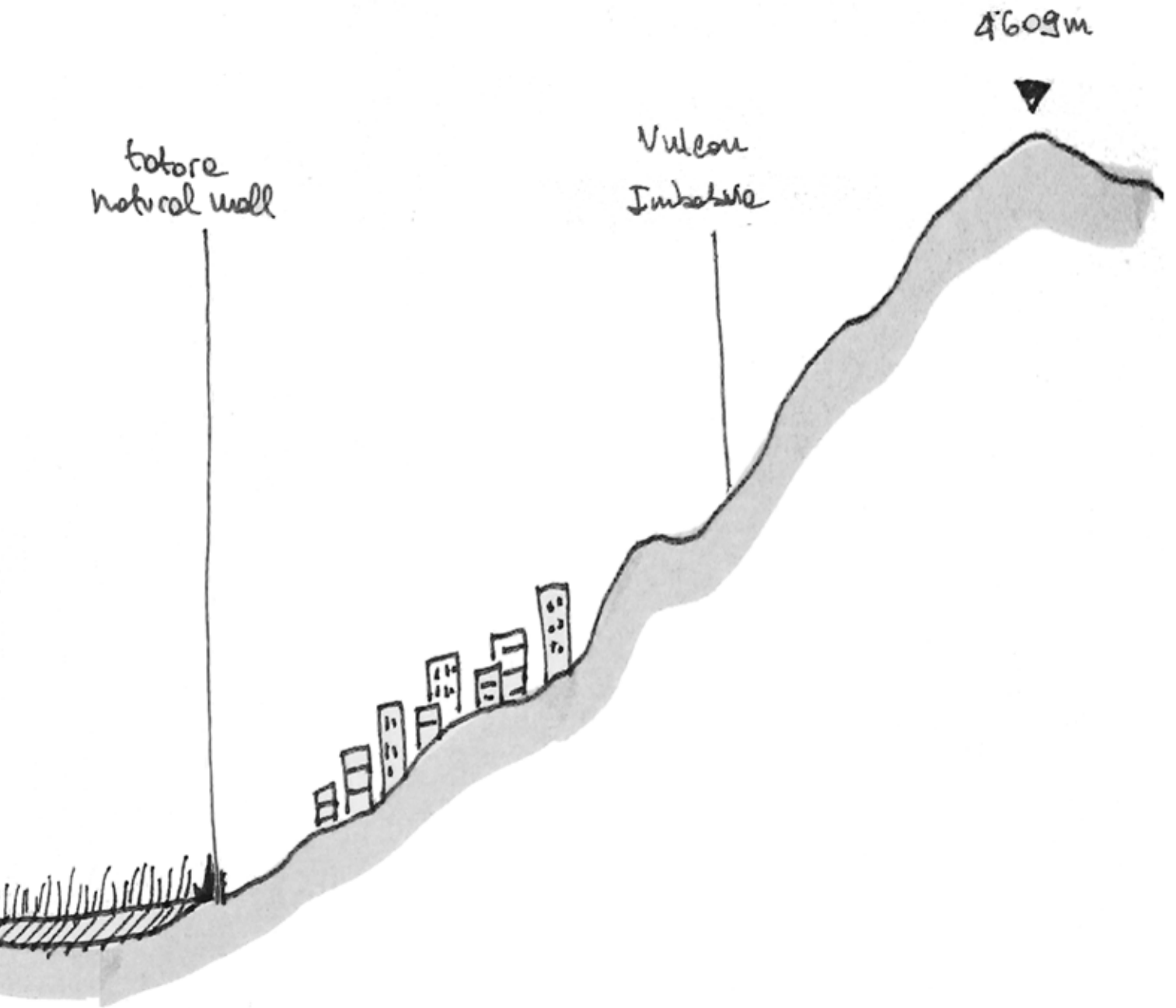
In our walk we discovered interesting places not signed on maps, not only urban but also rural, we saw the main touristic attractions and facilities, we met for the first time the population of the Lake and its culture, we saw the activities that occur in these spaces, we took pictures and we sketched all our perceptions on papers.

At the end of our walk we had a first general idea of where we were: a potential beautiful landscape, with the “mother” Lake and the “father” Imbabura Volcano on the front, an uncontrolled spread urbanisation due to the lack of normative on this area, an indigenous population proud of its culture, tradition and language, few touristic private structures and a general lack of valorisation of what could be, on our advise, one of the most amazing places of Ecuador.

Photo: Walking on the main road that goes around the Lake in Eugenio Espejo, Otavalo, Ecuador.

URBAN SECTION







LEGEND:

	PATH	EDGE	NODE	DISTRICT	LANDMARK
MAJOR ELEMENT					
MEDIUM ELEMENT					
MINOR ELEMENT					
CONNECTION					





Listening to the others

We knew that our perception and idea was not enough to really catch the “spirit of the place”. We wanted to listen more voices, more stories, more opinions; not only the “official” ones, from presidents and professors, but mainly the ones that usually are not listened, the ones that comes from the lowest levels of society, the ones that have a lot to say but rarely are taken into consideration. We decided to organize an “open questionnaire” paper and to go around the lake interviewing about 40 people of different gender, age and social class.

It was interesting the debate and the dialogue that born with each one of them. Someone was more shy and diffident, someone more curious of who we were and from where we arrived, and others more open with a big will to talk and be listened.

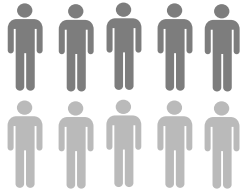
We realized that there is not just one “truth” but many “truths” according to different people and their stories.

Photo: Maria dressed with her tradicional indigenous clothes on the site work, Cachiviru, Otavalo, Ecuador.

POPULATION INTERVIEWS

INTERVIEWED for GENDER

Male 50% 50% Female



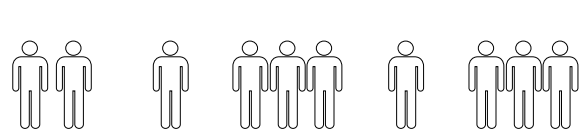
MESTICE and INDIGENOUS

Indigenos 40% 60% Mestice

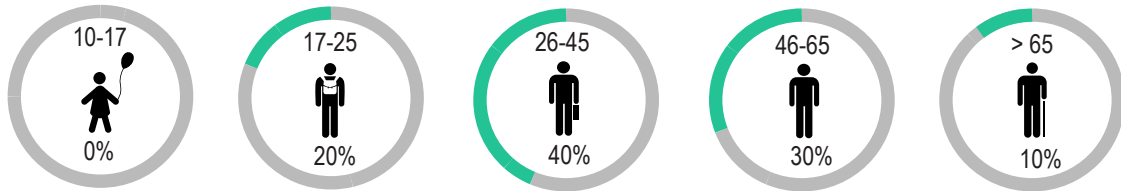


INTERVIEWED for PROVENIENCE

San Rafael San Pablo E. Espejo G. Suárez La Compañía



INTERVIEWED for AGE

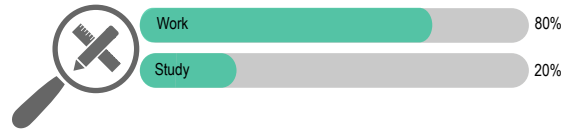


QUESTIONS

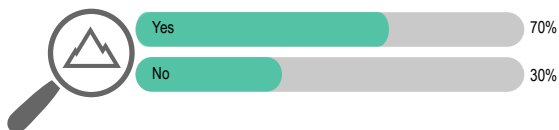
Have you always lived here?



What do you do in your life?



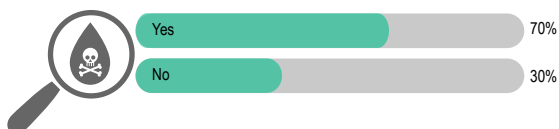
Has the landscape of the lake changed much over the years?



Do you have potable water in your house?



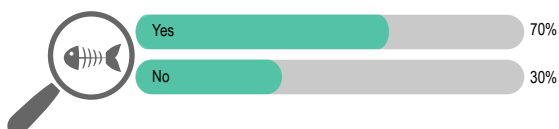
Do you think that now the lake is more contaminated?



Do you have a sewage system?



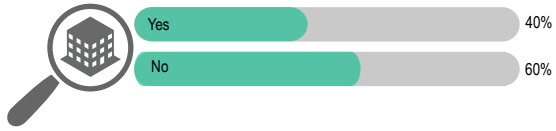
There is fish in the lake?



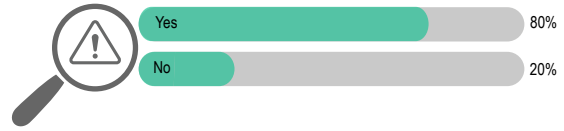
Do you use the garbage collection service?



Do you think that the concrete constructions reflect your



There are dangerous places where you don't like to go?



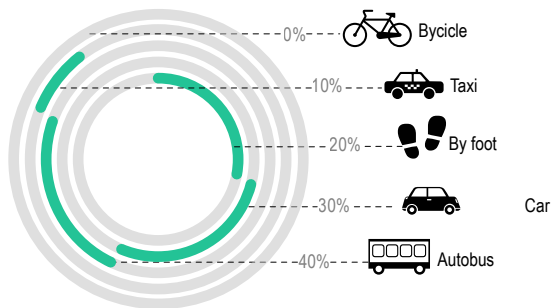
There is navigation in the Lake?



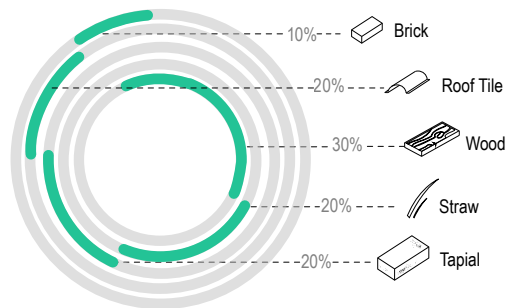
There are some activities around the lake during the night?



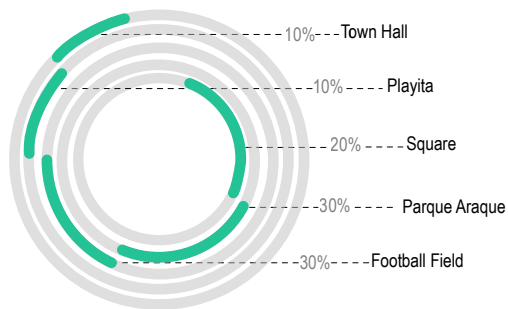
Which is your mean of transport?



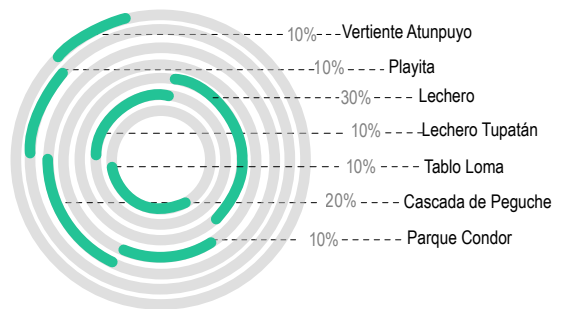
Which are the traditional materials of construction?



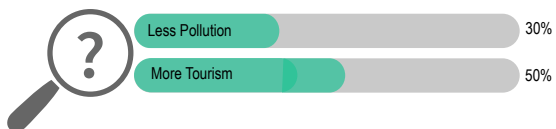
Which are the public spaces where people usually meet?



Which are the sacred places that you know?



What would you wish for you Lake in the future?





Name: Miriam
Age: 24 years old
Job: seller
Parroquia: San Rafael de la Laguna

"I was born here and I remember that, when I was a child, after school, I was always going to the lake with my friends. We were used to swim there and to play into the water. Nowadays the children prefer to stay at home watching television; that's also due to the pollution of the lake that doesn't make it accessible and enjoyable as before "



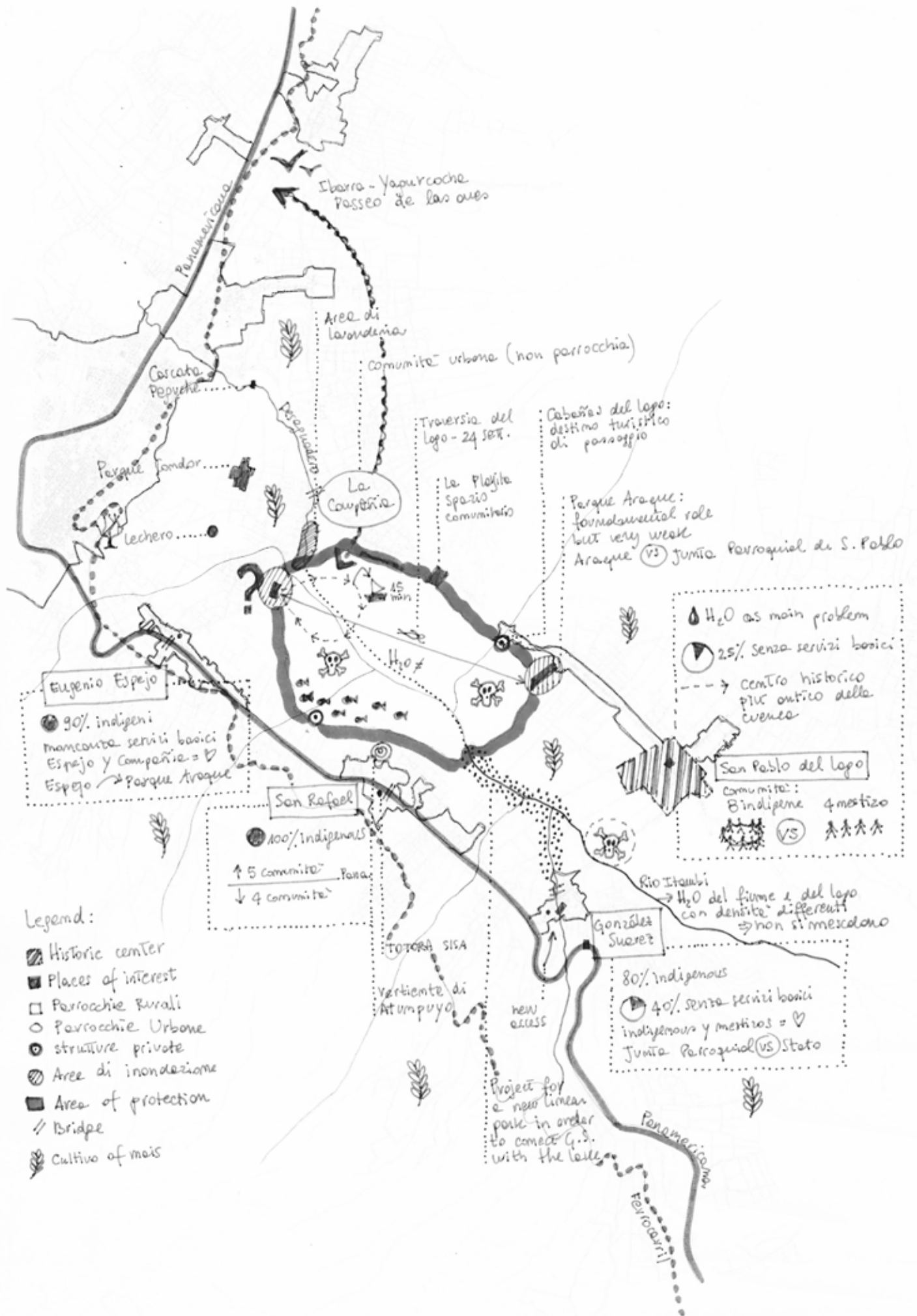
Name: Pablo
Age: 50 years old
Job: owner of a restaurant
Parroquia: Eugenio Espejo

"I am the owner of this restaurant but after the gold period nobody comes here nowadays. Look around you: everything is dismissed and abandoned, we don't have any financial help from the government and now we are just renting boats for the few tourists that still come here. There is a lack of interest in the valorization of this amazing place. That's a pity!"



Name: Cesar
Age: 67 years old
Job: farmer
Parroquia: San Luis

"I'm indigenous and I always believed in the power of Nature. I love this place, it's my home, and I would never change it for anything else. I worked the Earth for all my life and her products maintained me and my family in these years. Look how beautiful is the lake, its calm, its peace. And the Taita Imbaura, there, is protecting us."





Objective analysis

The third phase was aimed to find and get official information in order to have a strong objective base on which build up our proposal. For achieving it we started from the documents of each Parroquia, asking to Presidents the official “*Plano de desarrollo Territorial*” of their own Parroquia in which were defined the problems and potencialities of the area. The following step was a direct meeting with the Municipality of Otavalo and the director of Urban Planning department Byron Velasco that was not really helpfull, telling us that the only way to get the documents was through an official permission. We also went to the touristic office of Otavalo, that gave us some usefull websites, interesting books and papers. At the end, we also talked with the director of the “Antopology Museum” in Otavalo to know more about local people, their origin and their culture. All these documents were re-elaborated according to our startegy extracting the most usefull informations in terms of society, economy, urbanism, environment, nature, tourism and politics and re-organized in this chapter in five macro thematics: indigenous and their culture, nature and landscape, politics and development, collateral effects and the analytical synthesis. These key-themes are the starting point of a process that became, during its development, much more complex, interesting and multidisciplinary.

Photo: Panamericana high-way crossing the Parroquia of San Rafael de la Laguna, Otavalo, Ecuador.

1.2.4.1 Indigenous and their culture

Otavallo has been declared "Capital Intercultural of Ecuador" thanks to its landscape beauty, its cultural richness and its history. Here we can find the indigenous ethnic group 'Kichwa', famous for their ability in the textile handcraft through which sell objects in the Otavallo Market, the biggest artisan market in South America. This ethnic group is divided in 2 sub-group: Kichwa Otavalos, which represent the biggest percentage of population, and Kichwa Kayambis.

After the occupation by incas which last 17years, this population has been subjected to the Spanish supremacy because Otavallo and its population were considered a rich source for its development in agriculture and craftsmanship. According to a census of 2010, Otavallo has the biggest proportion of indigenous population inside the province of Imbabura with a percentage of 55,35 of indigenous. Even if almost everyone can speak Spanish, this ethnic group has maintained its original language: quechua. The majority of Otavaleños are Christian (either Catholics or Evangelicals), their religion does not conflict with the spirituality found in their cosmovision.

Indigenous calendar represent the conception of time on one side and show clearly the observation of Nature and stars. In the quichua language the word 'pacha' expresses the indissoluble notion of space-time. A cyclic notion of time expressed through the sign of the spiral. The observation of sky, moon cycles, sunrise and sunset, stars, planets helped to mark time and space and also to regulate the reproduction of society, socially, economically, symbolically and spiritually speaking. For the andin society astronomical phenomes reveal direct relation with human events, type cause-effect. From the obseravtion of cyclical phenomenal celestial they created predictions and calendars. The case of extraordinary phenomenous are intended as bad omens.

According to the indigenous cosmovision there are 3 levels in the cosmo: Hanan Pacha, Kai Pacha, Uku Pacha. The indigenous people of Otavallo maintain a close spiritual link with the environment. A main component includes their work with the land and the sacred sites that are interconnected with their spirituality. They venerate Pachamama (mother-earth) Cochamama (water-mother), Saramama (mother-corn)etc.. which are feminine archetypes that protect humans. According to this conception feminine will be always joined to masculine. For that reason mountains, lakes, rivers, astros are considered to have a sex exactly as man and woman.

Indigenous conception is related to a strong symbolism, for example, the "cruz cuadrada" represent a fundamental symbol within the cosmovision.

Objectified elements of the lakes become sacred; they include the sun (known as 'inti'), the mountains, trees, and large rocks... Along with purification rituals, there are also festivals, myths, rites, ceremonies and celebrations that are associated with the sacred sites. Kichwa Otavallo and Kichwa Cayambi celebrate four famous rituals which coincide with the two solstices and equinoxes during the year. Celebrations strictly related to the andin agricultural cycle for which corn is the main source of job and subsistence. There are 2 feminine celebration, Qoya Raymi and Paukar Raymi, and 2 masculine celebrations, Inti Raymi and Capac Raymi. According to the ancestral indigenous cosmovision of Imbabura in San Pablo lake are identified six different ecological levels known as Allpakuna that means 'Earth'. Wampu Allpa is a zone of lacustrine directly close to the lake, Ura Allpa is the zone related to human settlements and cultivation, Jawa Allpa is a zone of forest and dispersed cultivation, Sacha Allpa is a zone of bush and native forest, Uksha Allpa is a zone Highland grassland or pajonal and Rumi allpa that is a zone of high mountain.

The traditional clothes are, in the case of women, a suede dress long to the ankle, they can be blue or black; a white shirt with usually flowers decoration hand sewn and a dark cloth that covers the hair and usually they wear gold colored necklaces. Regarding men, they dress white trousers and a dark poncho with a dark hat. Women and men both wear particular shoes known as espadrillas, black for the woman and white for the men; and their hairs are always organized in a beautiful tress.

Moreover it is important to mention a concept that we had the opportunity to know in Ecuador and that helped us to build up our project. In Ecuador 'Minga' is the first traditional method of collaboration to get things done and is something which has grown organically over centuries. Minga by definition is collaborative work in which friends and neighbours volunteer their time, effort, and sometimes funds to achieve a shared goal for the betterment of the community (for example, building a home, harvesting food or repairing roads). It was created as a way of developing a town or village to benefit the whole community. Basically every member of a town or village would chip in a day here and there, to work on community projects such as fixing or laying a road, cleaning up a park etc. If there are emergencies then people gather together and work through the problems.

Population for Gender

Male 49% 51% Female



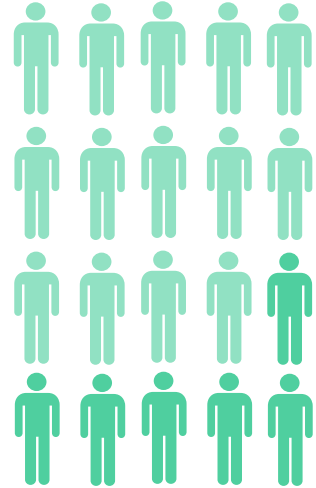
Mestice and Indigenous

Indigenos 83% 17% Mestice



Indigenous Ethnic Groups

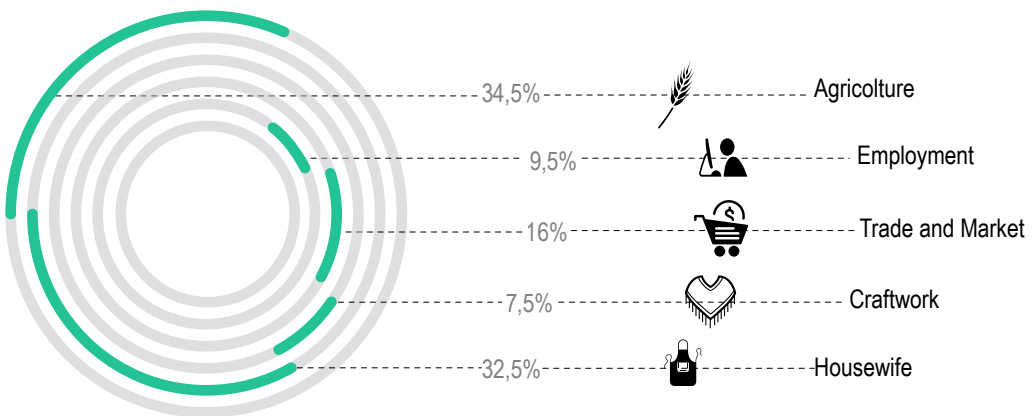
Kichwa Otavalos 56% 27% Kichwa Kayambis



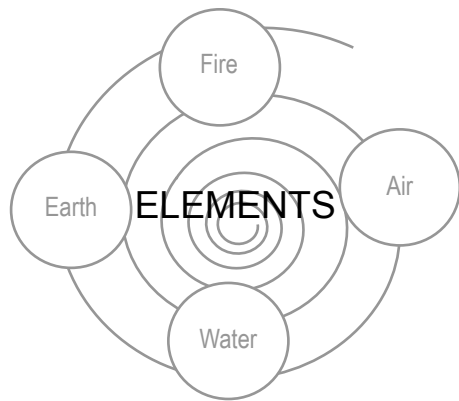
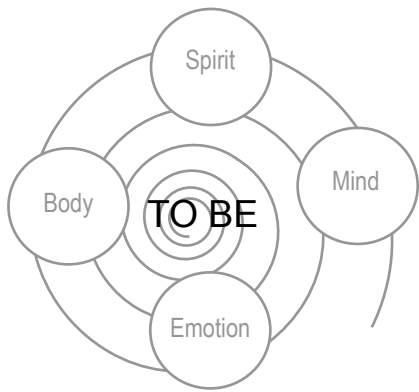
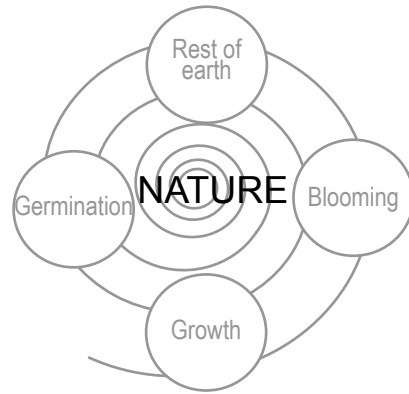
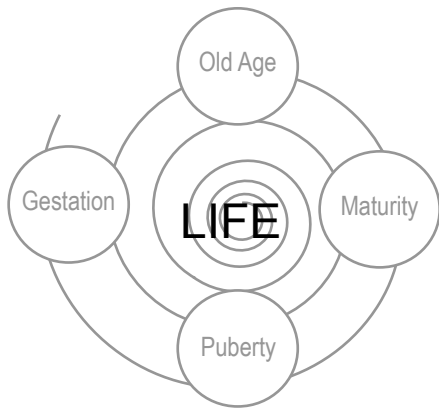
Population for Age



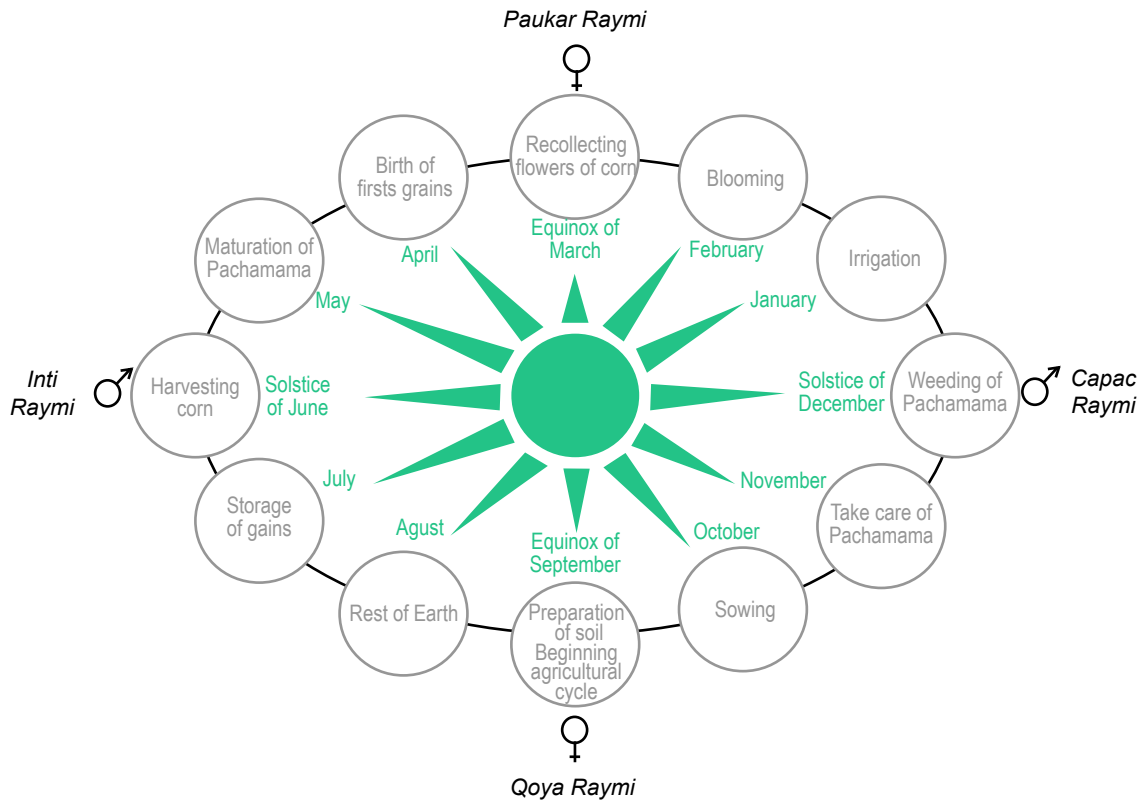
Economy



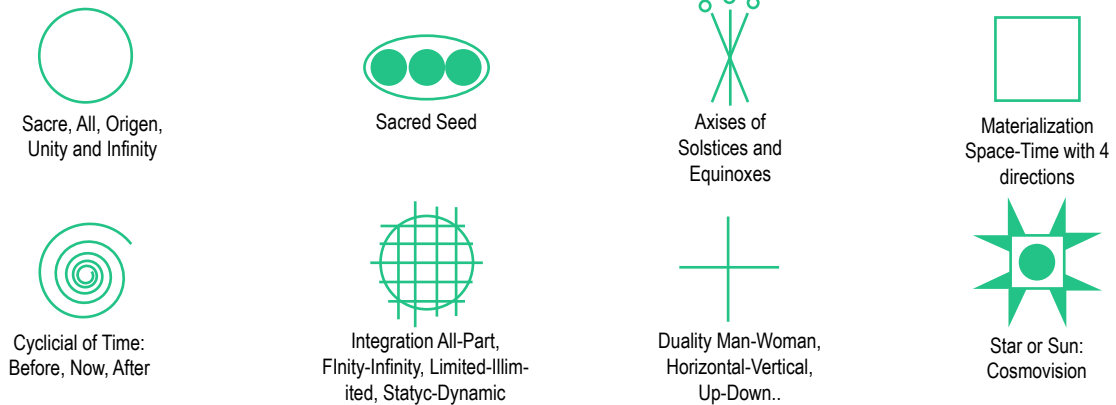
Cyclic Nature



Agricultural Calendar



Symbols



Cosmvision

Hanan Pacha :

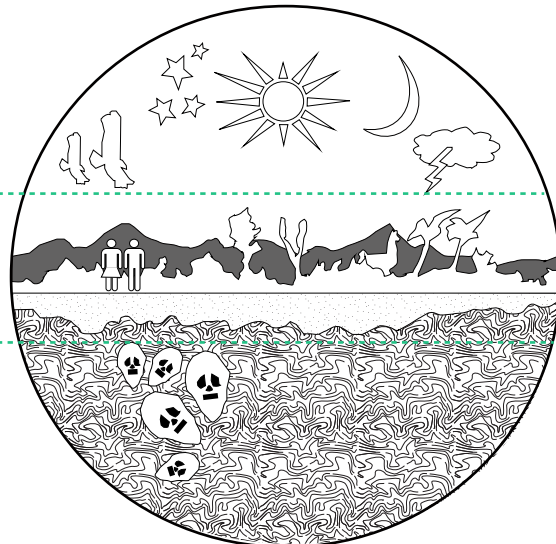
"World Above", (Hanna = North) where celestial entities, stars, constellation, a planets, rainbow and birds live.

Kai Pacha :

"This World", (Kai= being, existance, truth, orden) where human beings, mountains, lakes, rivers, plantas and animales live.

Uku Pacha :

"UnderWorld", (Uku= inside, within, deep) where mummies of ancestors stay so that nwe men can born from the earth.



- Rumi Allpa: above of 3700 mt - Mountain
- Uksha Allpa: 3400-3700 mt - Highland grassland or pajonal
- Sacha Allpa: 3200-3400 mt - Andean forest coves
- Jawa Allpa: 2800-3200 mt - Forest and dispersed cultivation
- Ura Allpa: 2700-2800 mt - Human settlement and cultivation
- Wampu Allpa: 2660-2700 mt - Lacustrine

sc 1:200000

Places of cultural interest

1 Cascada de Peguche



Where Indigenous ceremonies and baths of purification are accomplished. Moreover at the base of the waterfall there are some shops and restaurants.

2 La Playta



Open public garden preceded by a romantic forest of eucalpto without infrastructures. People rest doing pic-nics, enjoying the panorama and or different kind of celebrations.

3 Loma Atallaro



Sacred little hill, more related to ancestors, where people used to do rituals.

4 Parque Araque



Aquatic Park directly on the shore of the lake where there is a traditional restaurants and a simple dock used by boats. Children use to swim there.

5 Plaza San Pablo



Open public space, meeting point for inhabitants that host several multi-cultural events or market or famous celebration during the year like Inti Raymi.

6 Cancha San Pablo



Football fields used not only for sportive events but also for traditional festivities due to the fact that are one of the few infrastructure able to host a great number of people.

7 Cancha Gonzalez Suarez



Football-ecuvolley fields used not only for sportive events but also during particular periods of the year when there is for example 'la fiesta parroquial'

8 Plaza Gonzalez Suarez



Thanks to its lucky location in-between 2 main streets, the site is exploited for the weekly market and other important festivities. People gather also to play ecu-volley.

9 Totora shore



Inhabitants of San Rafael known for its ability in working totora create little canoas of totora in order to allow a Caballitos competition

10 Cancha San Rafael



Every Saturday this site host loads of people doing volleyball or football. But it is also exploited when there are important events.

11 Plaza San Rafael



Square in front of the main church which is used for traditional festivities as well as marriages. When there is the celebration of a festivities we can find different stands.

12 Plaza E. Espejo



Open public space, meeting point for inhabitants that host several multi-cultural events or market or famous celebration during the year like Inti Raymi.

13 Muelle E. Espejo



Site that, even if needs a renovation, represent a meeting point for celebrations, artisan markets and also a starting point for boats and swimmer

14 Lago San Pablo

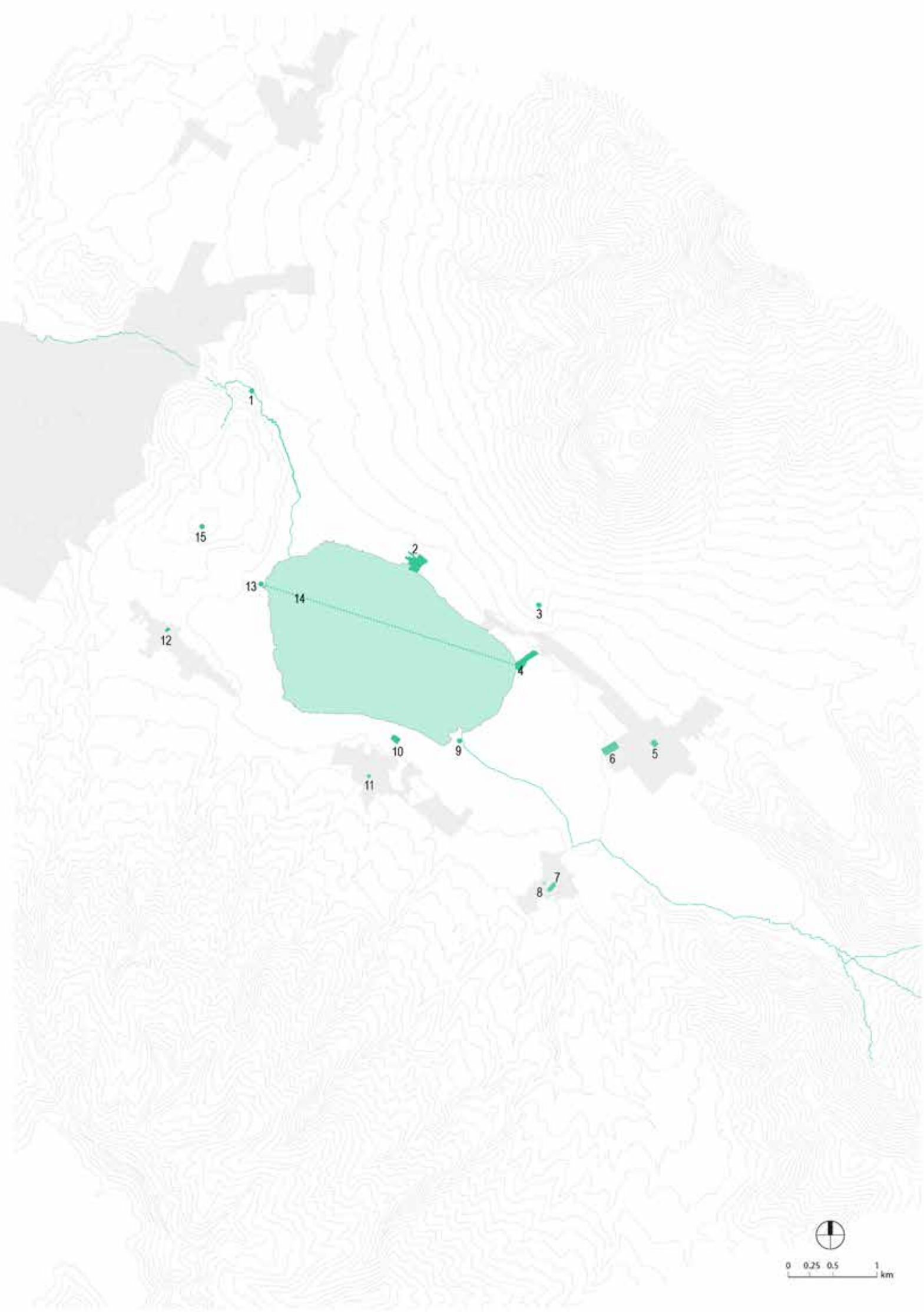


Biggest lake in Ecuador where the most famous Swim Crossing is celebrated: more than 100 swimmer cross the lake for about 3km

15 Lechero



Sacred site from which you can see the entire panorama of San Pablo. Several legends have been told.



1.2.4.2 Nature and Landscape

San Pablo lake is the biggest lake of the country. It is located inside a natural "hoja" (valley) between the active vulcan Imbabura (4609m a.s.l), on the North, and the vulcan Mojanda on the South. Between the local population the vulcan Imbabura is known as the "Tayta Imbabura", the father-god, and many legends are told about it. The lake has an altitude of 2660 m a.s.l., a surface of 7 km² and a maximum deepness of 35m (media of 24.6m).

Its main tributary is the Itambi river which brings around 44 cubic hectometros of water every year. The rains brings 5 Hm³ every year and others tributaries that come from the gorges of Mojanda, Cusin and Imbabura bring 1.5 Hm³ every year.

The basin of San Pablo lake is characterized by a variety of soils, mainly classified in relation to their altitude, and its famous for the richness of ecosystems and biodiversity which includes a variety of trees, herbaceous, climbing plants, bush, epiphytes and flowers. Some of these plants in addition to their ornamental and decorative function, are still used by the population as medical plants according to their recognized magical and energetic value.

Moving from the lake level we found the humedal, the wet soil characterized by the presence of totora, the antropized land with cultivation fields, the wood layer with native trees, and the down and upper paramo, with shrubs and small plants that now we are going to describe deeper.

The soil around the lake is characterized for a great percentage by cultivated lands since the life of indigenous population is strongly related to the earth and is organized following the kichwa solar calendar (which includes 13 months, of 28 days every one, in a total of 364 days) that regulates the agricultural cycles.

This activity was strongly developed in the last years destroying partly of the natural environment through wrong methods and use of chemical products. The corn is the most cultivated product in the region, followed by beans, potatoes, wheats, barleys, pumpkins and others; they constitute the 'poor' meals of native population.

Another large percentage of the soil is occupied by paramo, Andean ecosystems constituted by wide areas of straw, typical of higher altitudes from 2900mt to 5000mt.

Around the lake it is possible to meet also areas occupied by woods of eucaliptos which are sometimes used in the traditional construction industry.

Along the littoral it grows a waterplant known as totora which works as a depuration filter that affect positively

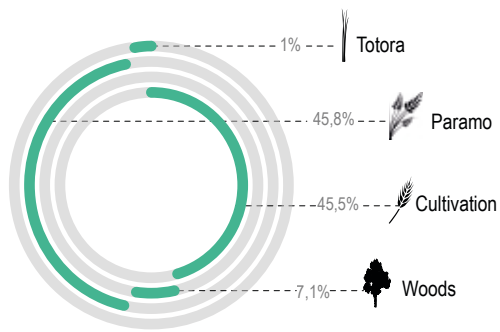
the lake ecosystem. Moreover it is a raw material that represents in some cases an evident productive resource as it is traditionally worked and treated in order to produce seable handcrafted objects.

The entire environment of San Pablo lake is distinguished for its richness in terms of vegetation and climate, for that reason it portays an ideal habitat for different species of animals.

The fauna that characterized the lake is especially fish fauna that includes mainly trouts arco iris and carpas; unfortunately in the last decades the lake has suffered serious problems of contamination and due to that the quantity of fish is dramatically decreased: most of fishes are at the risk of extinction first among all the preñadillas. The surrounding environment is characterized by a great amount of fowls such as colibris, cormorant, ducks and so on. Also in this group there are some species at the risk of extinction such as blackbirds, garzas, turtledoves and golondrinas.

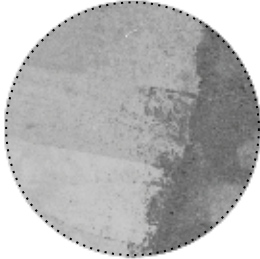
At the same time the territory is inhabited by wild animals such as Andin wolfs, deers and rabbits.

Typologies of soils

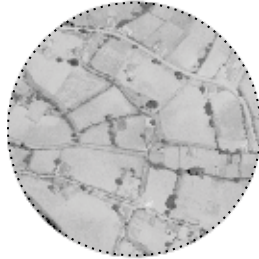


Patterns

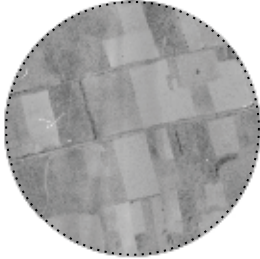
Pattern_1



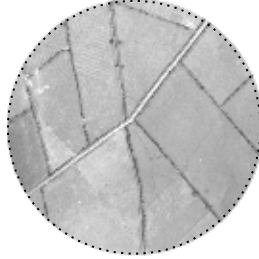
Pattern_5



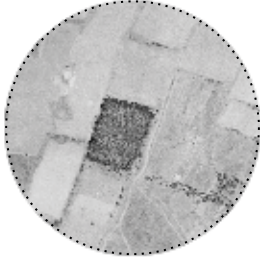
Pattern_2



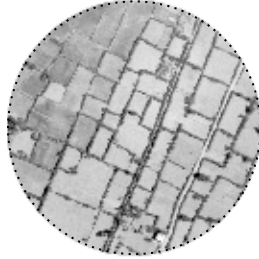
Pattern_6



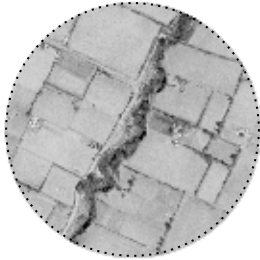
Pattern_3



Pattern_7



Pattern_4



Pattern_8



Legend





1

2

3

4

7

6

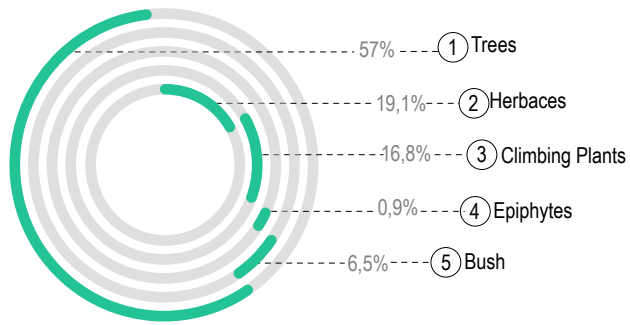
5

8

0 0.25 0.5 1 km



Flora



Fauna



Colibri



Cormorant



Aves Somormujos



Blackbird



Quilico



Pato Cuervo



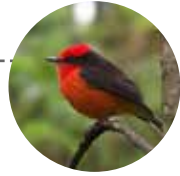
Garza Blanca



Gondolina de mar



Duck



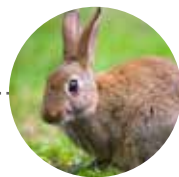
Pajaro Brujo



Sparrow



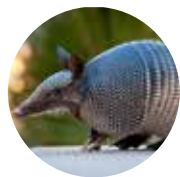
Turtledove



Rabbit



Cricetidae



Armadillo



Andin Wolf



Deer



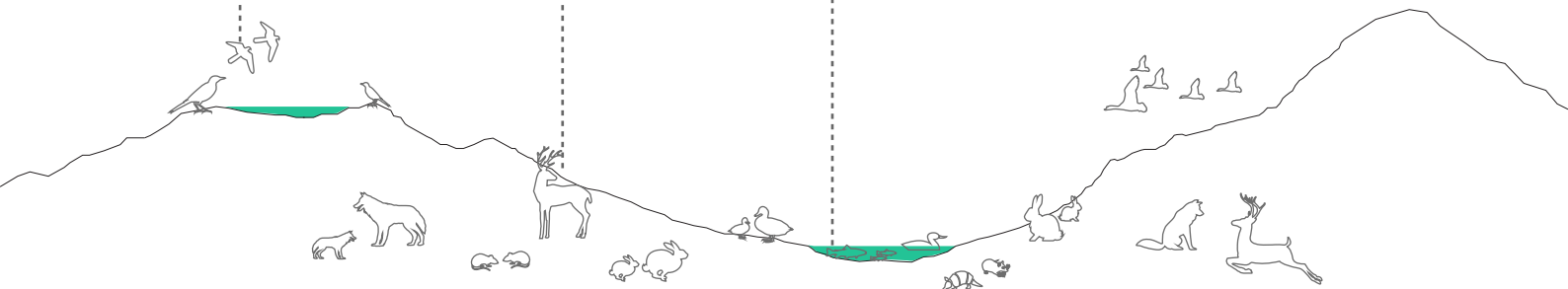
Preñadillas



Trout Arcoiris



Carpa



1.2.4.3 Politics and Development

Lago San Pablo is politically and administratively part of a more complex scenario in which different public corporations and political authorities are involved. They must be taken into consideration when a wide urban and architectural project is becoming established.

To better understand this political and administrative situation we tried to define a sort of pyramid of citizenship that see at its top the Prefectura of Imbabura province, followed by the Municipality of Otavalo represented by its Mayor Gustavo Pareja.

Two people are especially required in our type of project: the environmental management official of Imbabura Prefecture, Mrs. Karen Teran, and the director of the department of Urban planning of Otavalo, Mr. Byron Velasco.

The city of Otavalo is composed by a central urban core and a large number of GADT (Gobiernos Autónomos Descentralizados Parroquiales) more known as 'Parroquias' which are defined 'urbans' or 'rurals'. Each of them is run by a 'Junta parroquial' primarily represented by its president. Around the lake there are six parroquias belonging to Otavalo region: two urban and four rural. El Jordán and San Luis are the urban parroquias but of them just two communities are directly related to the lake, La Compañía and Camuendo.

As rural ones we find: Eugenio Espejo (24 050m²), San Rafael de la Laguna (19 590m²), González Suárez (50 920m²) and San Pablo del Lago (64 570m²).

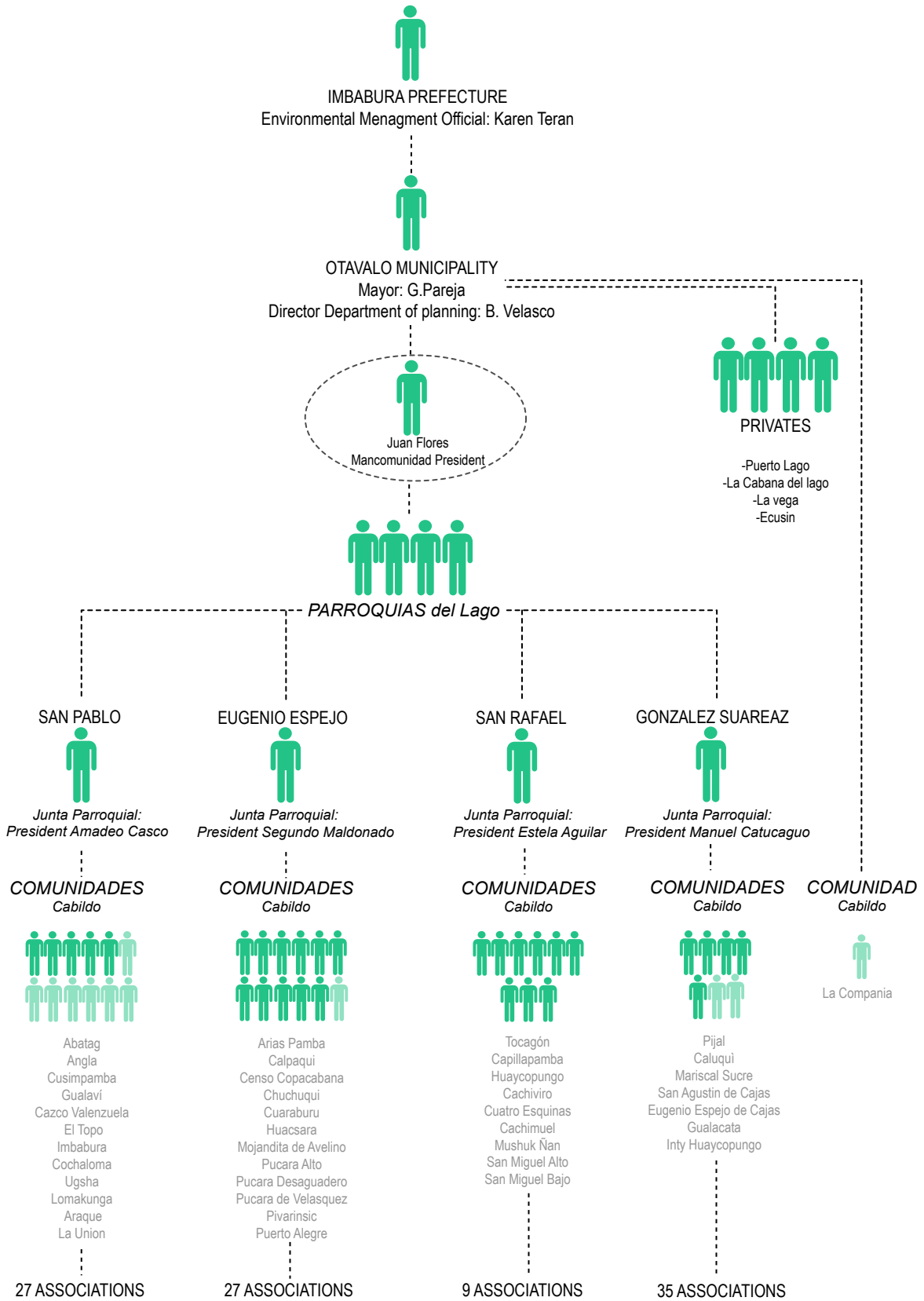
Till 2014 all the decisions taken by each president should be beneath the approval of Mr. Juan Flores, president of Mancomunidad. Nowadays there is not that figure and, for that, all the parroquias deal directly with the municipality of Otavalo.

Each Parroquia includes a number of 'comunidades' that can be mainly indigenous or mestice.

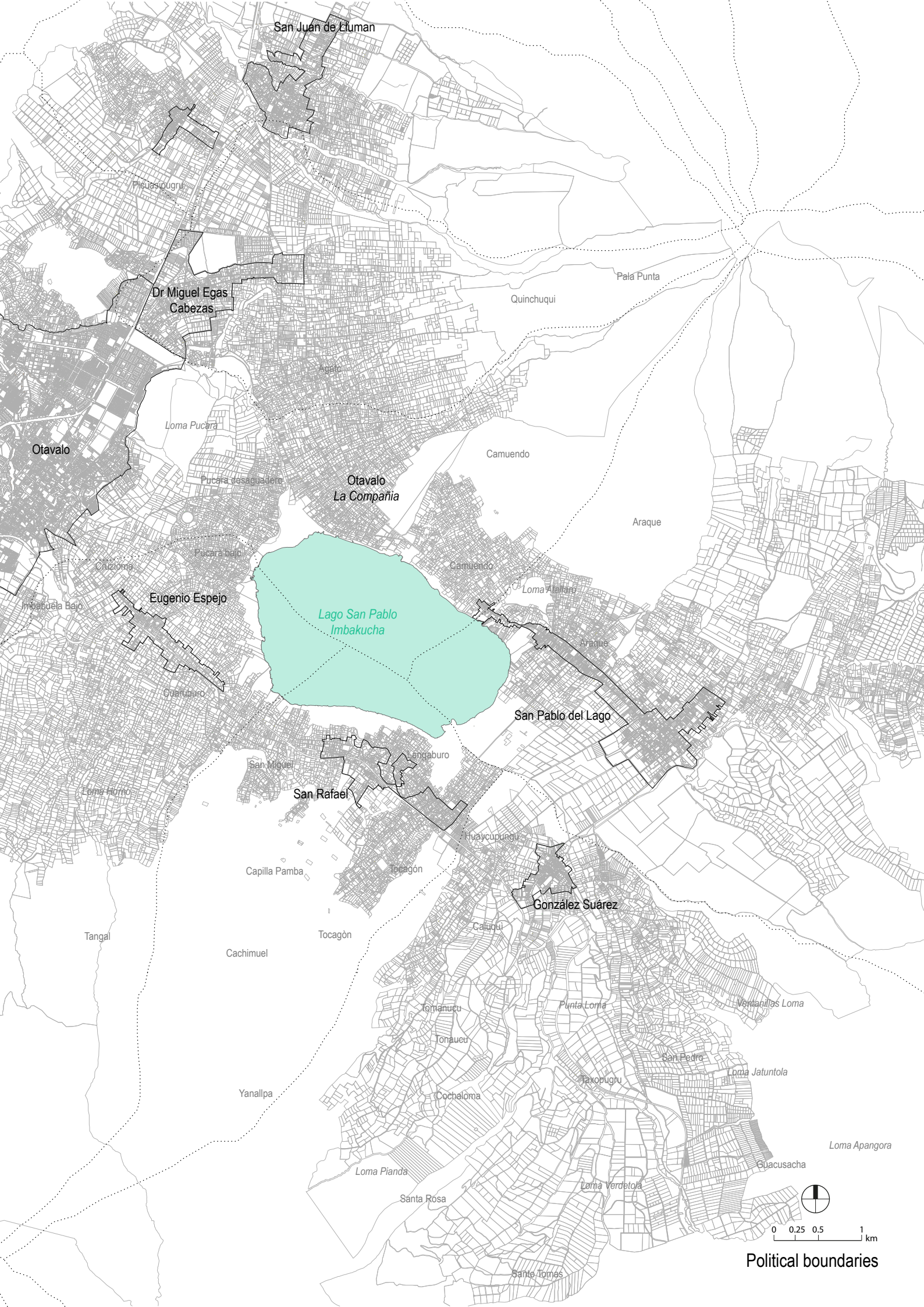
The ones of the lake are characterized by a high presence of indigenous and several associations operating in different fields.

The basin of San Pablo is crossed by the via Panamericana which connects with the province of Carchi and reaches the frontier with Colombia. This high-way is a functional infrastructure, able to fastly connect the extremes of the region, but at the same time is a strong intervention for the lake which it not able to provide bridges and connections between the two sides: many people prefer to run crossing the high way in order to reach the other side than use the bad-maintained bridges and many of them were run over

Historically, the basin of the lake was born as few centralized urban nucleos, that now correspond to the historical center of each Parroquia.. With time, in absence of a normative that regulates the lake and its surrounding, the urbanisation spreads on the territory becoming more and more diffused and a serious environmental danger.



Indigenous Mestice



San Juan de Cuman

Piñasiugni

Dr Miguel Egas
Cabezas

Pala Punta

Quinchuqui

Otavalo

Loma Pucara

Camuendo

Otavalo
La Compania

Pucara desaguadero

Araque

Eugenio Espejo

Lago San Pablo
Imbakucha

San Pablo del Lago

Imbabuela Bajo

Cruzloma

Pucara bajo

Camuendo

Loma Alajano

Araque

Guaraburo

Langaburo

San Rafael

San Miguel

Huaycupuragu

Loma Horro

Capilla Pamba

Topagòn

González Suárez

Tangal

Tocagòn

Calabul

Cachimuel

Tomanucu

Punta Loma

Veranillas Loma

Yanallpa

Tonauer

San Pedro

Loma Jatuntola

Cochaloma

Taxobugru

Loma Apangora

Loma Pianda

Guacusacha

Santa Rosa

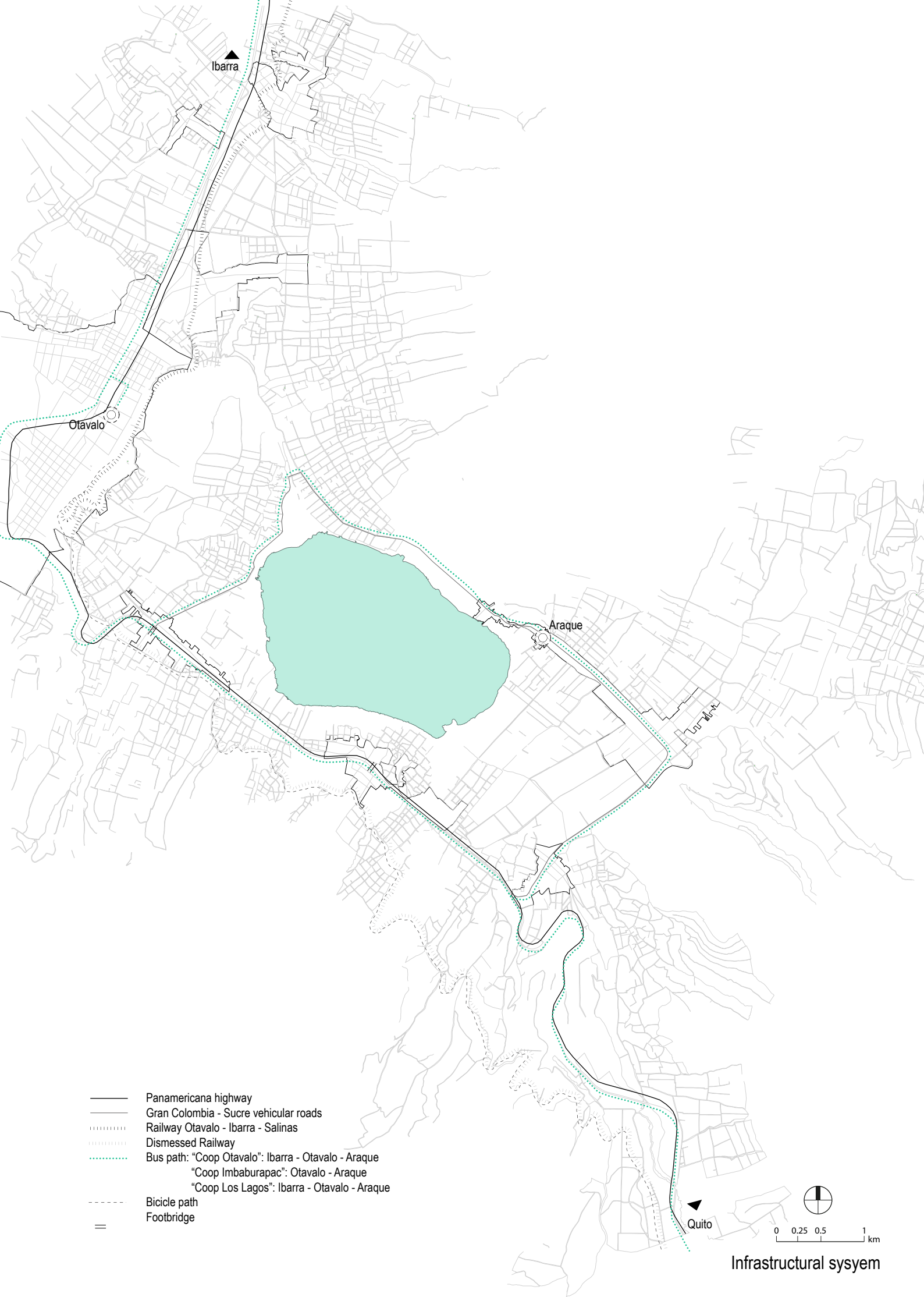
Loma Verdetola

Santa Tomas

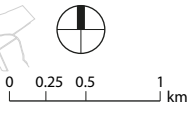


0 0.25 0.5 1 km

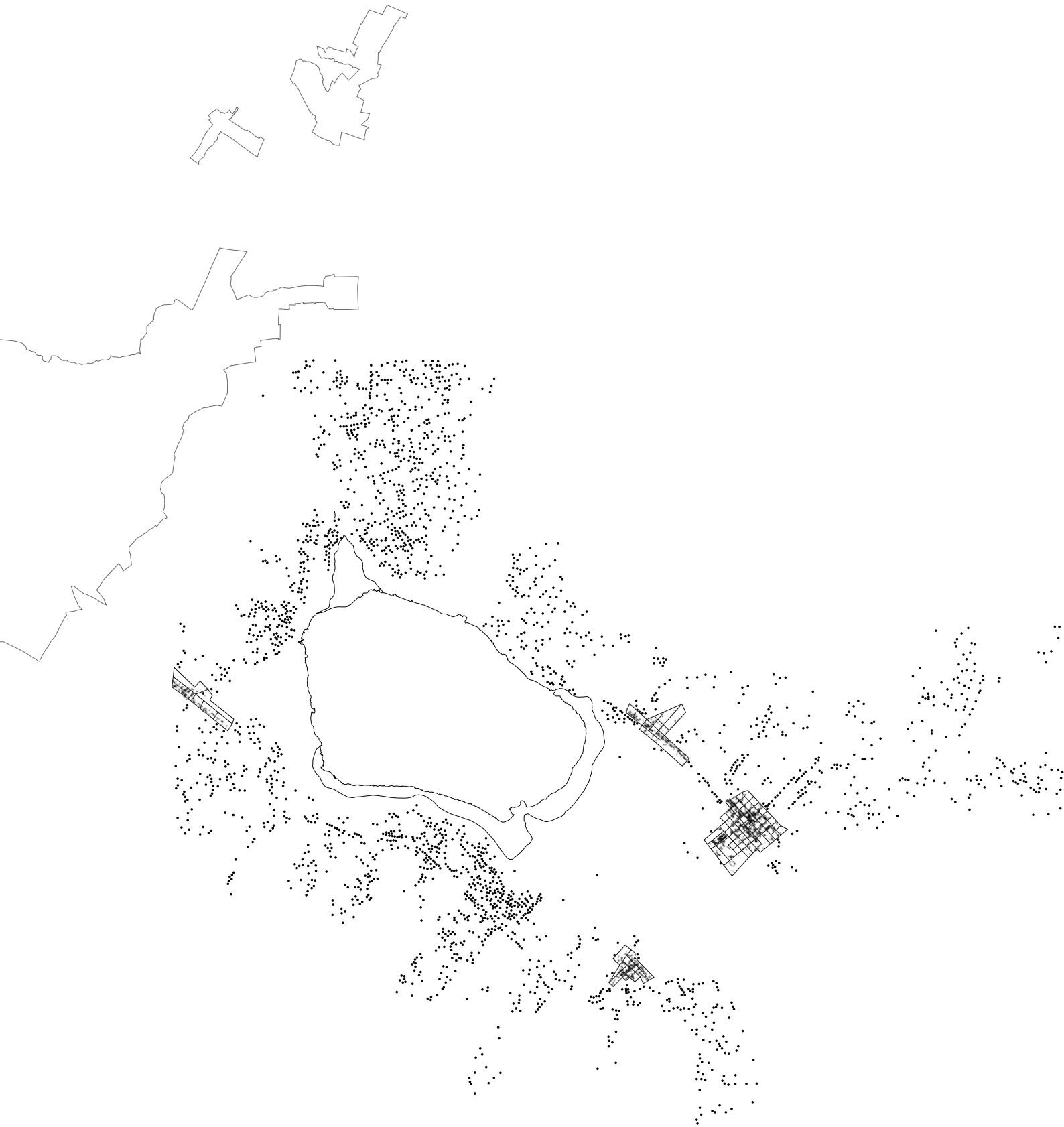
Political boundaries



- Panamericana highway
- - - Gran Colombia - Sucre vehicular roads
- Railway Otavalo - Ibarra - Salinas
- Dismissed Railway
- Bus path: "Coop Otavalo": Ibarra - Otavalo - Araque
- "Coop Imbaburapac": Otavalo - Araque
- "Coop Los Lagos": Ibarra - Otavalo - Araque
- - - Bicycle path
- = = = Footbridge



Infrastructural system



0 0.25 0.5 1 km

Historical situation_1977



0 0.25 0.5 1 km

Urbanisation_2015

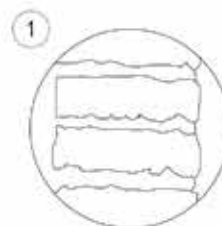
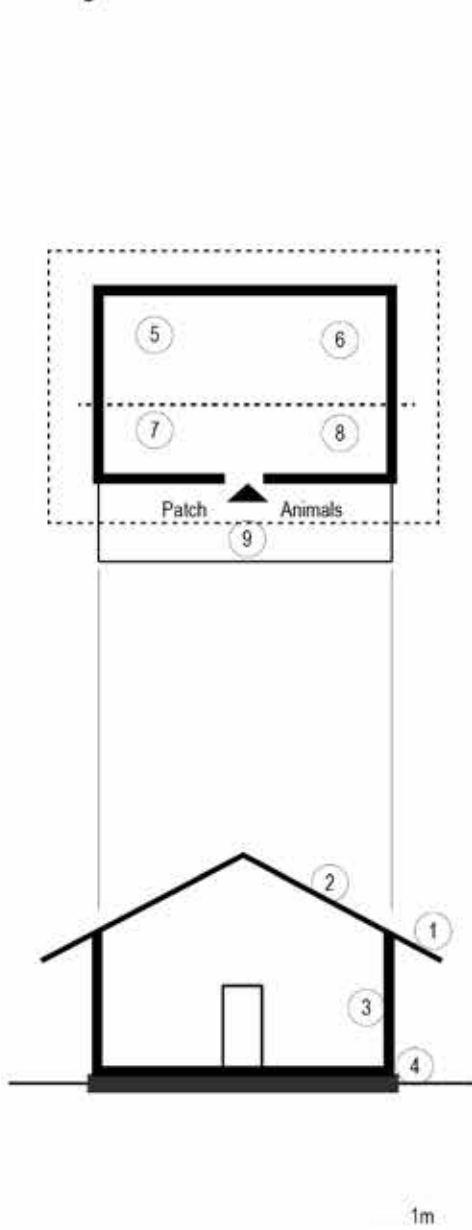
1.2.4.4 Collateral effects

Tradition VS...

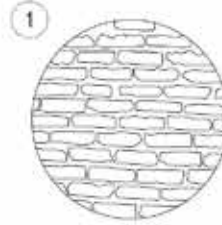
The original houses in San Rafael were built with traditional materials and specific features. The structural skeleton was realized with maderas of eucalipto, while the walls were realized thanks to the technique of tapial and bricks. Tapial blocks realized through the construction of wooden frames. Then the roof was made of straw or terracotta tiles. The organization of the house was developed on one single floor and included two main spaces: one intended as a kitchen-livingroom and a small space for quis farming; the other one as a room to sleep and area dedicated to weaving totora. These two spaces were divided by a wall of tapial or a simply carpet of totora. It was also possible to find back or in front of the house a patio which included a vegetable patch and a space for pet animals such us chickens and pigs.



Organization and Materials



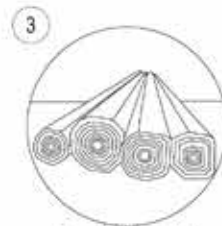
Wall-Tapial



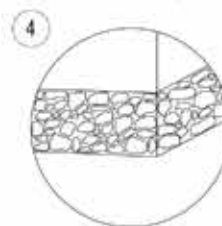
Wall-Bricks



Straw roof



Wood of Eucalpto



Rock Basement



Kitchen + Livingroom



Quis Farming



Titora area

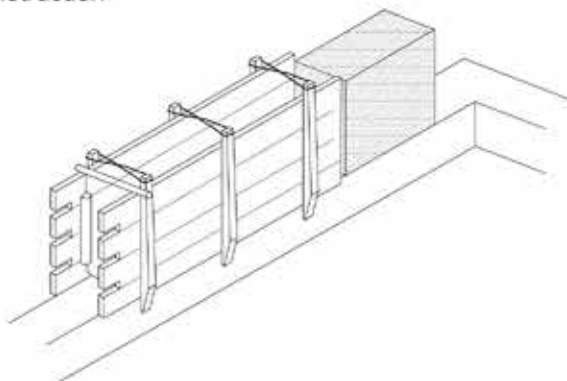


Bedroom



Patio

Construction



...modernity

Nowadays there are not laws that preserve the territory and control the process of construction. Everybody can build whatever they want in the way that they like mostly.

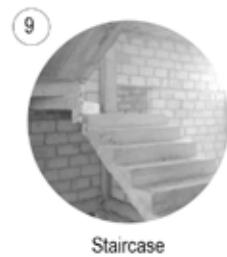
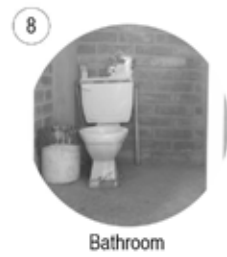
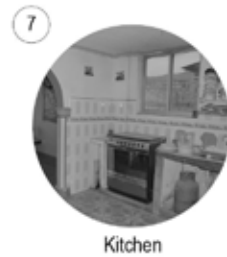
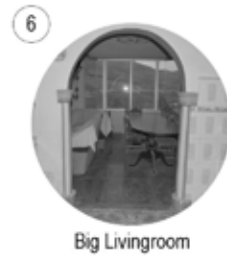
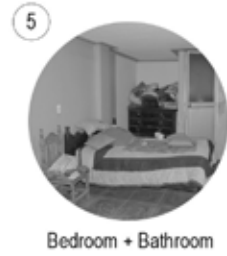
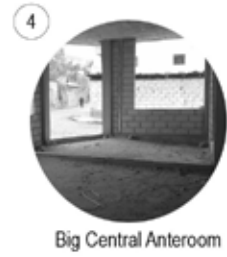
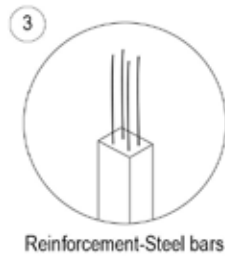
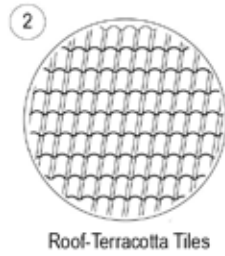
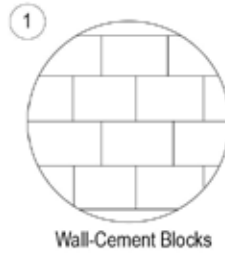
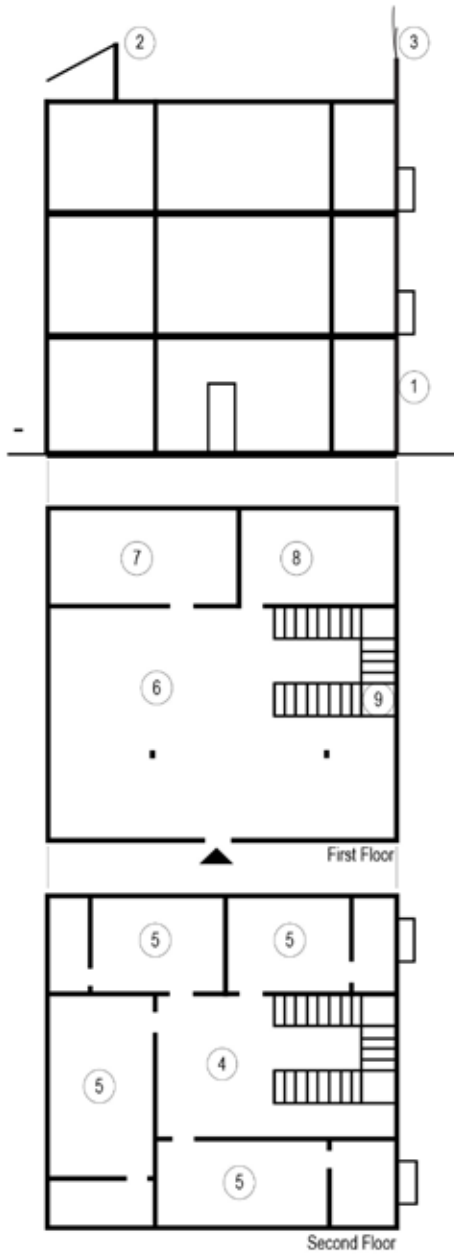
Therefore the landscape around the lake is studded with new houses that are totally out of context.

These new houses are made of cement blocks and reach even three floors. They are adorned with balconies, columns and capitals, finally painted with bright colours. The native population are used to practice "mingas" in order to build up their own house without properly take into consideration the money available, due to that most of these buildings are left unfinished. Moreover they build these big houses that are not strictly necessary and, for that, many times remained unused and empty. All the inhabitants of San Rafael are adopting this trend that is destroying their traditional and natural scenario. This is due to several reasons, firstly the effect of immigration that leads to have houses composed by a mix of styles picked out of Ecuador and grouped together in a folkloristic way.

Secondly the inhabitants are moved by a sense of pride and self-satisfaction for which seems important to have a house as "big and beautiful" as the one of their neighbor even if unnecessary. In this way the population has the illusion to escape by their original condition of poverty and to get in line with modernity and globalization.



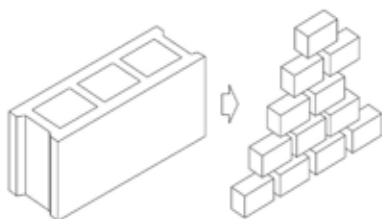
Organization and Materials



FEATURES



Construction



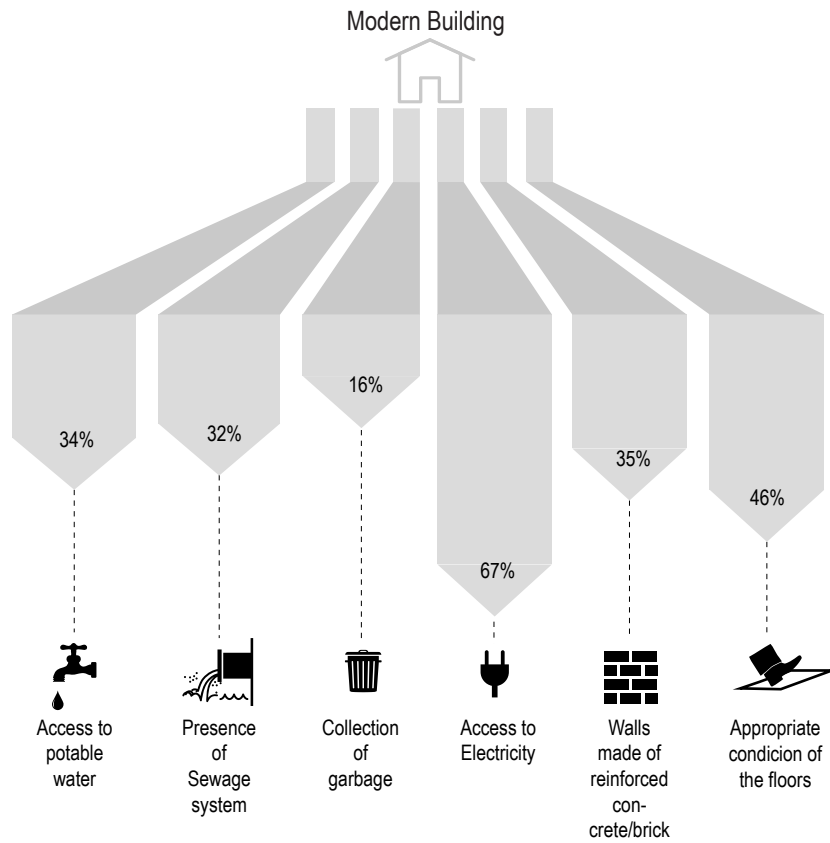
19 Patrimonial Traditional Houses



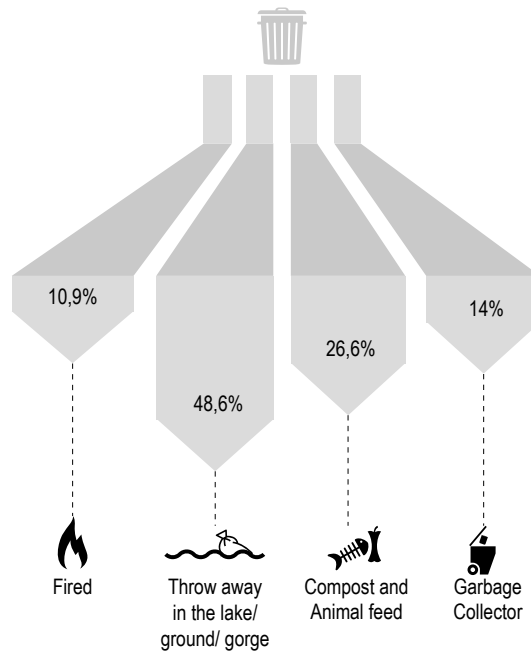
Uncountable new modern houses



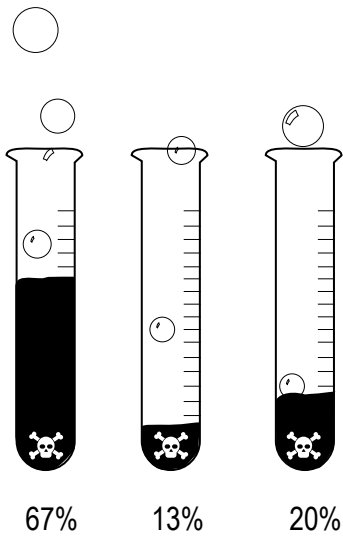
Contamination: causes



Treatment of Garbage



CONTAMINATION OF THE LAKE AND ITS SURROUNDING



AGRICULTURE OF SECANO



The “secano” agricultural activity, without measures of management of soil and water, generates an aggressive process of hidric erosion and production of sediments that, through rivers and gorges, reach the dampness level of the lake. Here they release substances, like fosforo, that accelerate the ageing process. Moreover, the use of chemical products in this activity increments the level of toxicity in the lake.

SEWAGE SYSTEM AND GARBAGE

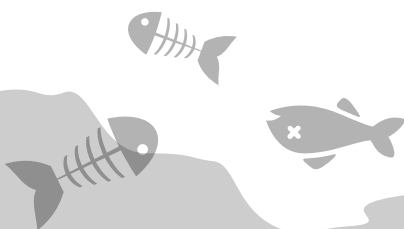
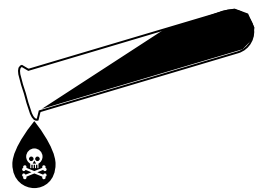


Only 32% of the buildings around the lake are covered by the sewage system while the other 68% goes directly to the soil and to the lake's. The municipality is trying to cover this problem through the installation of 14 fito- depuration pools. Moreover, 48% of the garbage is not collected but throw into gorges, grounds and lake.

OTHERS ACTIVITIES (LIVESTOCK, LAUNDRY...)



Other events that contribute to increase the level of pollution in the lake are the laundry activity, in the lake's tributary and shores, though the use of chemical soap and the livestock activity near to the lake and its waters.



Contamination: solution Phyto-depuration pools

In order to eliminate the pollution coming from sewage, to return water to the environment with quality parameters specified by the environmental legislation (TULAS), and decrease the eutrophication process of the lake, 14 treatment plant pools (2x50m) have been built for purify the water of the communities close to Lago San Pablo. This system of pool aims to collect, treat and purify black waters generated by a population on 26.132 habitants and cover the population growth till 39.527 habitants handling a flow of 71.62 l/s. These pools started to work between 2011-2012 with some problems of legality and opposition.

Phyto-depuration pool in San Rafael



First step: ACUATIC LENTILS

The black waters that comes from the sewage system are collected into tubes and go into the phyto-depuration pools. Here, the first step is the filtration in the lentils pool. Lentils, a plant that grows fastly, allow to remove the largest amount of contaminants present in the water through their absorption.



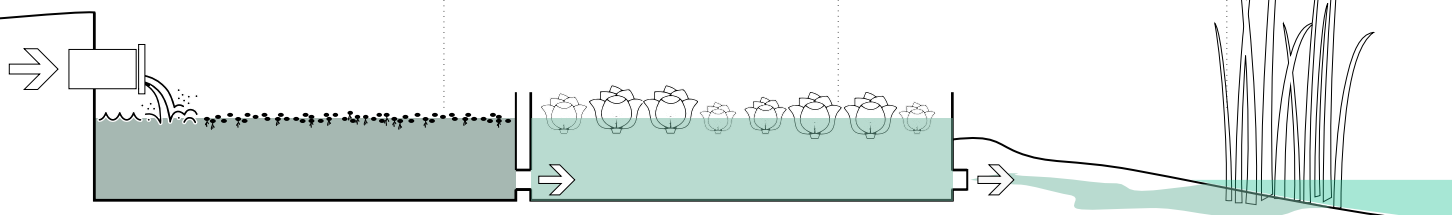
Second step: WATER LETTUCE

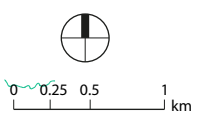
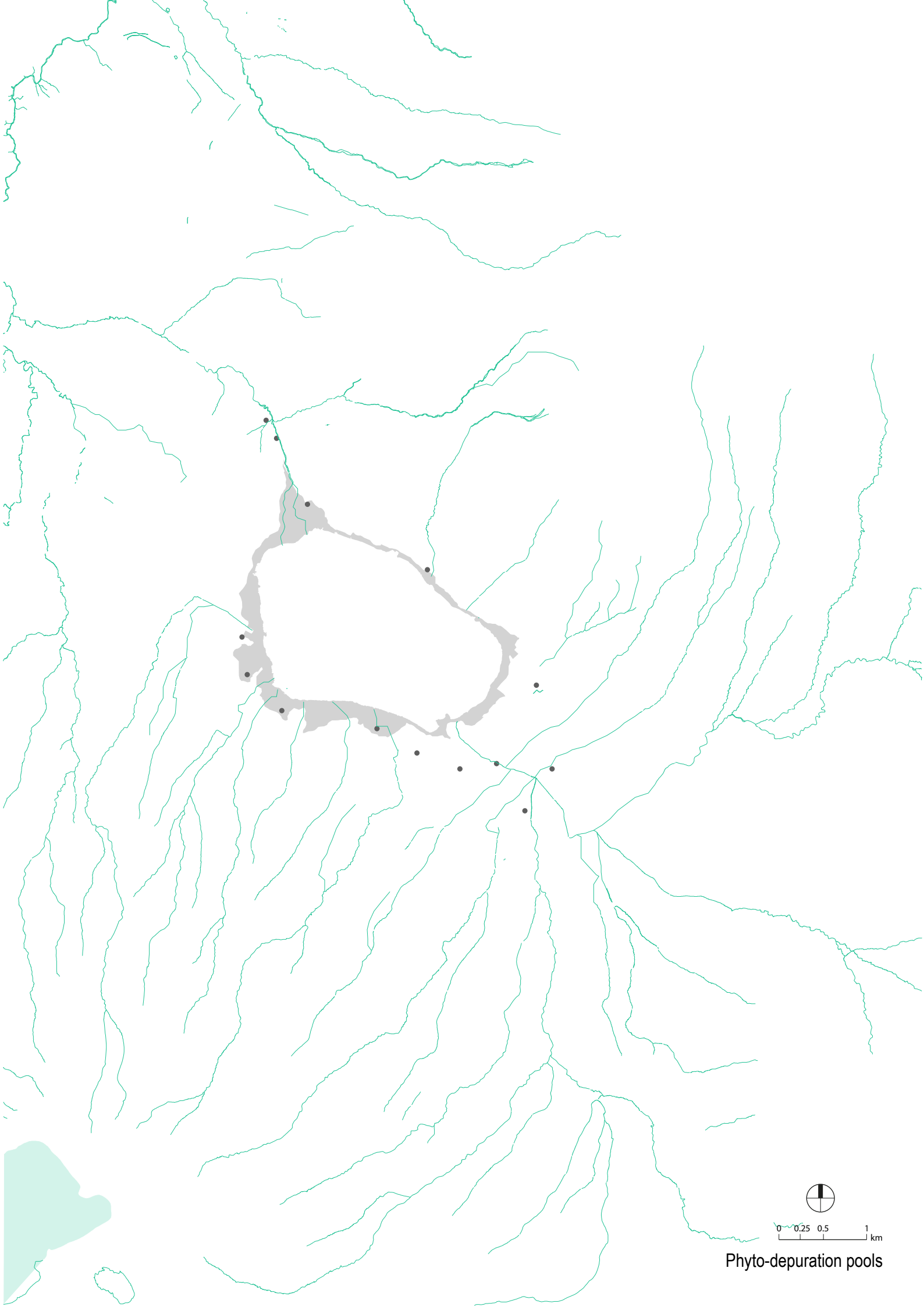
From the lentils pool the water flows into the second pool characterized by the presence of water lettuce, a floating plant. In this step the water is subjected to another level of purification removing the remaining contaminants and allowing the water to flow towards the last natural filter: the totora.



Third step: TOTORA FILTER

The last filter before the lake is the natural barrier of totora. This acuatic plant stops the last contaminants present in the water by absorbing them and release the purified water into the lake. The actual process of cutting and removing big portions of totora in the humedal is a real danger for the lake and its ecosystem.





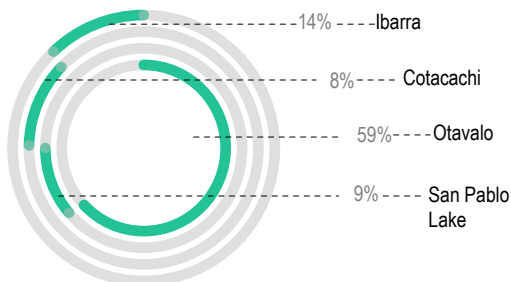
Phyto-depuration pools

Tourism

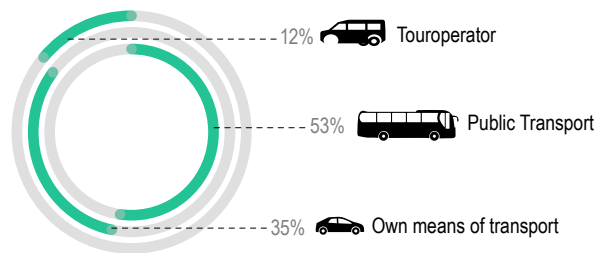
Most of the tourists that come in the region of Imbabura have as destination the city of Otavalo, especially its artesan market or they go to Ibarra, famous for its shopping center. San Pablo lake and its surrounding it's just a fast view along the Panamericana where usually people don't stop. This low affluence of tourists in San Pablo is due to the lack of enhancement of its natural and cultural values. The inhabitants of the lake are the first who would like to improve tourism: to valorize their beautiful landscape, their culture and their artesanal products.

Anyway the majority of tourist come from Ecuador, usually from nearby cities. They are almost all adults or families that usually stay there for only one day preferring for their stay private structures. They used to reach the place by their own car or by public buses which tickes have a very low price. But probably the attractions are not enough!

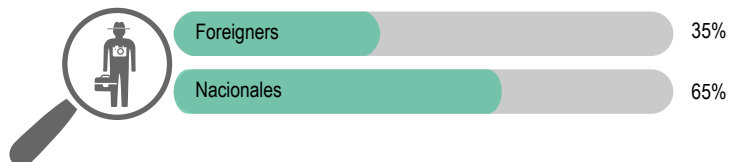
Where Tourists Go



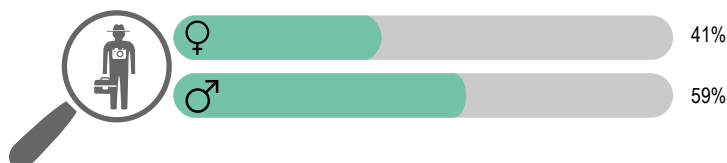
Transport



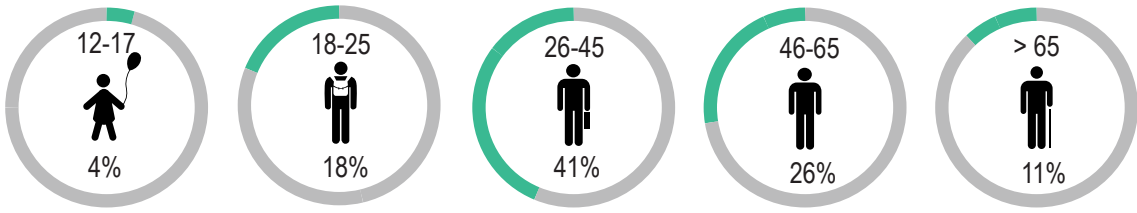
International tourists



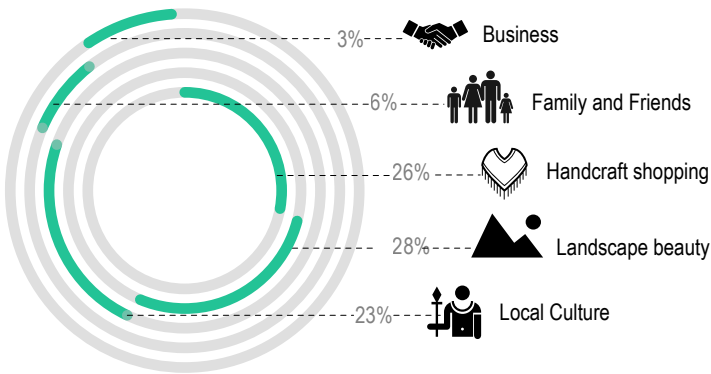
Tourist Gender



Tourist Age



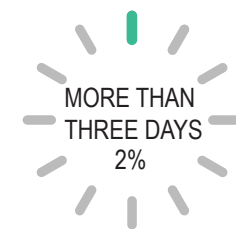
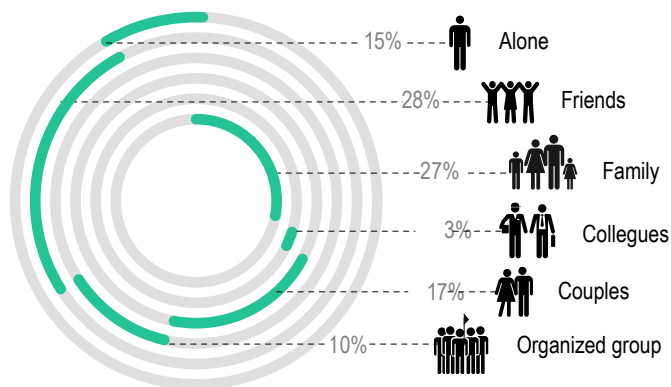
Reason of the Journey



Visit time



Partners



Touristic attractions



LANDSCAPE

1. Lago San Pablo
2. Lechero de Pucará
3. Parque Cóndor
4. Rey Loma
5. Cascada de Peguche
6. Lechero Tupatán
7. Playita
8. Parque Araque
9. Terrazas Tradicionales
10. Loma de Atallaro
11. Mirador Miralago
12. Bosque nativo Rinconada
13. Muelle Chicapán
14. Kuchapunku - Rio Itambi
27. Vertiente de Araque
28. Árboles ancestrales de cedro andino
30. Piscicultura de la Rinconada
32. Mirador Kuri Tola

..... Ferrocarril Otavalo - Salinas



HISTORY & CULTURE

2. Lechero de Pucará
4. Rey Loma
5. Cascada de Peguche
6. Taki Sami en el Lechero
10. Loma de Atallaro
15. Kalluma Inti Raymi
16. Chawpi Inti Caluqui museo
17. Tabla Rumi piedra ceremonial
29. Tolos de Caluquí



HANDCRAFT & TRADE

18. Caballitos de Totora
19. Sunday Market
20. Textile Handcraft
31. Paradero Apangora
33. Sombrería en Angla
34. Totora Sisa



HOSPITALITY & LEISURE

21. Club Nautico
22. Hosteria Jatuncocha
23. Cabañas del Lago
24. Puerto Lago
25. Hotel Laguna San Pablo
26. Hotel Cusin

Some of them



Cabañas del Lago

It is a private touristic structure located in San Pablo on the shore of the lake and, together with Puerto Lago on the other side, is one of the most famous. This touristic complex is organized in different functions and provided with high-standards facilities: a 5 stars restaurant, a hotel with comfortable bedrooms, a mini-golf area and a private dock for practising different sports: swimming, water skiing, canoa or windsurf.



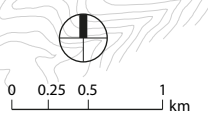
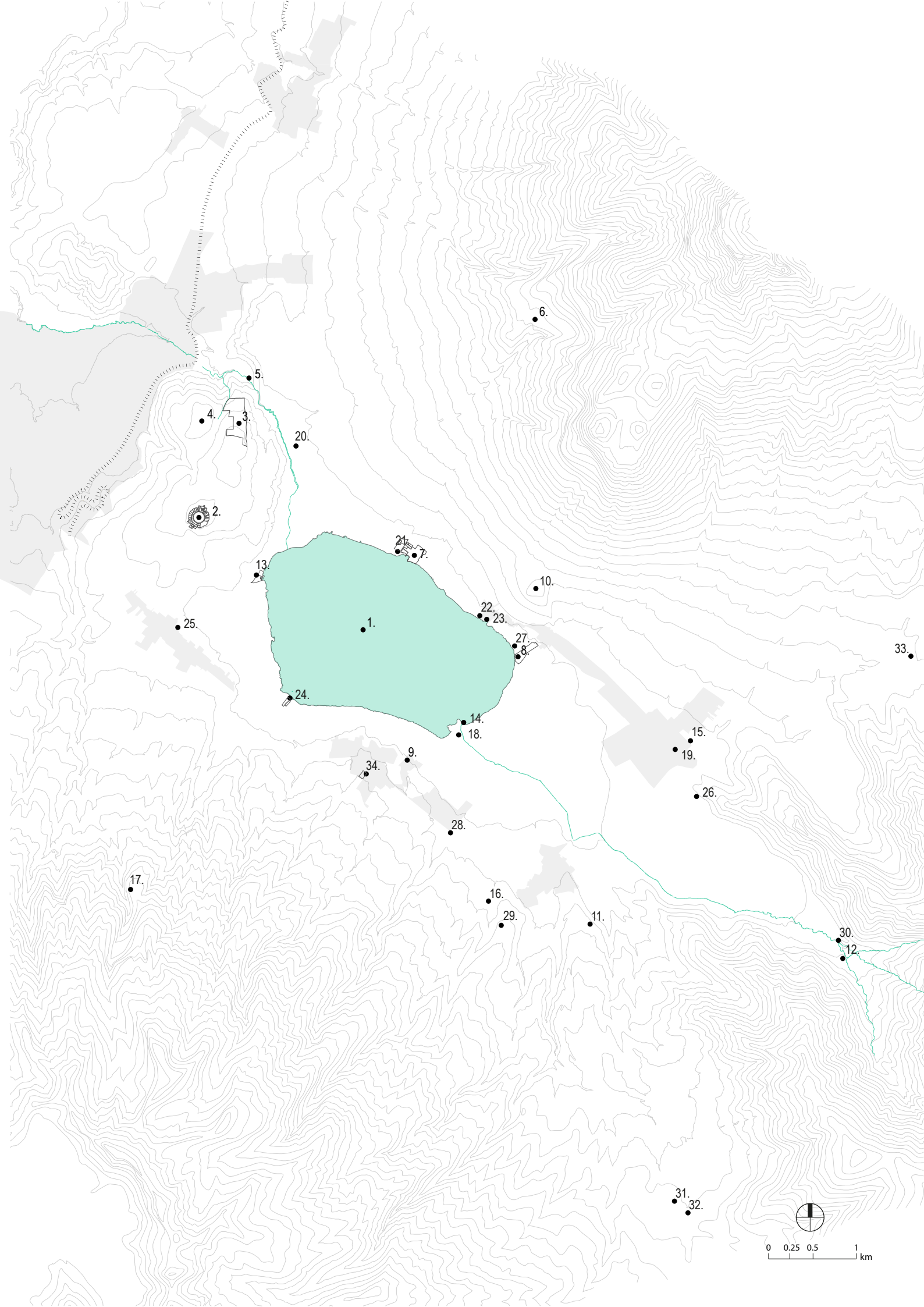
Totora Sisa

It is a micro-enterprise aimed to support and promote the traditional techniques and handcraft products of the lake communities based on the use of totora. This plant is a flexible water cane and local people knows how to work and plait it realizing amazing objects. It's located in San Rafael de la Laguna and is composed by a small shop and a laboratory where you can directly see all the working process to get the final product.



Lechero tree

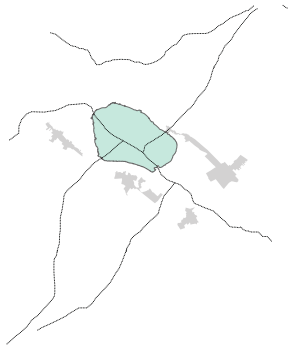
This tree, located on a small hill in the Parroquia of Eugenio Espejo, is a very rare plant for this area. For this reason, it is surrounded by many local legend and people consider it as a sacred plant provided of magical power. It says that this tree gives new energy to who touches it. But despite the great cultural value of this tree it's very hard to get there due to the lack of good signage, the bad maintenance of the road and its hidden location..



1.2.4.5 Analytical synthesis

At the end of the analytical process the intent was to extract the essence of each map underlining what is important for our project and what can be left in the background. We thought that could have been interesting to have a general overview of the multidisciplinary analysis putting the different maps in comparison between each others.

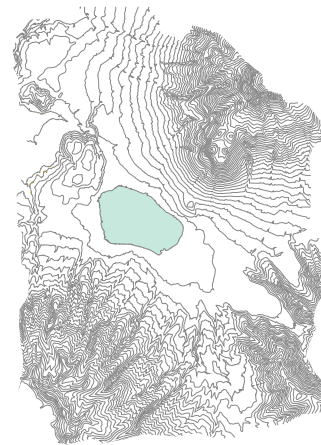
What come out was a deep reflection about the complexity and the fragility of the lake system, its lacks and its potentialities.



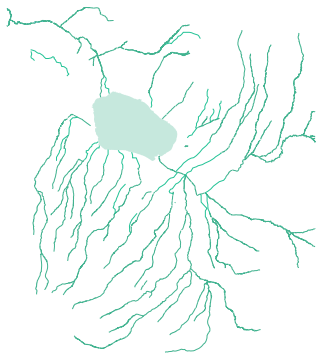
1.



2.



3.



4.



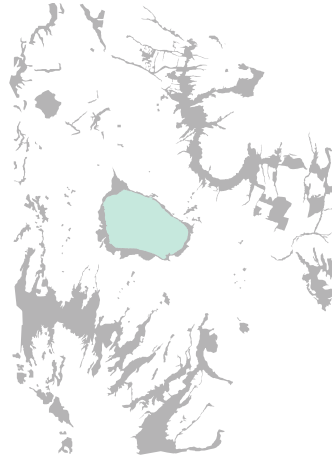
5.



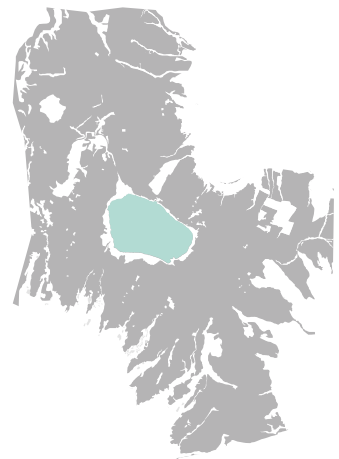
6.



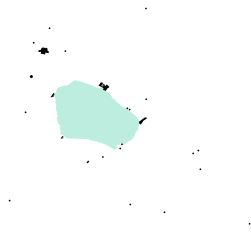
7.



8.



9.



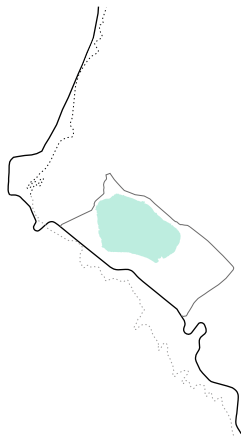
10.



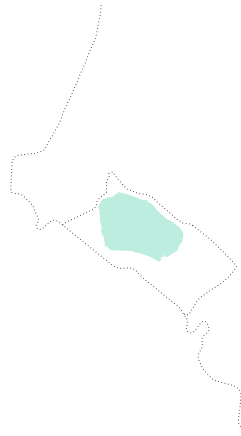
11.



12.



13.



14.

- 1_Political borders
- 2_Historical development
- 3_Morphology
- 4_Lake's veins
- 5_Lake's ecosystem
- 6_Lake's infrastructure
- 7_Paramo
- 8_Filters
- 9_Agriculture
- 10_Touristic attractions
- 11_Cultural sites
- 12_Schools & medical centers
- 13_Infrastructural system
- 14_Services-bus



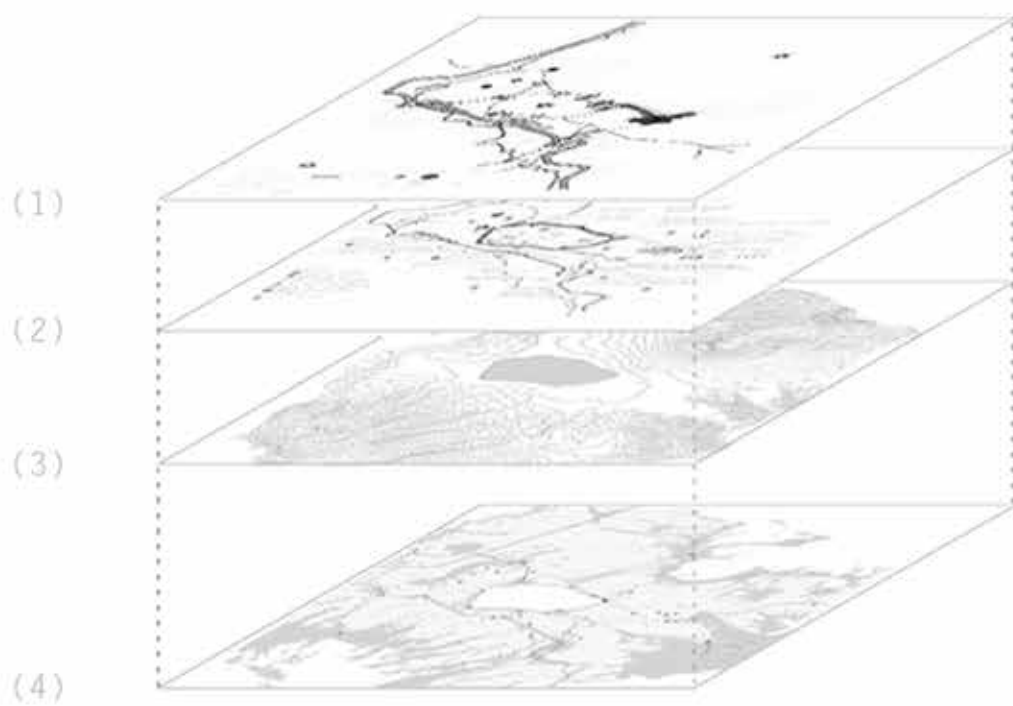
Synthesis: problems & potentialities

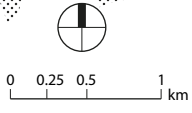
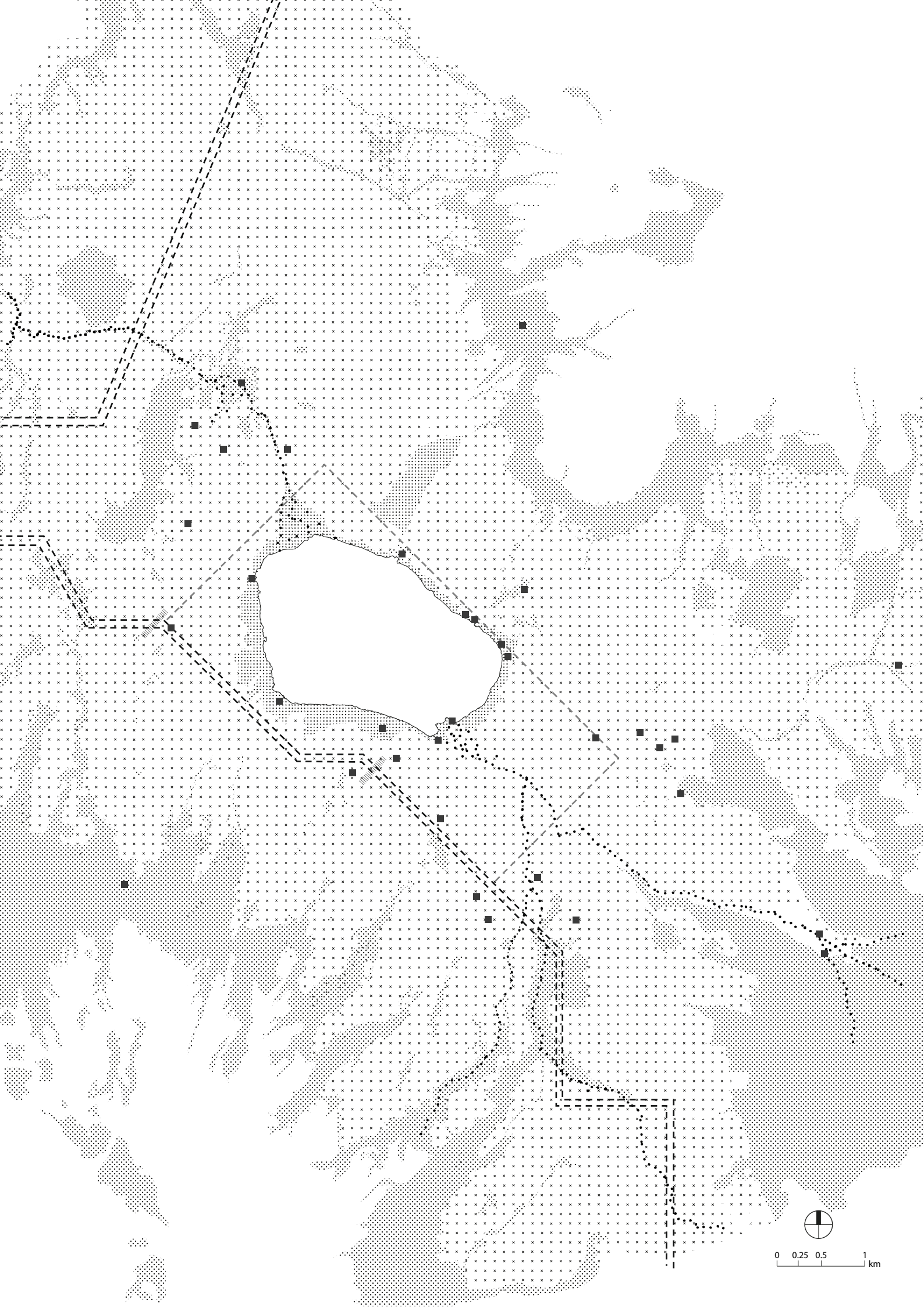
After the analytical synthesis it was time for us to get some conclusions. The following map is a conceptual synthesis that aims to sum up, following Archizoom theoretical approach on diffused metropolis, the main points analysed before.

A new relationship is showed between the environment and its objects: the physical ground is converted in a homogeneous geometrical grid, that works like a background, while the objects lose their real character becoming fluxus that move and distribute on it. More organic are the natural fluxus, which penetrate in the grid and spread in it, more rigid are the artificial ones which cut the grid defining borders and barriers. The interesting points for our masterplan are defined like key dots to underline their punctual character on an diffused base.

According to this map, to the interviews, to the documents and to the dialogues, we were able to define the main problems and potentialities that characterize the Place. The firsts are mainly related to a lack of valorisation, education and interest in the cultural and environmental heritage of the place, while the seconds underline the importance of their presence. Having clear these points we could also define our final design concept that follows the project in all its aspects and scales: "valorise what there is with what there is".

Photo: Views of Cachiviru landscape; in the front the natural environment with the Lake and Imbabura Volcano while reflected in the car mirror is visible the urban development that occurred in the community.





PROBLEMS



Panamericana cut
Lack of connections



City model in rural context
Effect: loose of identity



Lack of tourism



Contamination of the lake

POTENTIALITIES

Landscape beauty



Indigenous culture
and traditions



Strong sense of community
and cooperation



valorisacion de lo que hay con lo que hay

Potentialities
& strenghts



Problems
& weaknesses



Theoretical framework: C.B.T.

A community is, by definition, a group of individuals with some kind of collective responsibility, and the ability to make decisions by representative bodies. Many of the world beautiful resources exist in vulnerable communities. Professionals have tried to promote community-based tourism (CBT) since the 1970s.

Community-based ecotourism is a form of ecotourism that emphasizes the development of local communities raising living standards (particularly in poor rural or marginal areas) and allows local residents to have substantial control over its development and management, and a major proportion of the benefits.

Unfortunately, irresponsible tourism practices can exhaust natural resources and exploit local communities. For that, it is fundamental that CBT projects are carefully planned and part of a larger community development strategy. Tourism is no panacea; community-based ecotourism and responsible tourism should be part of wider sustainable development strategies in which to communities should be given guidance on how to develop a successful community based operation. CBT invites tourists to visit usually poor, rural and economically marginalized communities with the provision of accommodation. Here, the tourist has the opportunity to know local inhabitants and wildlife, to appreciate cultures, rituals and believes. At the same time, the community itself learns to be aware about its commercial, cultural and social value: a process that should foster the conservation of its resources.

The three key words related to CBT are: indigenous leadership, sustainability and cultural immersion. Community-based tourism can became a sustainable alternative to many travel organizations, which often do not work in solidarity with the communities and environments they use. The quickest and most effective way for achieving sustainable benefit is by the access direct jobs of poor population in the tourist sector. Strengthening the capacity of local communities often lies at the heart of these initiatives. In particular, for undermining economic and social exclusion, it is important to find measures that blur the geographic isolation of some communities. For example, technical or language training for indigenous populations can help them access the tourism value chain; infrastructure development and the use of tourist taxes to raise the human capacity of poor communities can similarly improve the participation of the poor. Four dimensions are considered equally important for sustainable development (Rozemeijer, 2001, p. 15): (1) CBT should be economically viable: the revenue should exceed the costs; (2) CBT should be ecologically sustainable: the environment should not decrease in value; (3) there should be an equitable distribution of costs and benefits among all participants in the activity; and (4) institutional consolida-

tion should be ensured: a transparent organisation, recognised by all stakeholders, should be established to represent the interests of all community members and to reflect true ownership.

CBT projects should provide collective benefits (for example providing funds for community assets), individual benefits (paid employment full or part-time) and opportunities for micro-enterprise earnings (for example craft sales).

Why is it suggested to experience CBT? We can have the opportunity to see, hear, touch, taste, and do things we might never have done otherwise; we can interact with population and gain immediate knowledge about people and place; we can gain a new perspective on culture and on how it influence our/their lives; we can perceive where our money goes ensuring that our money supports local communities in beneficial and sustainable ways.

Professional training is necessary to reach specific guiding and hospitality skills, and also in order to avoid disjunctures between local conceptions of community and the ways in which communities are imagined by visiting tourists. This involves the necessity to find the right balance between economic gain and cultural integrity. We cannot underestimate this last sentence!

Ecuador is one of the countries characterized by an amazing natural beauty and cultural richness. With its Coast, its sierra, the Amazon Rainforest and the Galapagos Islands, Ecuador includes four ecosystems and a rich biodiversity. 25% of the population is indigenous and still cherishes age-old traditions. It is a world composed by customs, beliefs, attitudes that are strictly related to the sacred concept of Nature. Nature, omnipresent, run the daily life of this population. It is clear that experiencing this world can be for us exciting and fulfilling. Indigenous along the year became more aware about their rich tradition and that allows Ecuador to be a pioneer in developing community-based tourism.

At the beginning of 70es and 80es tourism started to be part of the Ecuadorian context but often it was not respectful of the surrounding environment, destruction and exploitation affected in particular the Amazon region. Soon they discovered that there are others ways of dealing with Pachamama.

From that point, the first ecotourism projects emerged during the early 1990s, often with the support of European NGOs. In 1992, America celebrated the 500th anniversary of Columbus' discovery of the continent that the indigenous communities turned into the commemoration of '500 years of indigenous and popular resistance'.

Due to this increasing political awareness of the indige-

nous, the government of Ecuador started to increasingly finance projects in order to improve the poor condition of rural communities. Tourism started to become soon an economic activity and a powerful weapon for the development. In 2009, president Rafael Correa called tourism “the country’s future, an industry without chimneys”. According to France’s “Ecoturismo Magazine”, CBT is first and foremost a form of tourism wherein local communities themselves host tourists. Consequently, they have control over tourist activities on their territory and they can themselves generate money funds. FEPTCE (Federación Plurinacional de Turismo Comunitario del Ecuador) calls community-based tourism “a sustainable development strategy that maintains the own identity” where the main principle is *‘defender la vida de los pueblos’*. According to them, the CBT is an economic activity that combines eco and correct tourism with the aim to contribute to:

- Strengthen community from an organizational point of view. It is a social-economic activity that needs consultation, supports and cooperation. Infrastructure must be provided and the managing of money must be organized.
- Protect the natural resources, in particular if we think about how much Pachamama is important for local communities. Nature must be before protected and then exploited, in a positive sense.
- Strengthen cultural identity. Music, dance, gastronomy, spirituality and cultural traditions should be enhanced and so shared with tourists.

FEPTCE considers tourism as a means to ‘decolonise’ the tourist’s way of thinking, living and being. As all strategy that includes territory and people, tourist projects can go wrong, usually because communities enter into business. They invest heavily in hosting capacity but have little understanding of other aspects such as promotion. For this reason, FEPTCE open a school, ‘escuela de interaprendizaje’, where witnesses of each project can learn from each other.

But, on the other hand, some researches started to see in CBT some limitations and negative aspects. They argued that this process, that expects that tourists open up to the indigenous culture, is not so obvious and easy. In particular, how much indigenous are ready and able to adapt to the tourist and especially to the image that the tourist has of them?

Culture is not a static thing, culture evolves. They have to find a balance between conservation and progress, between folklore and respect.

One of the most famous organization that operates since 1977 in the Ecuadorian territory is The Belgian Development Cooperation which signed in 2006 the ‘Programa de Desarrollo Rural del Norte’. One of the organisations supported through the PdRN is Runa Tupari, known in the field of community-based tourism

in the province of Imbabura. Since 2001, the organisation from the tourist region of Otavalo-Cotacachi has offered visitors the opportunity to stay with local families.

The reflection we made is how it is possible to agree an idea of conservation with a community that doesn’t know the real concept of environmental, social, architectural heritage conservation, or has another way to conceive it. CBT can be a useful tool, replicable in several context, that allows to use optimally environmental and natural resources which represent the key elements to develop tourism. In addition, to respect the social-cultural authenticity of the hosting communities, it preserves the cultural heritage and the traditional values through a cultural practice of comprehension and tolerance. Moreover, it ensures long-term economic transactions, it offers social and economical benefits for all subjects interested contributing to the reduction of poverty. We believe that a tourism of this type can be part of the development process for the communities of San Pablo lake thanks to its environmental and cultural resources.

But analysing deeply the CBT we individuated that one of its weaknesses lies inside the proposal of these eco-tourism based projects as single punctual intervention out from more global visions and strategies. Many times the CBT operates for the creation of a hub that works alone, disconnected, close in its space and focused on present. Sometimes can be enough, sometimes not, mainly if this hub is not enough “strong” for working alone. That’s why, in our project, we proposed a different way of intervention that starts from a general masterplan and, going deeper and deeper, reaches the local project in the community of Cachiviru: Kaymanta is “only” one of the proposed structures inside the networking system of hubs spread on the territory of San Pablo lake. Our strategy is opened in time and space: the tourist is attracted by a net of culturally and environmentally interesting hubs, each one with specific functions related to the characteristics of the site, that we hope, with time, can spread on the territories connecting new spaces and becoming more attractive.

In this sense we really hope that Kaymanta, even if small, can be a starting point to improve the living conditions of local population generating long-term synergies.





Strategy: networking hubs for communities

Our conceptual strategy is focused on 2015; for this year we conceived a general masterplan related to the indigenous kitchwa Cosmovision (in which natural elements regulate the World) and based on 3 physical concentric "rutas": "ruta del agua", "ruta de la tierra", "ruta del sol", that from the Lake level rise up till the mountains and volcanoes. Each "ruta" meets in its path different existing key places related to its specific theme (water, earth, sun) that for us need to be valorised and exploited, and then runs towards its next point or to another "ruta".

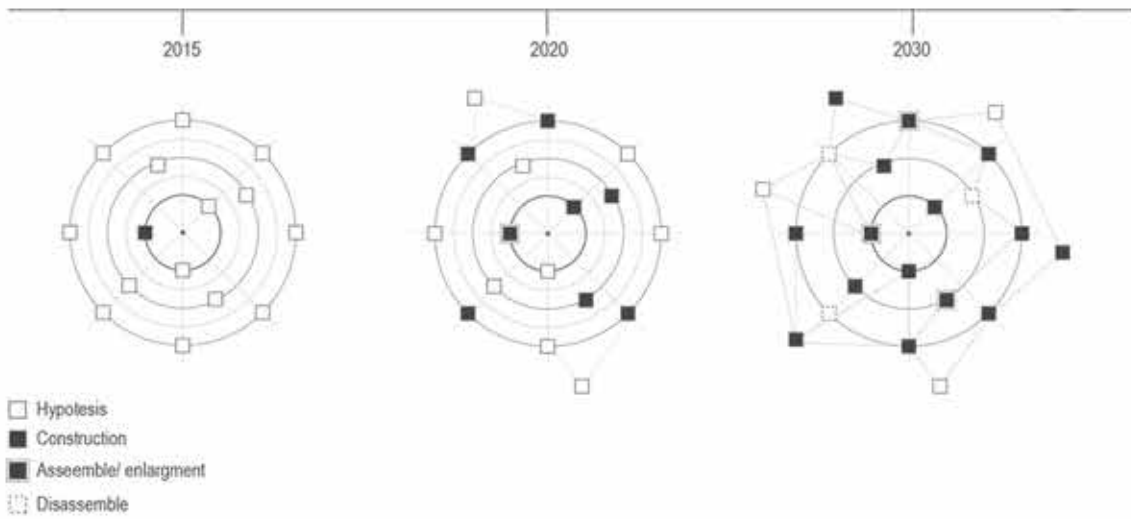
Physically each ruta was designed following the morphology of the Place, its difference of levels and proposing the reuse of the existing connections.

Each ruta is different and unique: that's why for each one of them we calculate its path in terms of difference of levels and in terms of time and difficulty for covering it through different ways of transportation: foot, horse, bike or boat, avoiding the use of any polluting mean of transportation.

But the masterplan is not closed in time and space: it's thought as a potential, open and free system and that's the reason why it looks beyond 2015. The general idea for the future is to expand the concentric path into an open net, able to reinforce the connections around the lake and at the same time to connect the lake to new spaces and systems.

In some of these selected places some light architectural devices are necessary and could help in enhancing the landscape and the socio-cultural aspects of the Place, becoming hubs where the global meets the local. We set some guidelines for composition regarding the most important aspects to take into consideration designing these devices.

Photo: San Pablo Lake and its surrounding from Lechero hill.



NETWORKING HUBS STRATEGY: GUIDELINES FOR COMPOSITION

1_RESPECTING
THE SURROUNDING



2_PARTICIPATORY
DESIGN PROCESS



3_MAX. HEIGHT 4m



4_MAX. SURFACE 30m2



5_PRIMARY USE OF
LOCAL MATERIALS



6_CO-CONSTRUCTION &
TRADITIONAL TECH.



7_ASSEMBLAGE/
DISASSEMBLAGE



8_LOW COST

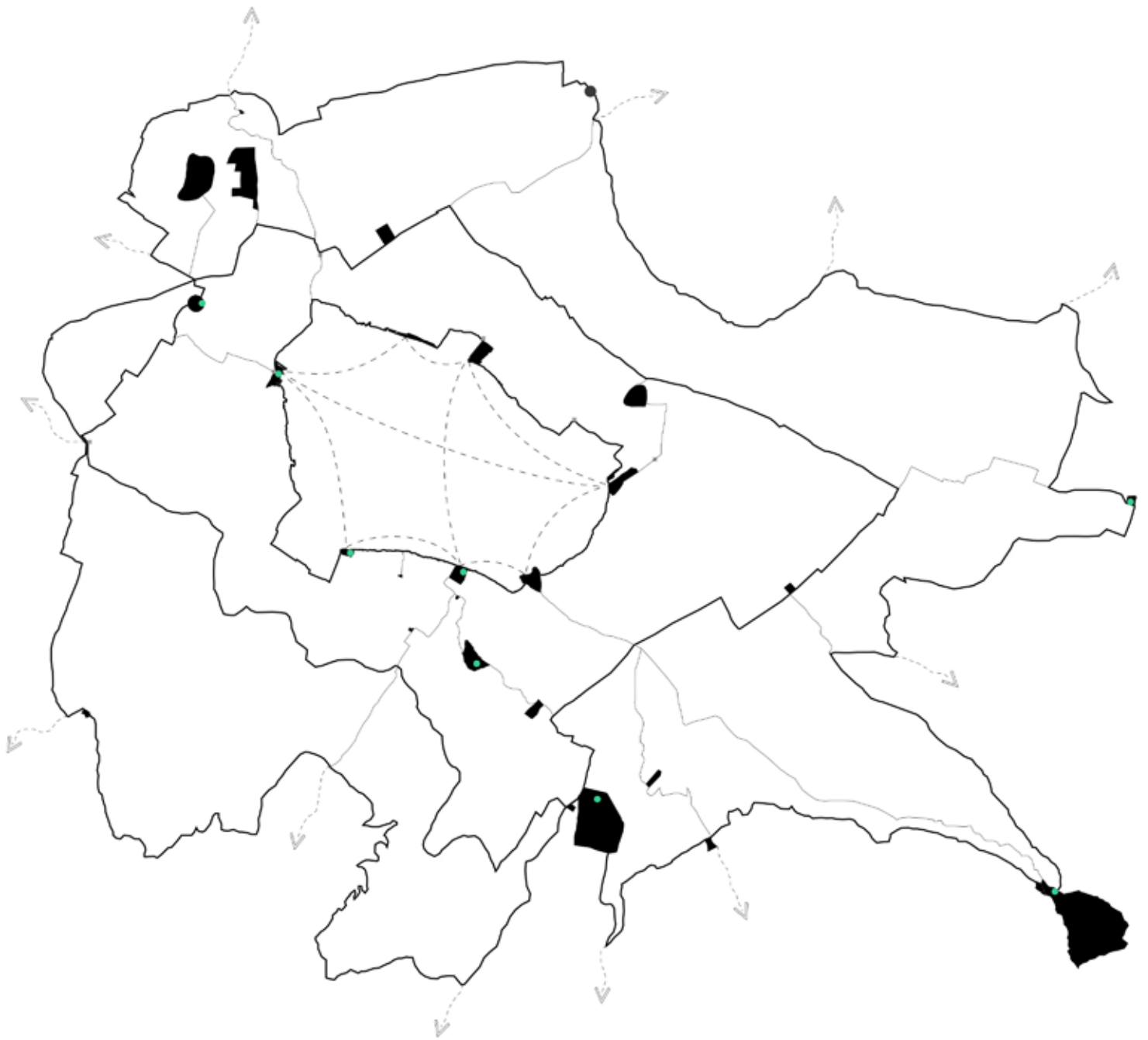


9_LONG TERM
COMMUNITY
RESPONSIBILITY
FOR THE PROJECT



- 1_INFOPOINT
Lechero Pucará
- 2_LAUNDRY
Desaguadero
- 3_BIKE RENT
Puerto Lago
- 4_MIRADOR
Cachiviru
- 5_GREENHOUSE
Terrazas
- 6_MUSEUM
Tolos de Caluqui
- 7_CRAFT SELL/EXPO
Sombrería en Angla
- 8_FISH FARMING
Bosque Rinconada





HUBS



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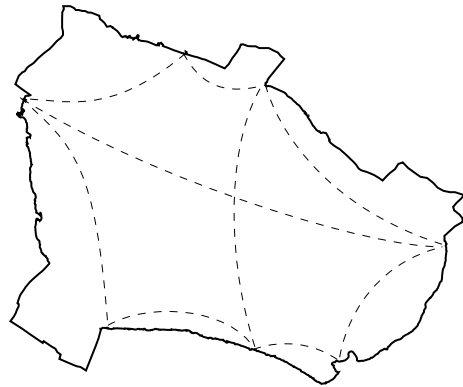
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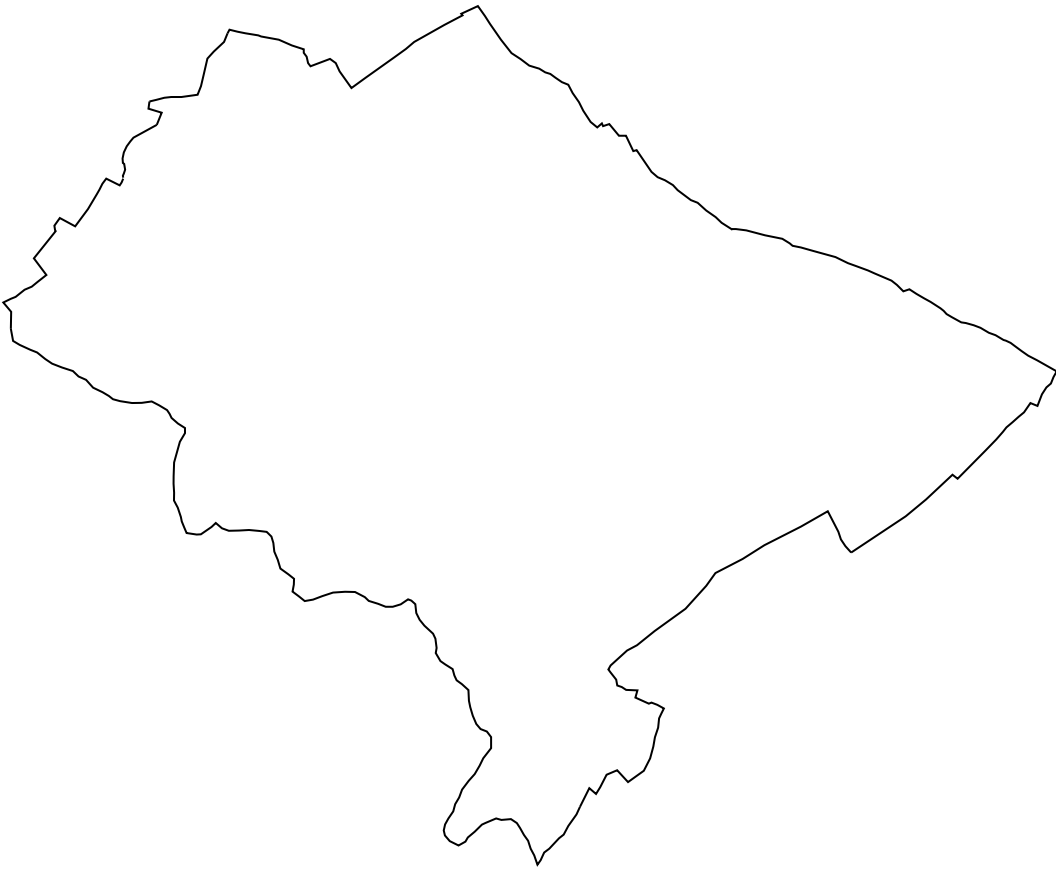
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RUTA DEL AGUA





RUTA DEL SOL

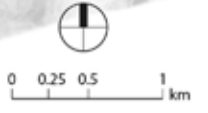
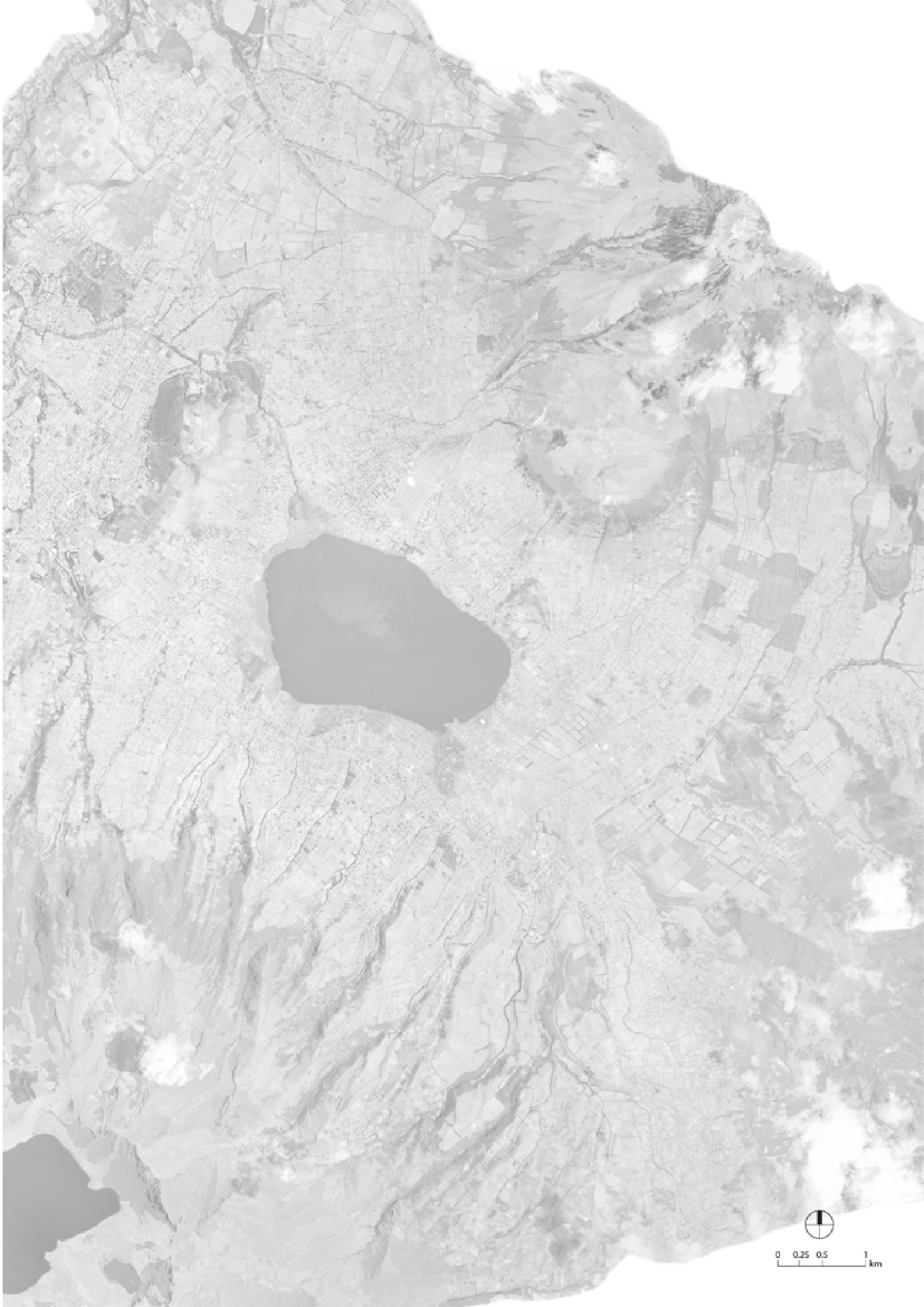


CONNECTIONS

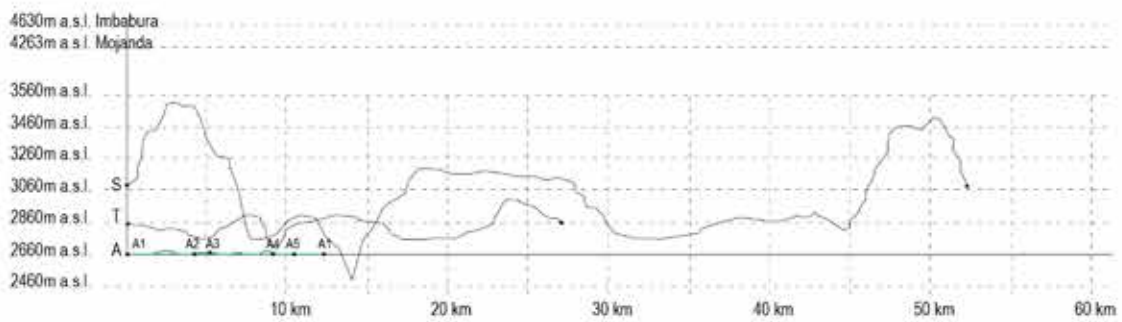


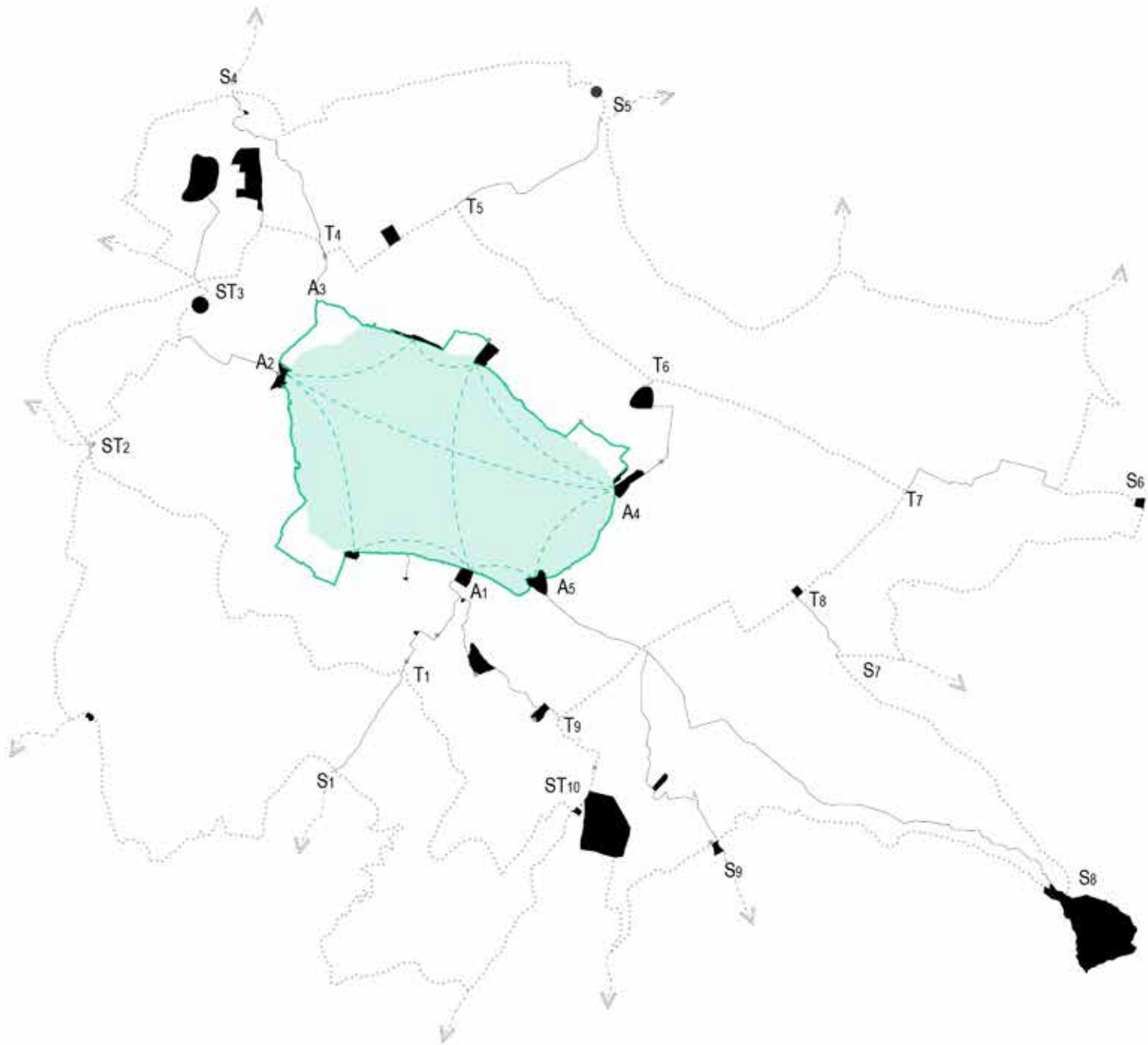
SELECTED AREAS





RUTA DEL AGUA

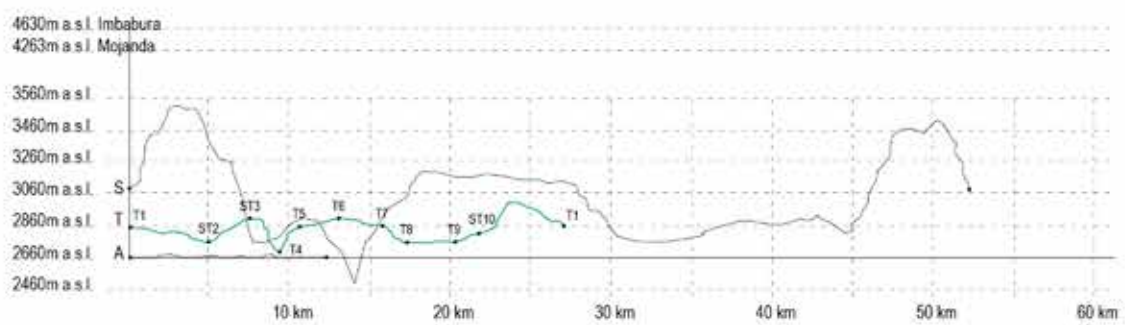


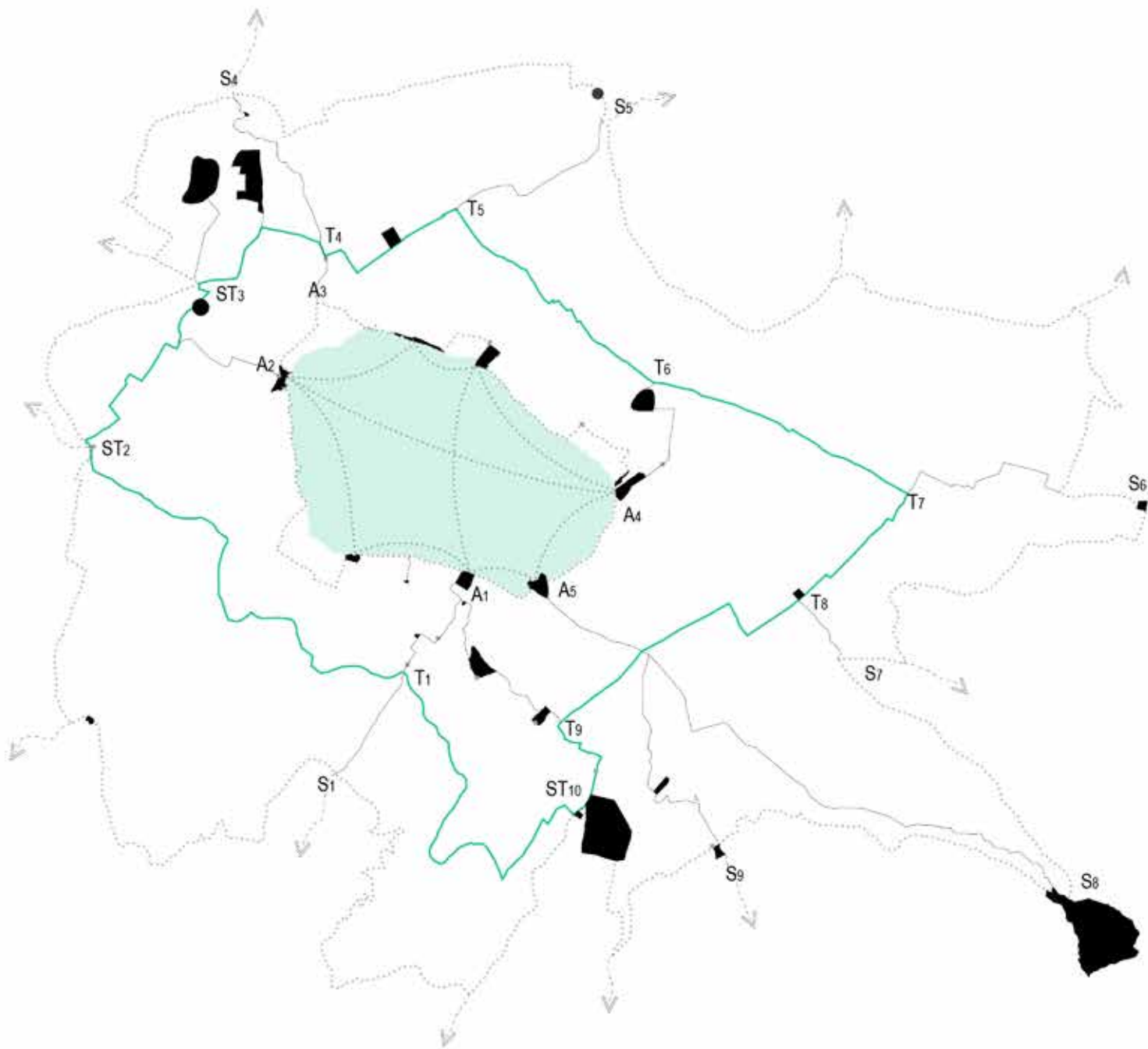


RUTA DE LA TIERRA

T
[27,5 km]

		
4h 30min	1h 20min	3h 50min





RUTA DEL SOL

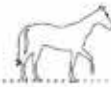
S
[52.7 km]



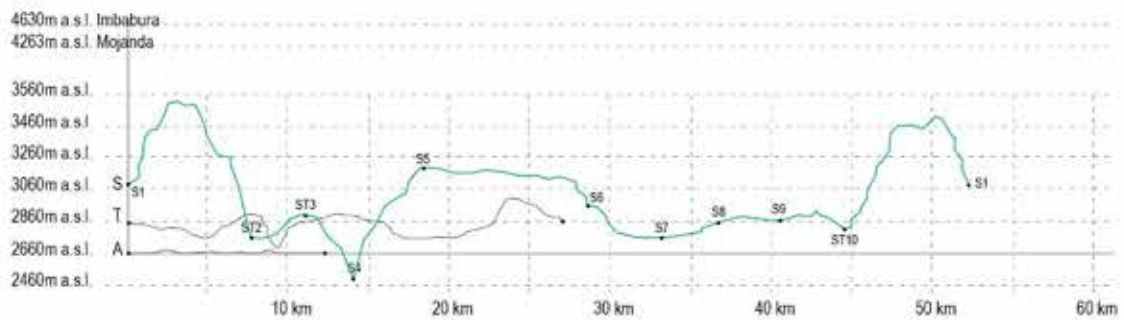
8h 50min

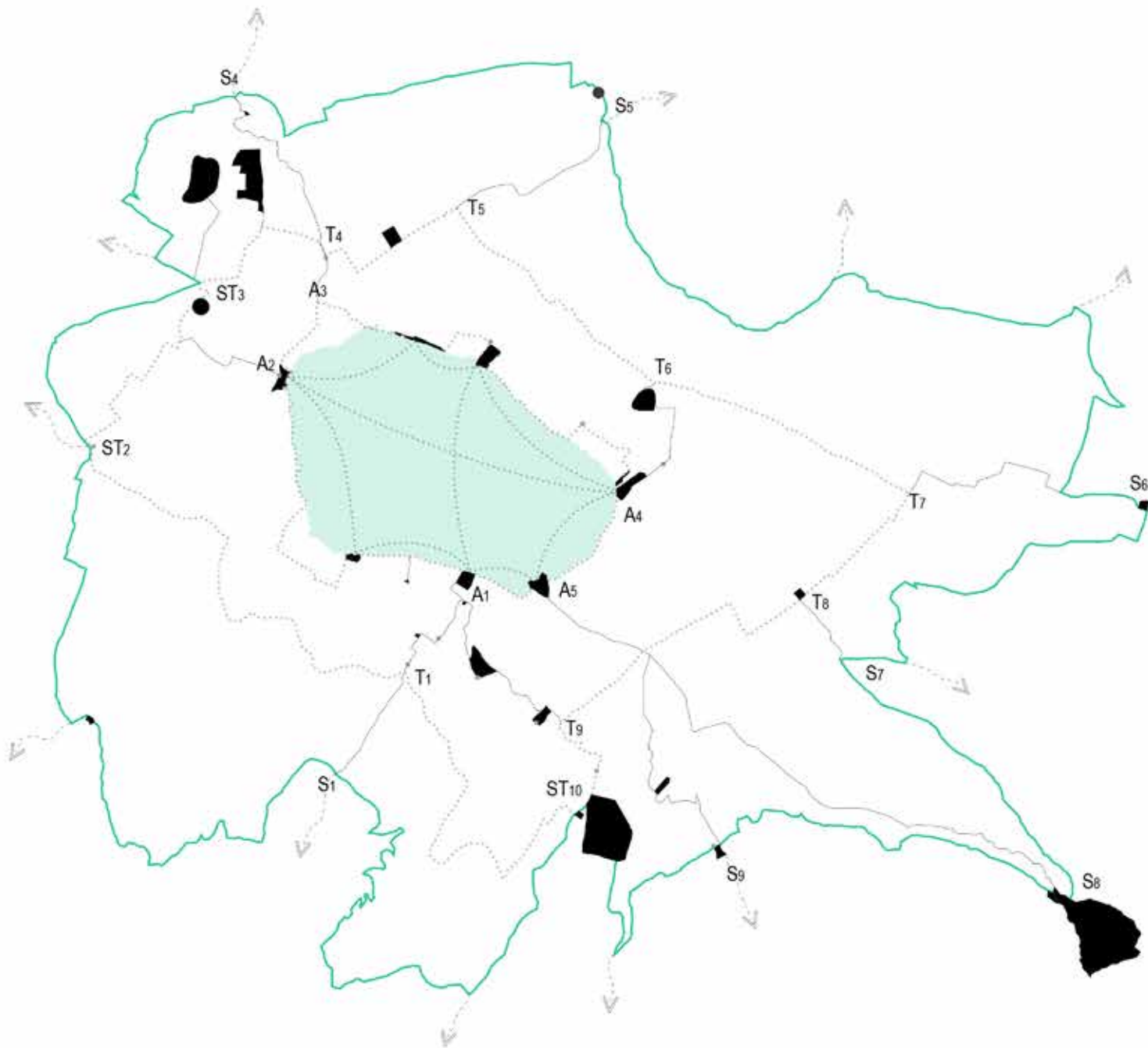


2h 40min

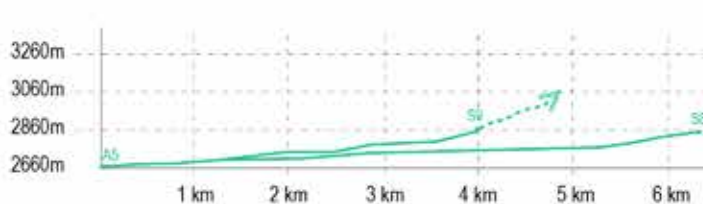
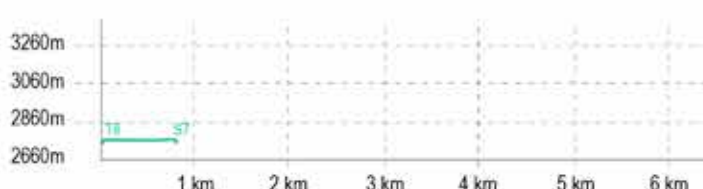
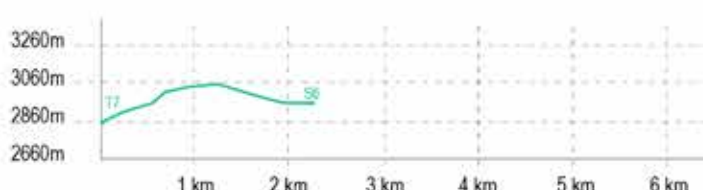
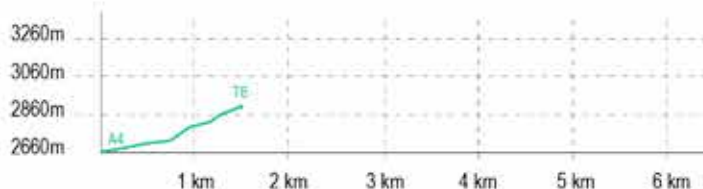
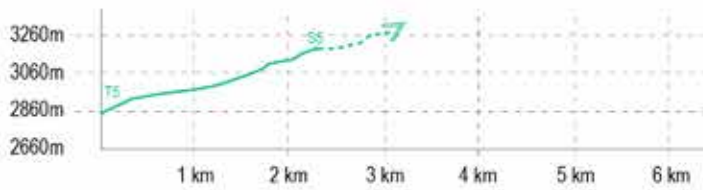
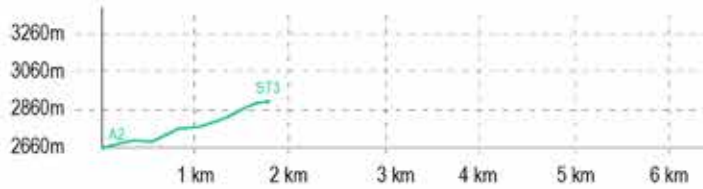
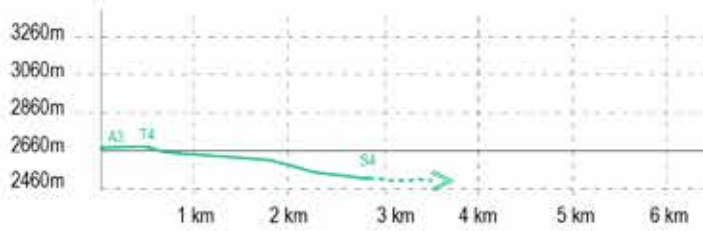
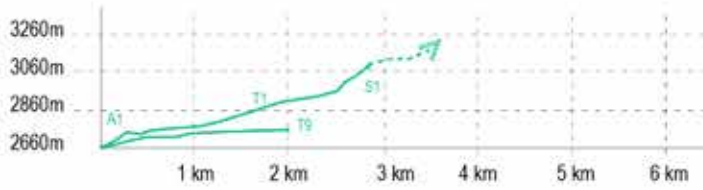


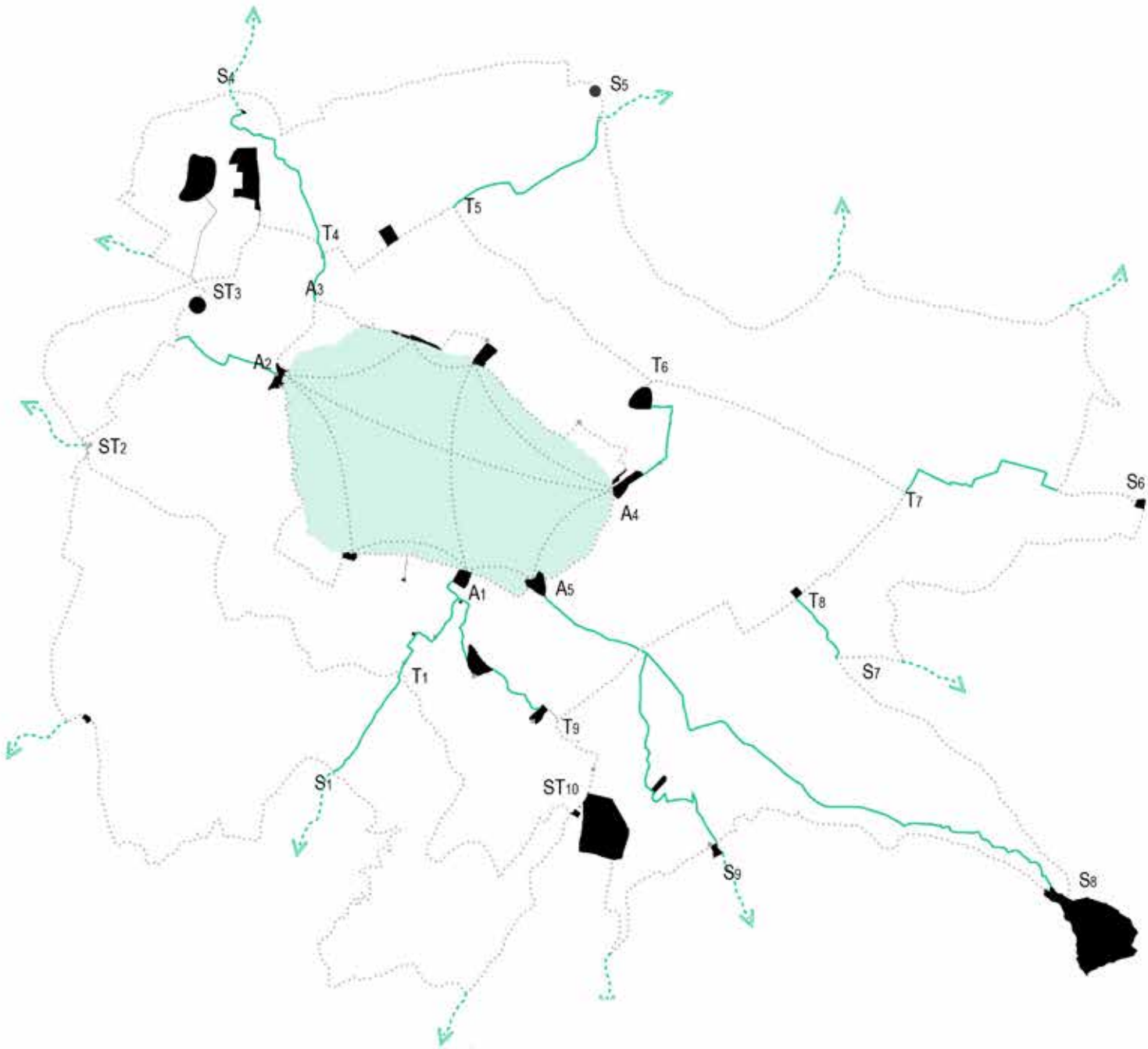
8h 15min





CONNECTIONS







Changing scale: the contest

We could have chosen anyone of the black potentially exploitable areas individuated through a territorial and social analysis to develop our project. To decide the best area where to work we made interviews to the local communities and meetings with the presidents of the Parroquias around the Lake, that led us to the choice of San Rafael de la Laguna.

In San Rafael we had the chance to realize a project from masterplan to screw: the GAD of San Rafael told us that they won a contest of ideas but they needed somebody that could help them to do the design of a specific area. Thanks to the UCE programme known as 'Vinculación con la sociedad' we have been able to sign an agreement between the university and the GAD of San Rafael (see attached document pag.356) and to collaborate with a real community for the final thesis project with the future perspective to realize it. Their idea was to design private cabañas for tourists but we changed the function according to our vision and the support of participatory design process. This opportunity, the strategic position, the enthusiasm of the people and the money of the contest (10.000\$) are the main reasons why we chose to work here.

The contest won by San Rafael already defined a given project area (1728mq) located in the rural community of Cachiviru along the Lake shore, surrounded by cultivated and livestock fields. We have done a series of visits to the site with the community and the GAD. The only construction already present on site was an "illegally" self-constructed wooden house not finished and without walls, used as a meeting space by the community.

We know that the first thing to do now, after the signature of the contract with the Parroquia, was to get in contact with the Prefectura of Imbabura, that promoted the contest, and the authorities of the Municipality of Otavalo to have a clear idea about the normative that regulates the Lake and its surrounding area.

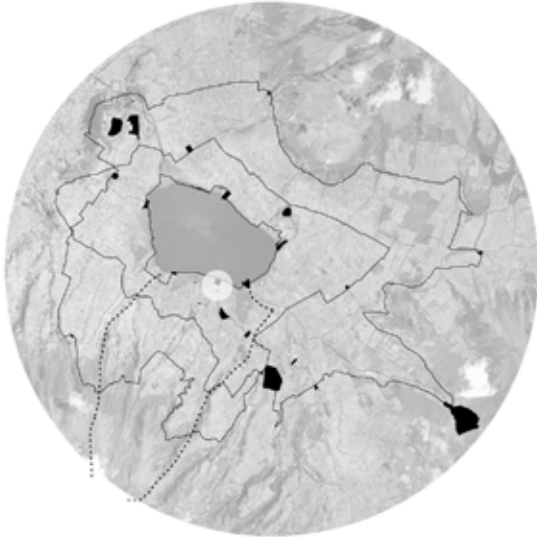
Photo: GAD parroquial of San Rafael de la Laguna and us on site, Cachiviru Community, Otavalo, Ecuador.







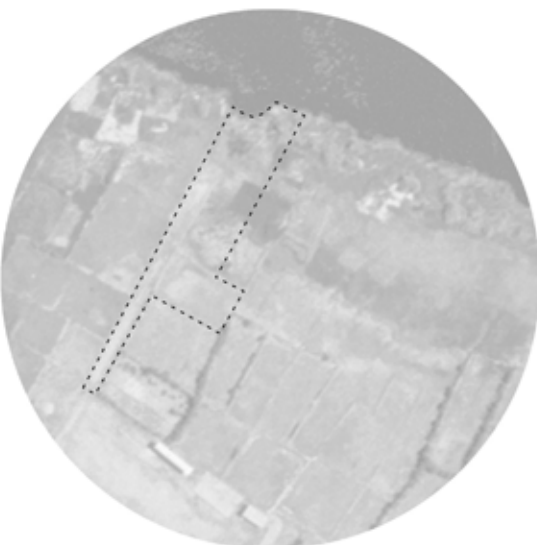
Photo: San Pablo Lake, view from the Parroquia of San Rafael de la Laguna, Otavalo, Ecuador.



MASTERPLAN: SAN PABLO LAKE
scale 1: 50 000



**THE OCCASION:
SAN RAFAEL DE LA LAGUNA**
scale 1: 10 000



**PROJECT AREA: COMMUNITY OF
CACHIVIRU**
scale 1: 1 000



**SAN RAFAEL DE LA LAGUNA:
THE CONTEST**
8th of May



**VAN TOUR IN SAN RAFAEL
WITH GAD**
8th of May



**VISIT ON SITE, CACHIVIRU
WITH GAD**
8th of May

THE CONTEST

When we met the GAD (Gobierno autonomo descentralizado) of San Rafael, the first thing they told us was that they won a contest of ideas but they needed somebody that could help them with the design.

The contest, called "Imbabura: Diversa y Productiva", was promoted by the Prefectura of Imbabura in order to exploit and enhance the region (see attached document pag.364). San Rafael won with the idea of 4 floating cabañas in Lago San Pablo lake in order to improve the community eco-tourism in the area. The four cabañas, according to the contest, should have been of 16 m2 each one and made in totora (a natural water plant of the area similar to bamboo). Their function was thought as private, for couples of tourists that arrive on the lake. The contest already defined a given project area (1728mq) located in the rural community of Cachiviru along the Lake shore, surrounded by cultivated and livestock fields.

Economically, the total budget available for this project was of 25 000 dollars. 10 000 \$ was the prize of the winning contest but with a condition: the project should have been built within December 2015. The rest of the money (15 000\$) was given by the GAD of San Rafael. The management of the entire project was organized between different actors: the Gobierno autonomo descentralizado Parroquial de San Rafael (GAD), the association of community based tourism "Rey Mola Kucha" and the community of Cachiviru.

OUR IDEA

Since the beginning we were surprised that a project of so much impact on the lake was proposed as "private", destined only to tourists, without taking into consideration the necessities, hopes and needs of the communities who live there.

Our approach, based on the community based tourism, would rather propose a project that could work as "hub", where the local meets the global in a synergy that directly benefits the community. For make this real we should have started from local people, their culture, economy and social activities. We wanted a project open to everybody and that everybody could enjoy.

We agreed for the use of local materials: totora, but not only. The area surrounding the lake is full of natural usable construction material (carrizo, stone, wood) and people of the lake used them, before the coming of "city models", according to different traditional building techniques that came from their ancestors. We wanted to exploit and revalorize these techniques conceived as an important aspect of the indigenous culture.

Local natural materials, "mingas" (communitarian construction) with local people, and traditional building techniques aimed to realize a project of minimum budget, cutting the extra costs of transportations and man power.





Photo: project area, Cachiviru Community, San Rafael de la Laguna, Otavalo, Ecuador.



All together now!

Photo: meeting with the Mayor of Otavalo and the community on the project area, Cachiviru, Otavalo, Ecuador



Theoretical framework: participatory design

The adjective “participatory” refers to a methodology that could be, in different manners, applicable to several settings from architecture to computer science. But participatory experience is firstly a mind-set and an attitude of people. It’s based on the involvement of final users in the process of participation.

Here, we will briefly debate the theme of participation from the point of view of territory and its architectural objects. Participatory design is a shift in attitude from designing for users to designing with users and by them. It is a new design movement that requires new ways of thinking, feeling and working. It is about the statement that all people have something to offer and that they, when given the means to express themselves, can be both articulate and creative avoiding the risk to realize standardized models. If we can learn to access people’s experiences (past, current and potential), then we can make user experience the source of inspiration and ideation for design.

Yet in the post world period Northern Europe countries developed initiatives for the community design/planning due to reconstruction; in the USA the participatory design is known since decades: from the ‘advocacy planning’ in the ‘60es with P. Davideoff who focused on the needs and viewpoints of minority and lower-income communities, to the researches brought on by Christopher Alexander, urban planner who focused his postulates in the social participation within the design of public spaces. He is known for his famous project “University of Oregon”, urban context within which design and organization of spaces were decided through the involvement of student’s community.

Also in the Eastern Europe some practices related to participation have been applied through some simple technics such as ‘Planning for Real’, invented in the 70s by the professor Tony Gibson at the Nottingham University, *“for giving local people a ‘voice’ and professionals a clear idea of local people’s needs in order to bring about an improvement to their own neighborhood or community.”* (Neighborhood Initiatives Foundation 1995)

On the other side, in the countries of the southern hemisphere, NGOs play a relevant role and usually the process of participation, which includes a process of life improvement of community, is strictly related to auto-construction through the adoption of technologies that exploit natural and local materials.

One of the example we had the opportunity to study in Ecuador is the project “Escuela de Nueva Esperanza” for the realization of a school for a community of fishermen at the coastal village of rural Ecuador. This project has been realized with a low amount of money confirming that resources are not only money, but also materials, hands, brains. The architectural studio Al Borde wondered about what is essentially necessary to make

architecture: to be aware of the reality that surrounds you; to analyze and synthesize abstract ideas; to translate those ideas into space; to know the materials and the construction process. The design methodology consists in a process that doesn’t have preconceived ideas. Now, the children and their parents are proud of their school. Proud of the change that this school has made, been a motif of union and self-esteem for the whole community. When people from outside admire it, when they see it and know it.

It has been observed that this kind of designing can generate a sort of democracy reflected in the “shared” deliverable. Moreover it enriches the cultural baggage of the professional through the obtaining of new information and thanks to the experience provided by the end-users of the object or programme.

Usually the first steps are to recruit participants and audience and to choose a place where participants feel comfortable in order to schedule from 60 to 90 minutes meetings for each session. There are many ways we can learn from people about their memories, their current experiences and their ideal experiences.

All these objectives are obtained through some chosen techniques in which designers act as facilitators or visual translators for people who may not be skilled or confident in idea expression. Usually the most common ones create a tool-kit of visual stimuli such as shapes, pictures, or symbols to offer expression to non-designers. Generally, the meetings forecast information and feedbacks, comprehension and analysis, opportunity and outcomes.

It is also fundamental to say that there are not absolute rules for operating with the participatory design. In fact, participatory design is a methodology universal but not absolute, that supports different ways of acting, different techniques depending on the context we are going to work with. When we speak about “context”, we are referring to all the elements that form it: people, space, time, politics, economy and so on, that are inevitably specific and typical of each place/area. A project with a Kichwa community in Ecuador is completely different from the project made with the same methodology (but different variables) in a small town in Sicily. And here it’s the interesting point: the experience will be always unique in itself because the same variables can’t be find somewhere else; maybe similar, but never the same. Due to these variables, it is not obvious that the participatory process works. For example it is indispensable, at the beginning of the process, to clarify if people are truly interested to participate in a design process. It is important that both project and process obtain the consent. Without this starting certainty the architect is forced to go backwards trying to adopt another way of designing.

The method does not dictate the final object to build because the participatory design helps to strengthen the project, not to do it! But the output of participatory sessions can provide valid insight into priorities and can motivate strategic design decisions. To involve actively all stakeholders (consumers, end-users) in the design process helps to ensure the result meets their needs. Recent research suggests that designers create more innovative concepts and ideas when working within a co-design environment with others than creating ideas on their own. Basically it is "participatory design", therefore active and socially visible, if and when it is composed not only by architects, but also by a synergetic cooperation between all actors involved. One of the most famous aphorism of De Carlo is: "*Architecture is too important to leave it to the architects*". He invites to move the ego of the architect from the pedestal in order to involve in the process who beforehand had been excluded. In fact, he defined architecture as a heteronomous (not autonomous) activity, an activity that dialogues with other disciplines and realities.

Participation means cohesion, security and social identity; a long and complex task that should continue also after the object is built, at least between people who has participated for the creation of it.

An accurate investigation by "Community Gardens Movement" (Francis, Cashadan, Stone, 1980-New York) proved that the costs of realization and maintenance managed in a participation manner are definitively lower than the ones related to a conventional design. Related to cost reduction some contributions are the use of "poor" or recycled materials, the availability of manpower inside the community we work with, a possible voluntary programme for the management, eventual agreements of co-management stipulated by local public/private institution.

Since Architecture is in charge of man and the relation between them, a process well-run can contribute to reconstruct the network of social interaction and mutual aid that after the realization of a project allows to manage more effectively all sources engaged. Already some architects like Giancarlo De Carlo recognized the importance to know the place and to interact -if not physically at least mentally- with people who live in. Inhabitants, complete and active persons, producers of territory, are not anymore passive subjects for which a project is built, according to statistic neutral and aseptic data. They instead become active individuals producing a clear qualitative leap.

Looking at its outcomes, "Villaggio Matteotti" in Terni, one of the first participatory italian example, acquires a pragmatic and instructive value and show us how De Carlo, the designer, was able to interpret collective and specific requests generating shapes to live approved by

a group of inhabitants; he produced an object of collective value.

In his essay "L'architettura della partecipazione" he spoke about a "realistic utopia": Architecture must participate to all phases for the realization of a project, from design to construction.

Architects became entertainer, facilitator and mediator. It is clear that such a route is not easy, neither assumed.

Nevertheless some risks can exist, general traps described by Fareri (1999): participation can be elected as a method but cannot be underestimated, in other words, to have different characters around a table is not enough to produce a well done design; participation can be easily manipulated or exploited, in favour of specific interests regarding the most powerful persons within a participatory setting. Another risk mentioned by De Carlo is the fact that along the years participation has been become a tool used a lot by public administrations to enlarge the group of actors that often brought to a general delay in the process. An indispensable and propaedeutic act should be the definition of a sort of "contract" between who manages the meetings and each participants, within which the common aim is defined, starting from each expectations, each role and each task or responsibility. As well as it is suitable to determine time-schedule and workload so that each component has clear idea about his own contribution.

There are some useful devices that can lead to successful outcomes: to arrange a conceptual strategy of the process sufficiently flexible, but also sufficiently defined in order to allow everybody to understand the key steps; to verify, at each phase, the efficiency of the used techniques and to plan in detail the activities of the next phase; pre-order, before and during the work, all the instructive supports finalized to put the actors in condition of equal opportunities.

Today horizontal participatory design represents an unavoidable approach because indispensable for the creation of social projects, not for ideological or value reasons, but essentially for methodological and contents ones. De Carlo leads us to a "narrative" architecture, able to listen, host, annex the tensions of inhabitants. Architecture that is Process where the architect "must get his hands dirty" to be contaminated with the Place. If we operated a well-done process of participation, the community should take possession of the project realized, feeling co-author of the outcome. Architecture works if it becomes integral part in the cultural process of a community and if participation becomes the mean through which a society build its future existence, its "space".





Workshops & normative matters

Believing in the participatory design as a key tool for the reinforcement and enrichment of the design proposal we decided to involve the people of the Parroquia of San Rafael in our design process. We subdivided the work in 4 workshops during a total period of one month and half (29th of May- 13rd of July). Each workshop was related to a specific topic and organized in different activities to involve people in its participation. The first reunion was also the first meeting with local people where we knew each others and we defined the next calendar of meetings and activities; the second workshop was related to identity and history in order to discover their origin and culture; the third was focused on traditional building techniques and handcrafts that we wanted to re-enhance with our project; in the last one we presented our final design proposal, developed in a parallel way with the workshops, and we discussed it with the community.

Meanwhile this face-to-face experience we had to face another still quite “unknown” world: the one of normatives and authorities.

Since the project was born from the winner idea of a public contest, the first institution we had to meet was the Prefectura of Imbabura and the delegated technicians Arturo Myar and Vinicio Puente. They gave us informations about the contest regulation but they were not in charge for the normative that regulates the Lake and its sourrounding. For getting this knowledge we had to alternate the workshops' schedule with diffent reunions in the Municipality of Otavalo (sometimes very hard to plan), meeting different figures with different roles: Pedro Antamba, technician of Otavalo Municipality, Byron Velasco, Director of Urban Plannig Department, Karen Teran, Director of the Enviromental Management Department, Gustavo Pareja, Mayor of Otavalo and many others engineers and technicians. The confused and undefined starting situation about the normative of the Lake, that didn't let us building up anything in the Lake's water or in its 70m borders, get more and more clear and districated in each meeting despite some contrasting affirmations. The key-meeting was the one with the Mayor of Otavalo on the project area where we obtained the final approval and an “easy way” to get the needed documentation in the Municipality.

Each workshop and meeting with local authorities was fundamental and gave its own contribute, even small, in shaping the final project result.

The 17th of July the project was officially approved.

Photo: the community and the GAD of San Rafael discussing with us the final design proposal before its approval.

¡TRABAJAMOS JUNTOS

¿QUE PASA?
Reunion de
Arquitectura
sobre un proyecto
de turismo
comunitario
para la
recalificacion
del lago S.Pablo

¿DONDE?
Junta Parroquial
de San Rafael

¿CUANDO?
29 Mayo 2015
h 16.30

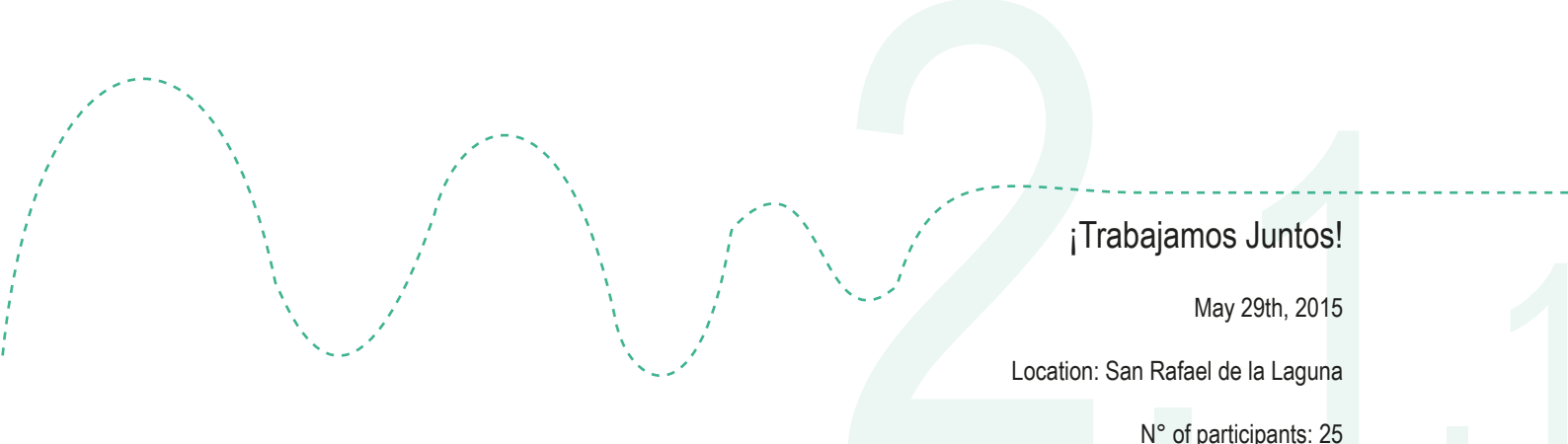
QUIEN?
Todos!
Te esperamos!

*Colaboración
Participación
Ecoturismo
Identidad
Cultura
Tallers
Mingas*



PARA VALORIZAR EL LAGO!

UCE-Universidad Central del Ecuador
POLI- Politecnico di Milano



¡Trabajamos Juntos!

May 29th, 2015

Location: San Rafael de la Laguna

N° of participants: 25

Objective

The first objective of the reunion was to meet the community and introduce ourselves, explaining who we are, where we come from and why we were there; at the same time our aim was to know the community: who they are, their history, how and if they can cooperate with us through their technical constructive and human knowledge, also sharing the potentialities of the available local materials. The second objective was to organize the following participatory workshops and *mingas* on the basis of their free time. The third objective was to clarify the compromise between the community and us, in terms of conditions and limitations, economic budget and administration of the project. Prof. Arch. Carlos Hidalgo, thanks to his experience in the participatory processes, helped us both in the organization of all the following workshops and in the reunions with the authorities about normative matters (together with Prof. Arch. Marlown Cuenca).

Activities

The reunion started with a general presentation of the Institution from our Professors of Universidad Central del Ecuador, introducing the aim of the meeting and the work we will do together. Then to better know the participants, we played a little game called “thread game”: standing on a circle we passed each other the thread ball saying something about ourselves, creating a physical and social network between us. After that we prepared a deeper presentation about who we are, what we do and why we chase Lago San Pablo and San Rafael for our thesis: we were fascinated by the biodiversity and the natural, rural context where it's located and as foreign and tourists we think that the Lake has a great tourism potential but still not exploited. Furthermore the majority of the population is indigenous and we think that include and enhance the Kichwa culture may be one of the most strong and interesting points of our project. We visited the whole basin of the Lake but in San Rafael we found a concrete architectural need; we also perceived this Parroquia as the most interesting where to work for its closeness to the Lake, its panoramic strategic position facing the Volcano Imbabura, its traditional totora craft and because they already begun a program of flora recovery with the replantation of native species. At the same time the community seemed very interested and available to work as a whole with us. After hearing what the participants wanted to say about their past, their stories and their community, we discussed the timetable for the next months of work, setting a date for the workshops and explaining that what we will do together is a participatory design process ending with the construction of a project as a sort of “guide” that will remain for a future further development of the entire masterplan. Finally we spoke about the available resources in terms of knowledge, materials and money, defining conditions and limitations. All was written on big papers on the wall while the participants were speaking.

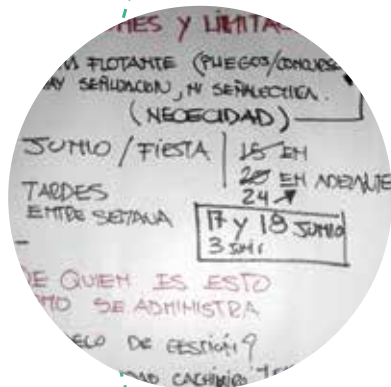
Presentation

Thread game to know each other creating a social and physical network between us.



Organization

Using a spiral representing the time, we approached the indigenous cosmovision to organize the following workshops and "mingas" checking their availability.



Agreements

We spoke about the available resources in terms of knowledge, materials and money, with the aim of defining conditions and limitations.



Results

What we learned hearing their stories is that there is not just one history common for everybody but a lot of single truths depending on their past and their own imagination. They told us that San Rafael was the ancient settlement of Otavalo and it's recognized as the land of "Coraza" and Yamor; there are 21 sacred places (tolas), 19 heritage properties, three churches made of tapial and the biggest potentiality for them is the tourism. Regarding the traditional materials they spoke about barro, straw, tapial made with bull excrement and horse crine, bareque, aliso wood, cabuya, carrizo, totora. They all know how to work totora and carrizo and in the past there were people specialized in making tapial construction. They spoke about the competition they won with the idea of cabañas flotantes and about the money they have: 10.000\$ from the Imbabura province and 15.000\$ from the Junta Parroquial. We spoke about a possible management model of the future project setting a mixed economy enterprise made by Cachiviro community, ReyMolaKucha association and Junta Parroquial. We perceived a mix of confidence and mistrust: they were really interested in working with us but they collaborated in the past with students from different universities and the experience was not always positive. Finally we organized the first workshop on June 3rd and the second on June 17th-18th.



- Confidence
- Dialogue
- Historical & cultural knowledge



- Mistrust
- Scepticism



Photo: Carlos writing about conditions and limitation, San Rafael de la Laguna.





Photo: Organization of workshops' schedule with the spiral of time, San Rafael de la Laguna.



Photo: Pedro Antamba speaking about normative, San Rafael de la Laguna.

2.1.2

1° Reunion: How can you win a contest for building up floating cabañas if you cannot build up anything in the Lake?

June 3rd, 2015

Location: San Rafael de la Laguna

Before starting the first participatory workshop with the community we wanted to have clear in our minds the legislative situation, so we decided to contact the Municipality of Otavalo asking for someone to speak with. The Municipality sent a technician of the Urban Planning Department, Arch. Pedro Antamba, at the GAD Parroquial of San Rafael, where we spent some hours trying to get normative's clarifications. Basically we asked him to explain us the current legislation about the Lake's shore, the Lake itself and the soil around it. We also wanted to know at which norms the contest won by San Rafael was subjected to. He told us that for all the matters regarding the contest we should spoke with the Prefecture of Ibarra that released and managed the contest matters, but anyway in his opinion it was not possible to build up anything in the Lake.

How can you win a contest for building up floating cabañas if the normative prohibits it?! So we tried to understand what was possible to build up in the pre-defined area of the contest (Cachiviru community) thinking of an alternative project. He told us that the only sure thing was that in the 70 meters of protection from the Lake's shore is forbidden to build up anything permanent with basic services, but the normative was currently work in progress and he suggested us to speak directly with the director of Urban Planning Department, Byron Velasco. In conclusion, Pedro Antamba was really accomodating with us but we didn't get the expected clarifications.

- Willingness



- Lack of clear normativa
- Forbidden to build up in the Lake
- Few informations



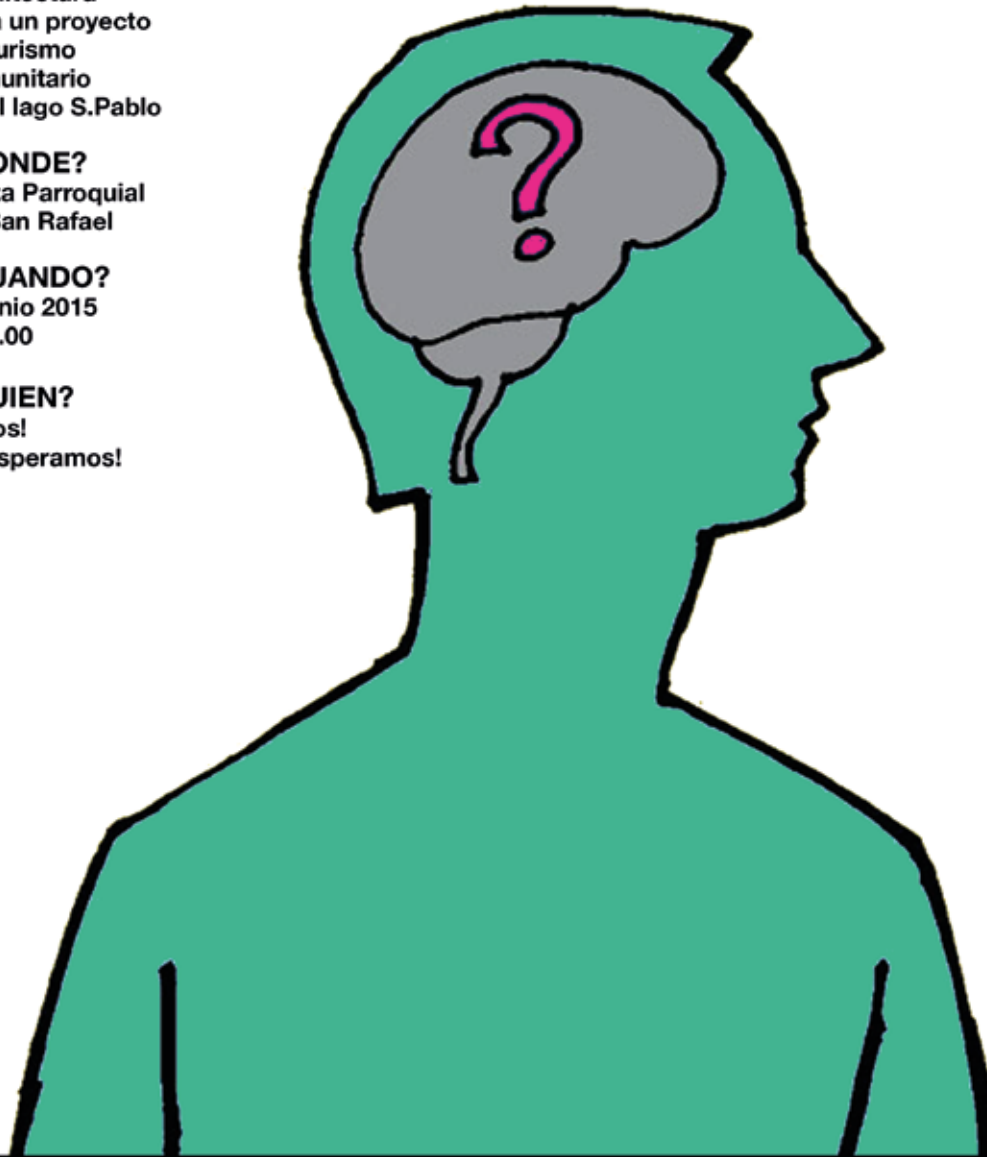
1° TALLER: IDENTIDAD CULTURAL

¿QUE PASA?
Primero taller de
Arquitectura
para un proyecto
de turismo
comunitario
en el lago S.Pablo

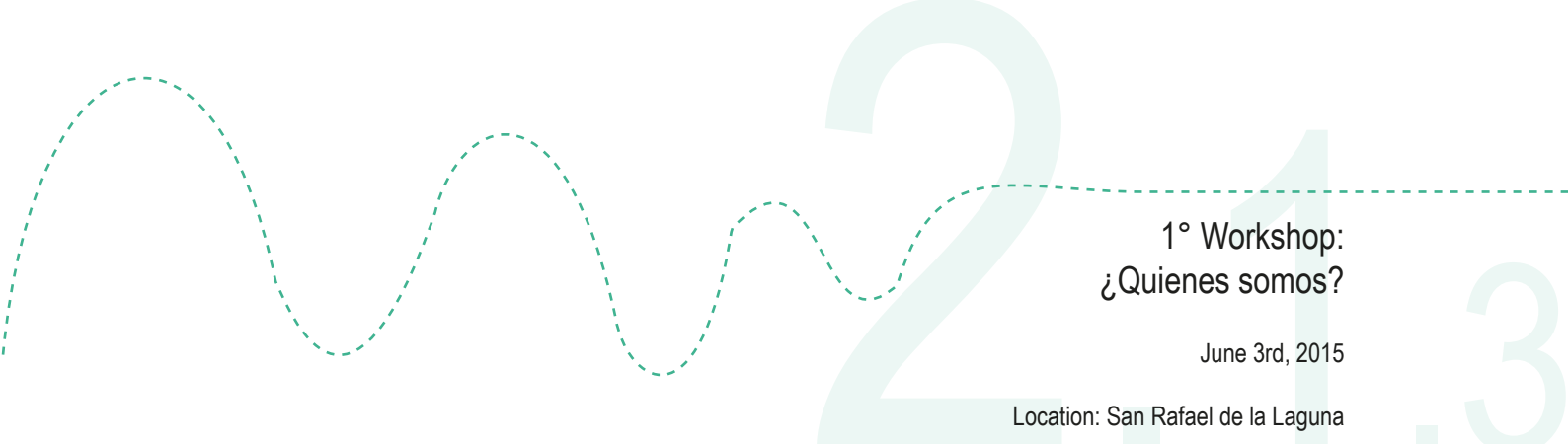
¿DONDE?
Junta Parroquial
de San Rafael

¿CUANDO?
3 Junio 2015
h 15.00

¿QUIEN?
Todos!
Te esperamos!



¿QUIENES SOMOS?



1° Workshop: ¿Quienes somos?

June 3rd, 2015

Location: San Rafael de la Laguna

N° of participants: 15

Objective

The first objective of the workshop was to know and detect the identity, problems and expectations of the people living around the Lake, in order to understand what they want for their community.

The second objective was to approach and remember the constructive traditions and the history of San Rafael and the Lake, in order to value its territory and labor.

Activities

The workshop started with a question: "WHO ARE WE AND WHERE ARE WE?" introducing the topic of "identity" to understand what people think of themselves and how they recognize their own culture and identity. The question was written on a big paper stick on the wall where we noted down the answers while people were speaking. First of all they recognize their cultural identity defining themselves as Kichwa Otavalo Indigenous, feeling represented by natural elements such as the Lake and the Volcano Imbabura and they told us how "mingas" (collective works in favor of the community) are part of their culture. Then we divided the participants into three small groups of five people, each one headed by one of us, with the aim of investigate in the past, present and future of the people through simple questions related to their life, daily activities and future dreams: What did you usually do when you were a child? How was your house? What do you usually do in your working and holiday days? How are the relationships inside the community? What is the biggest problem of the Lake? What would you wish for the future of your community and your Lake?

In the second part of the workshop we did a small walking trip through out San Rafael together with the participants that showed us three different houses: a patrimonial one, a modern one and a "mixed" one. We visit the first one, discussing how uncommon is finding a traditional house in San Rafael: wooden structure from eucalyptus tree, tapial walls and pitched tile roof. The second one was chosen in between hundreds of modern houses because it was the only one completely finished (not just the main façade): concrete structure, three floors, plan roof, weird decorations and columns in between balconies without a structural function. To the question "Do you like it?" we obtained fifteen "yes!" so we tried to understand why they liked such a modern weird construction far from their identity and close to their concept of "city". They recognize this house as the "home of rich people who travel a lot"; in their mind modern house = richness = city and it is part of their vision of life: get married, have a family, have a modern house, have a car. We were a bit astonished hearing that the young generation wants to go away: why do they built giant modern houses for their kids if they don't even want to stay in San Rafael? This question is just an additional one to many others: why do they start a construction they cannot finish for economic reasons? Where this "fashion" of modern weird houses comes from? Why there are so many empty houses?

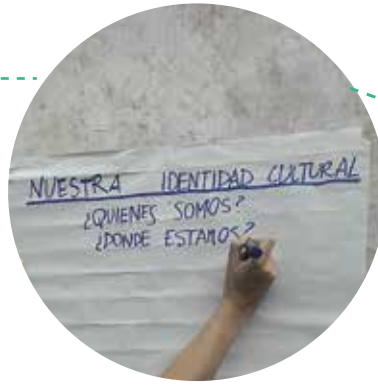
We called the last house "mixed" because it was a modern concrete not finished construction where the owners placed bundles of totora leaning against the façade in order to make them dry; moreover the first floor of the house was used as a storage for it.

The reason of this third visit was to make the participants reflecting on the potentiality of a traditional material such as the totora: why not using it as a construction material instead of using modern empty construction as storage? During the walking trip we recollect some kind of materials: totora, carrizo, cabuya, straw...and we asked the participants to tell us how they work them, the possible uses, the durability and the products they can make.

We left the participants with the invitation to the next workshop scheduled for June 17th 2015.

Identity topic

WHO AND WHERE WE ARE? had been the opening questions, written on a paper stick to the wall, to introduce the community into the topic of identity.



Past, Present & Future

We divided the participants into 3 small groups of 5 people, asking them questions related to their life, daily activities and future dreams.



Walking Trip

We visited with the community 3 different houses: a patrimonial one, a modern one and a "mixed" one and we discussed all together about them.



Results

They speak a lot about their past, showing a bit of nostalgia, telling us that the kids were really different before: they always played at open air, they used to swim in the Lake using life vests made of totora, they didn't go to school or wear shoes; while now internet and technology replace nature and the Lake is too much contaminated to swim in it. Their houses were traditional ones, made of just one floor, with a porch, two rooms, straw or tile roof, with the bathroom outside, no electricity and a big fire in the center where they used to eat all together (and all the community could participate). About the present they told us basically they don't have holiday days but they work hardy during all the week (someone rests on Sundays) but they have entire weeks of party during their sacred festivals. A typical working day for a woman starts at 3 am: they basically cook and weave the totora (they prefer to work it when there is no natural light and no wind). A typical working day for a man consists in working in the agricultural fields during the early morning and in flower crops (mainly roses). At Sundays they weak up at 7 am, they go to church, sometimes they practice sports and go to Parque Araque but the places to meet are really few: they mainly meet at the community hall or at the football fields. Usually the community meets up when the President of the Junta Parroquial convokes the Presidents and leaders of the communities. About the future of the Lake they would like to improve the environmental conditions, lower the contamination of the water, valorize their own indigenou culture and they would like to have more tourism; about the future of their community they would like more rules and norms to regulate the constructions, more green spaces and to improve the social collective education. At the end we found out that the biggest problems of the lake are:

- CONTAMINATION

(they cannot swim, no safe public access to the Lake, lacustrine dangerous areas, dirty water).

- LACK OF TOURISM

(aim: communitarian tourism).

- LACK OF COLLECTIVE EDUCATION TO TAKE CARE OF THE LAKE

(most of the people wash their clothes and cars in the Lake with chemical soaps, they don't collect garbage but they burn or bury it in the soil or throw it in the rivers, use of non-traditional materials of construction building non-finished houses that ruin the landscape).

- LACK OF VALORIZATION OF INDIGENOUS CULTURE AND HISTORY OF SAN RAFAEL

(they recognize themselves as indigenous and they want to valorize it, even in order to attract more tourism).

We tried to discuss about some possible solutions:

- Fit depuration, creation of a safe public access to the Lake, collective education in order to avoid contamination (use of natural soaps if they want to wash clothes in the Lake, education to garbage collection, no use of chemical products in agriculture).

- Generation of tourism through the valorization of the natural landscape, the local handicrafts, the indigenous culture.

- Process of sensitizing through little discussions and meeting within the community.

- Valorization of natural landscape through native plants (and decontamination), use of traditional local materials of construction, valorization of local cuisine, history, handicrafts through an exposition area, valorization of Kichwa language through the promotion of trilingual (Spanish-Kichwa-English) in the road signing.

The problems of San Rafael are all connected to each other: what they basically want is more tourism, less contamination and the valorization of their culture; to get a sustainable tourism we need to decontaminate the Lake and to valorize their culture; to decontaminate the Lake we need a collective sensitization; to have a collective sensitization we need a united community and to have a united community we need to make them conscious of their own identity and the potentiality of being indigenous with their own traditions, materials, culture.



- Participation
- History
- Traditions
- Identity



- Less people



Photo: Marta opening the topic of identity, San Rafael de la Laguna.





Photo: Walking trip, San Rafael de la Laguna.



Photo: Municipality and Prefecture round table, Otavalo Municipality.

2° Reunion: Otavalo's normative Vs Contest

June 7rd, 2015

Location: Municipality of Otavalo

The objective of this reunion with the Municipality of Otavalo and Ibarra Prefecture, was to get more information about the normative to which the contest won by San Rafael is subjected: we already knew, speaking with Arch. Pedro Antamba, that it should be forbidden to built anything in the Lake, but the contest emanated by the Prefecture approved the idea of building up floating cabañas. Moreover we wanted to understand the conditions regarding materials, technology and functions of the project understanding contest limitations: can we change the parameters of the winner idea? How should we move in respect to the normative? We already had in our mind a potential alternative idea for the project: what if we build up a public space with a dock and a panoramic pavillion? What if we build something in the Lake but just using natural materials? And what about the existing wooden structure in the Lake's shore of the project area?

Since we didn't get enough answers from the first reunion, we aimed to create a round table discussion face to face with all the actors involved: the director of Urban Planning Department Byron Velasco and the technician Pedro Antamba representing Otavalo Municipality, the tourism responsible Arturo Myar and the economic development responsible Vinicio Puente representing Ibarra Prefecture, the authorities of GAD and Cachiviru representing San Rafael. Regarding the normative, they told us that in respect to the *Decreto Ejecutivo 1999 art. 646*, it's possible to build outside the 70m of protection from the Lake's shore; it's forbidden to build up anything with basic services inside those 70m, but if we propose something light and not invasive using natural materials there is a chance to discuss it for a possible approval. If we want to build up something IN the Lake we should talk to the Environmental Management Department director Eng. Karen Teran. Regarding the existing wooden structure inside those 70m of protection, it was illegally built (like most of the constructions around the Lake!) and they said we cannot do anything with that, no rehabilitation nor interventions. Regarding the contest, Ibarra Prefecture told us that a parameter that cannot change is the main function: it must be something related to tourism, but since the normative does not allow to build floating cabañas, we can change the product. The only conditions is that what we propose must obviously be approved by San Rafael and by Cachiviru community.

- Limitations
- Contest idea --> Our idea



- Limitations
- Lake --> K. Teran
- <70m> --> Nothing!
- +70m --> May be



2° TALLER: MATERIALES

¿QUE PASA?
Segundo taller de
Arquitectura
para un proyecto
de turismo
comunitario
en el lago S.Pablo

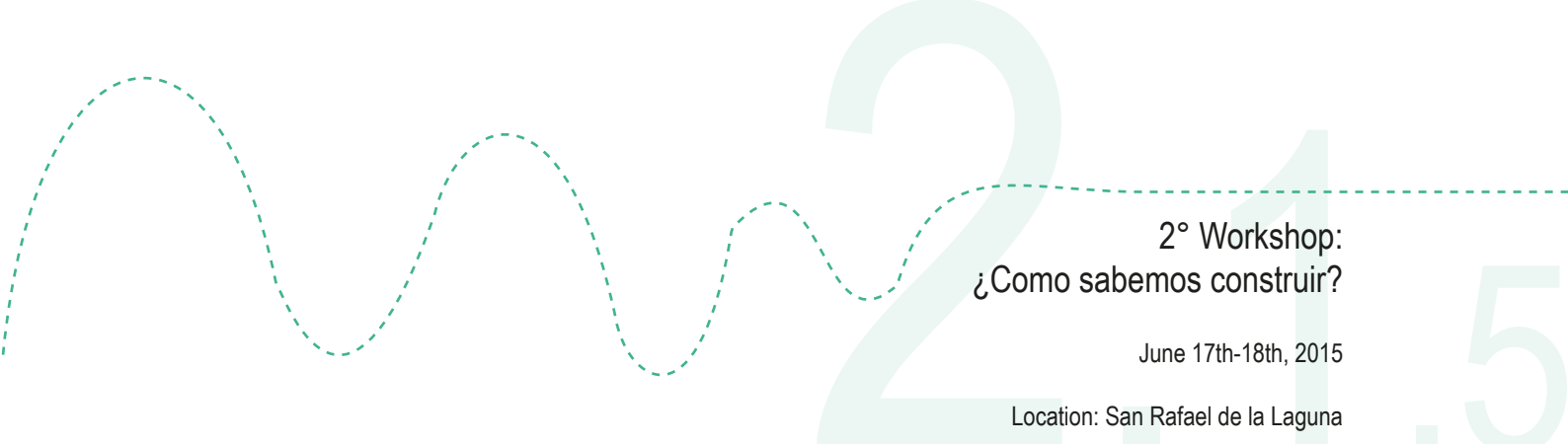
¿DONDE?
Junta Parroquial
de San Rafael

¿CUANDO?
17-18 Junio 2015
h 15.00

¿QUIEN?
Todos!
Te esperamos!



¿COMO SABEMOS CONSTRUIR?



2° Workshop: ¿Como sabemos construir?

June 17th-18th, 2015

Location: San Rafael de la Laguna

N° of participants: 10

Objective

17th, June:

The first objective of the workshop was to verify the problems detected in the first taller, than to propose possible solutions, to know better the community life understanding more specific problems in terms of spaces and activities for the community itself.

18th, June:

The objective of the second day was to know more about the natural local materials we could use in our project and the generation of architectural elements through the available materials (totora, carrizo, cabuya).

Activities

June, 17th:

The workshop started with the presentation of the problems detected in the last taller and the possible solutions: we wrote the problems on a paper stick to the wall and we discussed about it with the people.

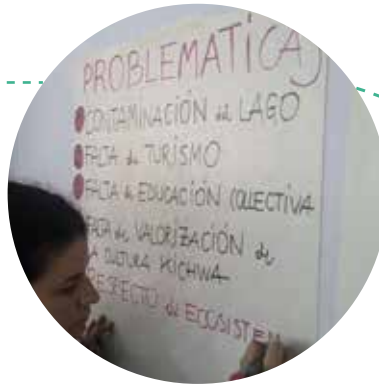
Then we showed them a drawing representing the Lake full of tourists, since from the last workshop it seemed that the biggest problem of the Lake was the lack of tourism. Starting from that, knowing that the Lake needs tourism, we tried to understand what THEY need: if they need common spaces to meet up during the week, if they need relax spaces and what does relax mean for them, which kind of activities they would like to practice in the surroundings of the Lake and so on. We also asked questions related to the needs of families and kids, workers, teenagers: we asked where the kids stay after school, if they stay with the parents or there is a need of a space dedicated to them, if the teenagers have particular necessities and which kind of spaces they would like to have, if the existing wooden house could be used for community's activities or if they imagine it just for the tourist; we also asked them to explain us the entire process of the totora to understand which kind of spaces they need in relation to the handcraft and if the presence of Titora Sisa is enough or not.

Junes, 18th:

The workshop started with a discussion around the local natural materials: we asked people to tell us everything they know about their durability and possibilities of use. After that we split in two groups, each one had the task to build up a wall panel made of totora and than we discussed about it and the chance to introduce one of the two models in our project.

What does the lake need?

We talked about the problems detected in the last workshop writing them on a paper stick to the wall, discussing possible solutions.



What do you need?

Understanding that the main problem for them is the lack of tourism, we tried to focus on more specific community's problems through more specific questions.



Building up!

We split into 2 groups, each one had the task to built up a wall panel made of totra using cabuya and two different techniques; than we discussed about them.



Results

17th, June:

Regarding the last workshop's results, the community confirmed us the problems detected and agreed with the solutions, always underlying that the biggest problem for them is the lack of tourism. They told us that "relax" means "sit down and eat", so they express the need of a big space ("salon") where to meet and relax. Regarding the existing wooden house they conceived it both for the community and tourists, a space for the tourist where you can meet indigenous people working and living the space. The teenagers expressed the need of a place with Wi-Fi to study together and doing working groups, an artistic taller where they could play instruments and a circular space for dancing and fireplace. The families expressed the needs of their kids: a space to relax and eat after school, a space for doing homeworks, a playing area and the possibility to swim safely in the Lake. The workers would like to have a totora handcraft workshop closed to the Lake since Totora Sisa is seen more like a storage and is far from the Lake. Regarding the totora process, they told us that this plant grows in the water with a deepness of 70-100cm and floating roots and must be cut 20-30cm outside the water; it needs three weeks to be completely dried (ten days on the water for the pre-dry and the other ten days to completely dry horizontally on the floor). The minimum space for a taller is 80mq (one person need a space of 1,50m x 2,50m to work the totora) with the necessity of protection from wind and rain where the walls could be done in totora or Carrizo.

18th, June:

Regarding the durability of the materials the community suggest us to use carrizo instead of totora for the external spaces: totora has an higher quality but it lasts less (just 3 years). Cabuya can be used to tie totora and Carrizo. The groups built up two kinds of wall panels: in the first one they tied totora's bundles together with wooden beams with cabuya rope making three different type of nodes; in the second one they tied totora's bundles on a wooden mark with cabuya rope. During the discussion about the two types of walls came out that the second type of wall panel is better because of the possibility to built it in a modular way and because it's more resistant thanks to the wooden mark. We finally discussed about the possibility to introduce it in our project using Carrizo instead of totora. The best local wood for the exterior is Seike.



- Participation
- Enthusiasm
- Space and functions' definition



- Less people



Photo: José showing the best prototype of totora wall, San Rafael de la Laguna.





Photo: Building up!, San Rafael de la Laguna.



Photo: Karen Teran reviewing our proposal, Otavalo Municipality.

3° Reunion: Environmental normative: the Lake

July 1st, 2015

Location: Municipality of Otavalo

The objective of the reunion with the Environmental Management Department of Otavalo Municipality was mainly to talk about the Lake's regulation proposing our design idea: is it possible to build something "light" and easily dismountable inside the Lake without using any concrete foundation? What if we build up a dock with a floating part made of wood and recycled plastic tanks? We also wanted to know which kind of certificates we needed to get the municipal approval of the project and the related timing.

In this meeting with us there were the authorities of Junta Parroquial of San Rafael and the technician of Ibarra Prefecture Arturo Myar. The engineer Karen Teran confirmed us that our project respects the environmental requirements since we decided to use just natural local materials such as wood; furthermore the plastic tanks we planned to use are recycled and didn't contain any contaminating substance but honey. The bad news were about the timing and certificates: one of the problems was that neither the community knew the exact property of the soil where we will build up the project! It came out that we needed: the "uso de suelo-linea de fabrica" certificate (that was about the use of the soil) to be asked to the Municipality; the "permiso ambiental" (environmental permit) that she would release; the "permiso arquitectonico" (architectural permit) released by the director of the Urban Planning Department Byron Velasco after the revision of the plans; and finally the "permiso de construcción" (construction permit) released by the director of Civil Engineer Department Vicente Gualsaqui. After this reunion it was clear that the whole process would have been long and difficult.

- Approval of the idea!



- Long timing
- Lots of certificates needed





Photo: Presentation of the project's idea to the Mayor and authorities, Cachiviru.

4° Reunion: Mayor approval!

July 2nd, 2015

Location: Cachiviru

We decided to participate to a survey-reunion of the Cachiviru community in the project site with the Otavalo Mayor Gustavo Pareja, the Director of Urban Planning Byron Velasco, the Civil Engineering director Vicente Gualsaqui and other authorities of Otavalo Municipality and Ibarra Prefecture. Our objective was to speak directly with the Mayor in order to get the approval from the highest office of the Municipality and to have a general overview about how to get fastly and easily the required certificates.

In front of all those people we had the chance to present and explain our project idea, asking and answering questions: we finally got the general approval! The Mayor gave us the exact list of certificates needed, telling us we could simplify the procedure since it was a little "light" project done with the community inside a university course and furthermore we just wanted to use natural materials. We also got an appointment with Ing. Vicente Gualsaqui for getting the construction permit. This final reunion was positive from many points of view and we started to prepare all the necessary documents and technical plans in order to present everything to the community and to the Municipality for the official approval.

- Dialogue
- General idea's approval!
- Burocratic facilitation



3° TALLER: PROPUESTA

¿QUE PASA?
Tercero taller de
Arquitectura
para un proyecto
de turismo
comunitario
en el lago S.Pablo

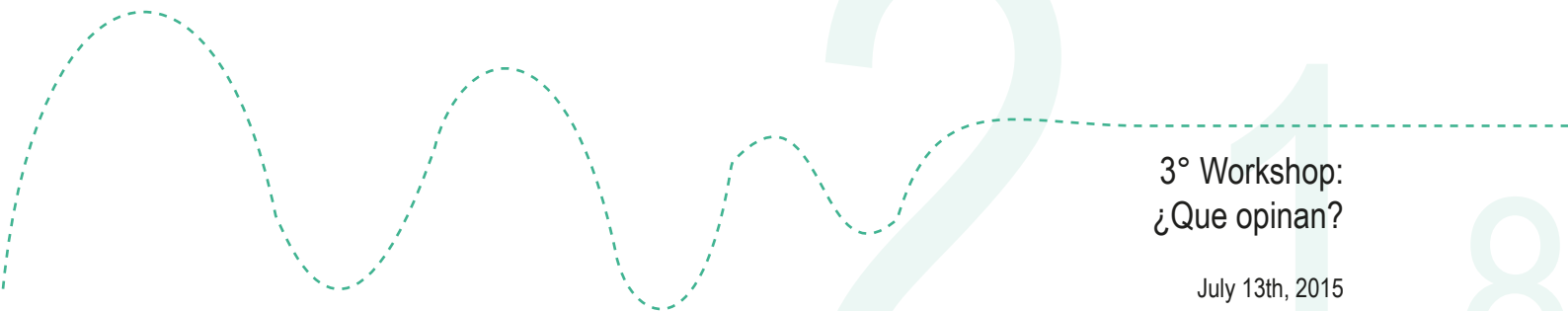
¿DONDE?
Junta Parroquial
de San Rafael

¿CUANDO?
13 Julio 2015
h 15.00

¿QUIEN?
Todos!
Te esperamos!



¿QUE OPINAN?



3° Workshop: ¿Que opinan?

July 13th, 2015

Location: San Rafael de la Laguna

N° of participants: 25

Objective

The objective of the last workshop was to present and discuss the design of the project elaborated to the community, in order to get the general approval before delivering the plans to the municipality.

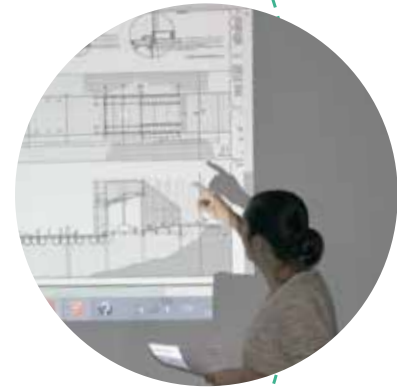
Activities

First of all we presented the complete design of our masterplan, explaining to the community that for reasons of money and time we will proceed in terms of “phases”: the first part to be constructed will be the “Muelle-Mirador”, the second one will be the part of the 70 meters of protection (with the community garden and the relax-dance space) and the last one the coffee-bar. We prepared a power point presentation with the panels representing our design (plans, sections, elevations, 3D views and details) in order that the project could be visible from all the participants and we explained it trying to be as clear as possible. Since we knew that the technical drawings might be not understandable for the majority of people, we also brought a physical model showing our masterplan and we discussed the design around it.

We also presented the economic pro-forma in order to get the approval from the Junta Parroquial and at the end we signed the plans.

Project presentation

We presented the design of the project, focusing on the Muelle-Mirador, with the projection of the technical drawings through a power point presentation.



Model discussion

We discussed the project around a physical model we brought with us in a way that the project could be easily understandable by everyone.



Approved!

At the end of the day all the authorities signed the technical plans to be delivered to the municipality.



Results

At the end of the day the community approved our design and the economic budget: the technical plans have been signed by us, the architect Marlown Cuenca, the president of the Junta Parroquial Estela Aguilar, the president of Cachiviru Gregorio Anrango Aguilar and by Jose Espinosa, in representation of ReyMolaKucha association.



- Participation
- Enthusiasm
- Confidence
- General approval
- Signature of plans

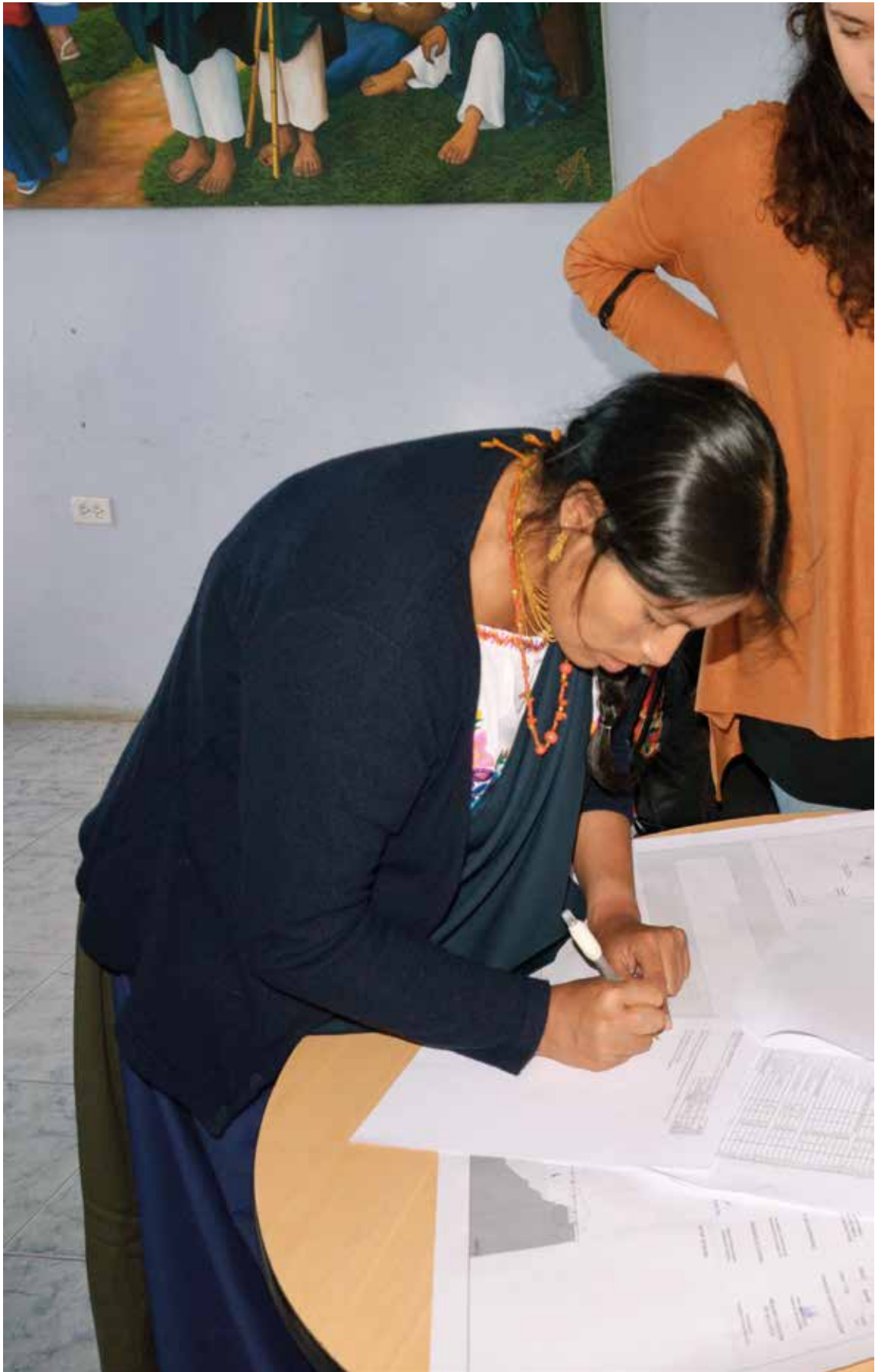


Photo: Estela signing the technical plans, San Rafael de la Laguna.





Photo: Discussion of the project around the model, San Rafael de la Laguna.





Approved!

After the approval of the project by the Community and the President of San Rafael, Estela Aguilar, who signed the official plans on 13th of July, we needed the final approval of the Municipality of Otavalo for starting the construction.

The Mayor, Gustavo Pareja, gave us a “vocal” approval but it was not enough; we need to exploit and don’t miss this occasion for getting the needed documents. Our professor Marlown Cuenca gave a fundamental contribution with his experience following us in the Municipality and helping us in the most difficult steps and dialogues with authorities.

The process brought us into the Municipality for two entire days running from one office to the others.

First we went to “Catastro” office to get the “*Linea de fabrica*” (see attached document pag.369) which defines the limits of the area; then we met Karen Teran who released us the “*Environmental permission*” (see attached document pag.371) and finally we talked with the engineer Gualsaqui, director of the Civil Engineering department, who gave us the so desired “*Construction permission*” (see attached document pag.377). With the signature of Byron Velasco, director of the Urban Planning department of the Municipality, the project was officially approved! (see attached document pag.378)

Photo: the President of San Rafael, Estela Aguilar, and us, in front of the Municipality of Otavalo after the official approval of the project

Summing up



1_San Rafael winner of Imbabura contest with an idea



3_Prefectura of Imbabura Contest regulation



2_But which are the guidelines for the design?



4_Pedro Antamba Lake's normative



5_Conflicting situation



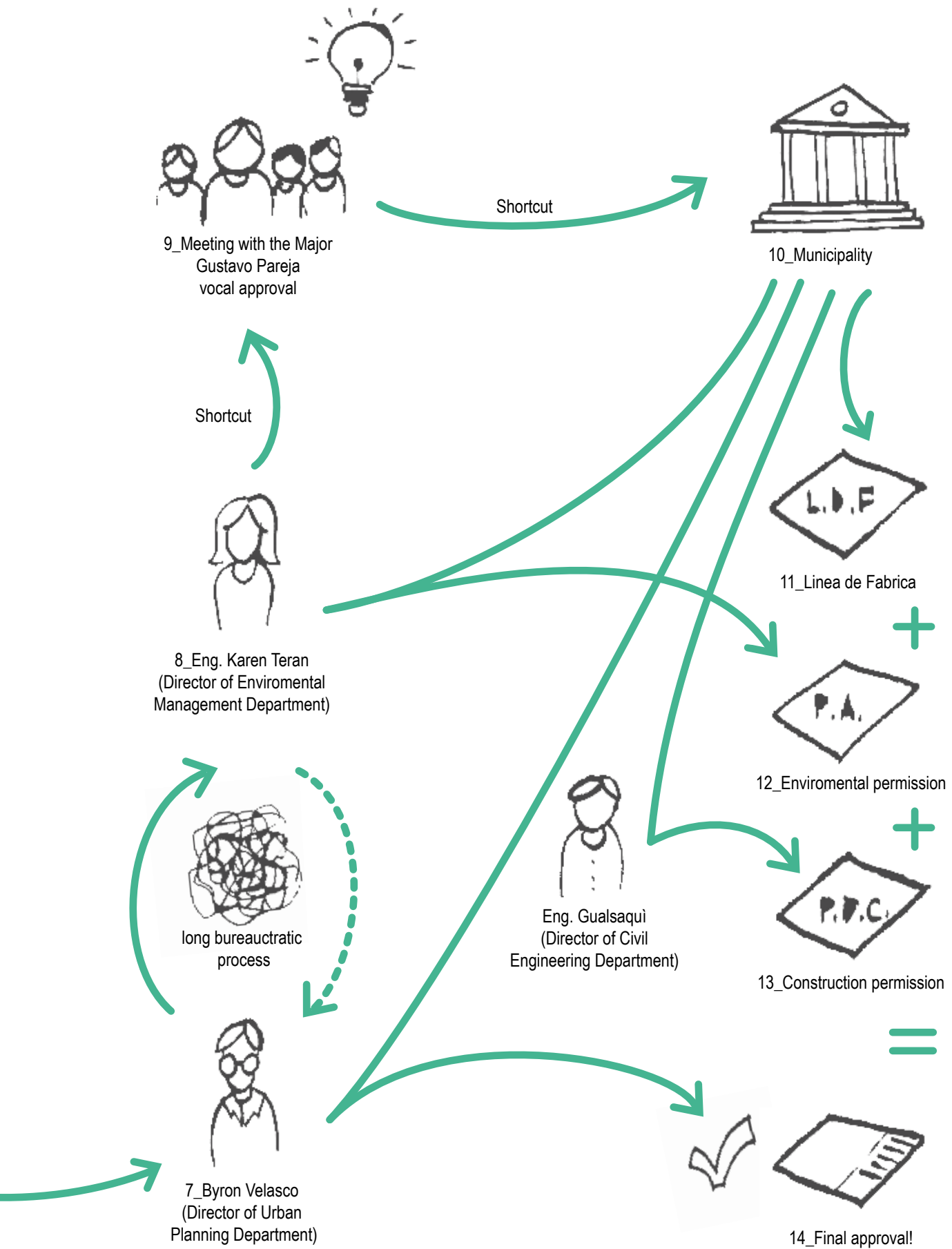
Community build up illegally

Illegal way

Legal way



6_Municipality clarify the normative situation

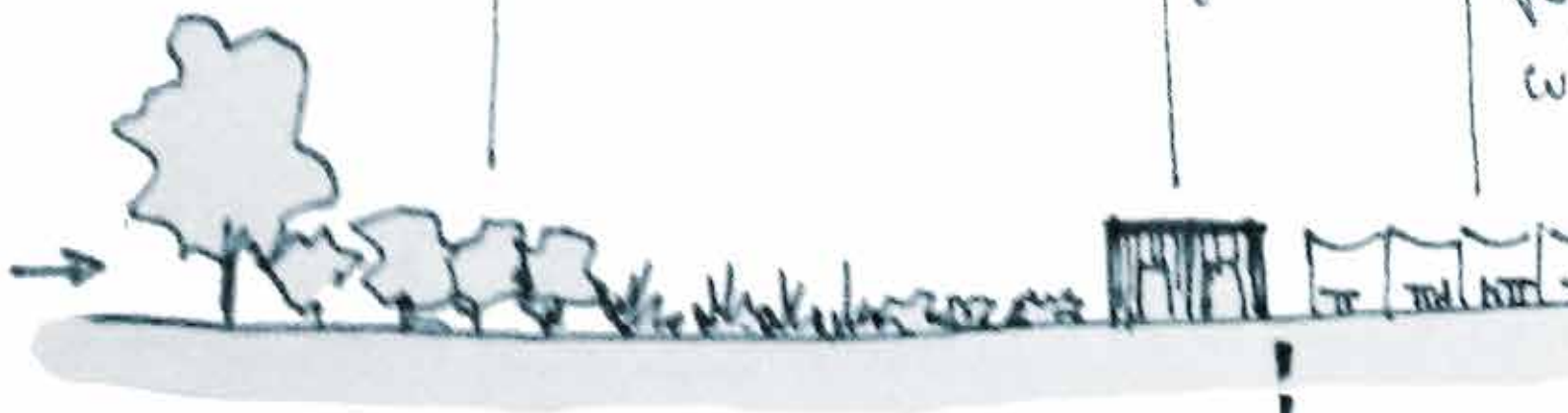


Replantation
of native
plants

Coffee box $36m^2$ + rebox

Community
garden

with
herb
for
w

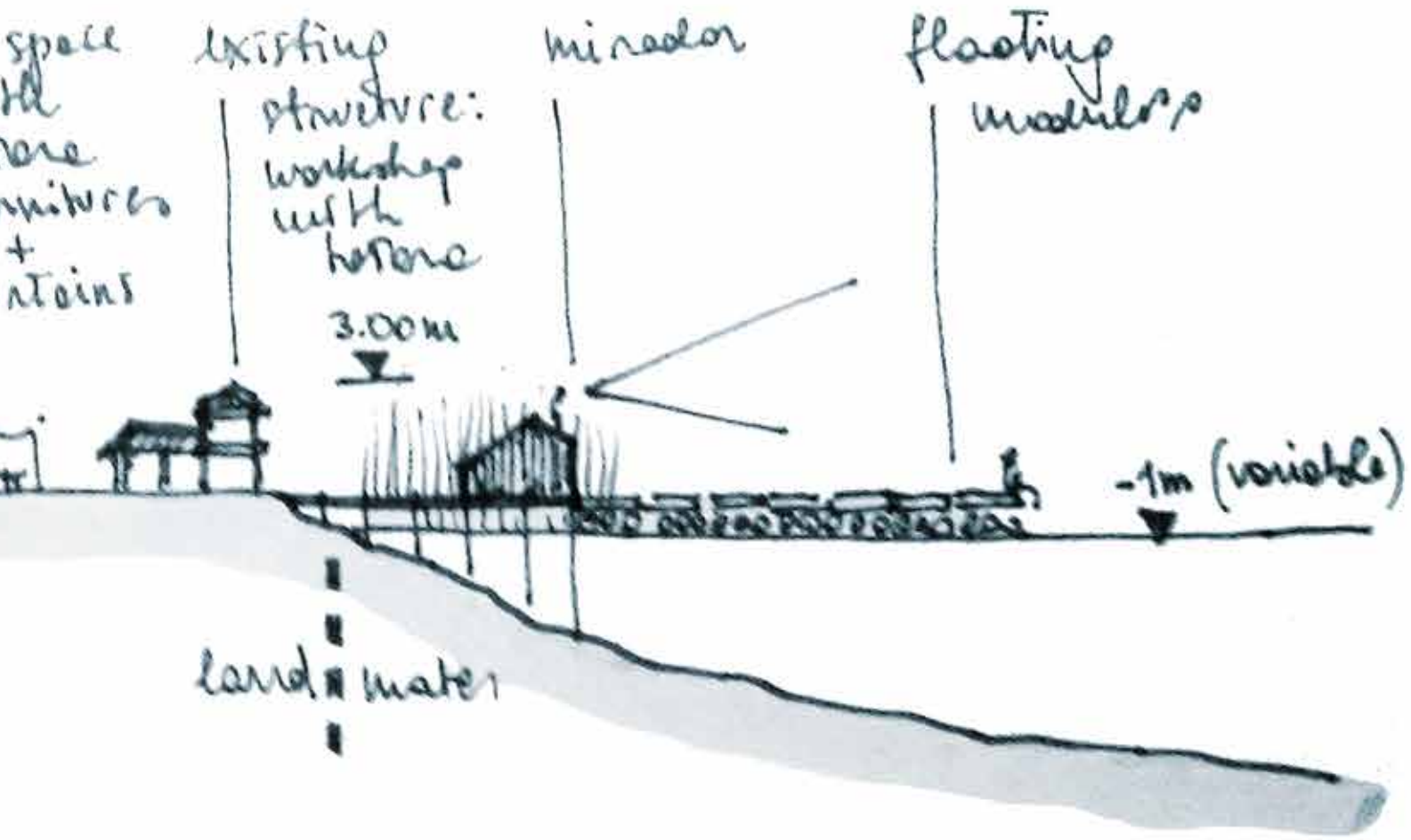


outside
70m

inside
70m

Kaymanta | desde aquí

Photo: sketch of the project and its relation with landscape



Theoretical framework: Perception

According to our academic background we decided to focus our design on two main aspects related to architecture: perception and modularity. The first one, more related to the *Genius Loci* is the poetry that accompanied us in our design process, believing that architecture doesn't involve just the eye but all the senses, paying attention to the relation between the place and the spectator; the second one is a more technical aspect related to the construction that helped us in developing a project dividable in modules that the community could be easily understand and build up.

Architecture, as creator of a space, is strongly related to people. This is why before creating it, we must, first of all, understand how we see space, how we perceive it. Thus, the last decades can be considered to have been an effervescent period during which architects and psychologists alike have been attempting to link Architecture with the psychology of the individual, seen as the user of these spaces. Perception is the first step we take when we interact with a space. It is the interface, our first contact with the surrounding environment. This is why, in a discipline such as Architecture, which is attempting to establish a relationship between the individual and their environment, it becomes essential to identify what perception really is and how can this process influence our interconnection with space - as users and as designers, as well. Architecture means light, form, colour, sound, movement, texture and smell. They are all tools through which architects can create certain atmospheres. Because the architectural product always addresses a user, who will react in a certain way towards the architectural object, towards built space, towards his environment in general. This relationship is bidirectional and its effects are visible on both ways: we modify the environment through the designing process (architecture, urban planning, design in general) and the environment (natural or built) modifies our behaviour. In this context, it is crucial to understand the functioning mechanism of the perceptual processes that is very complex; that involves gathering information through our senses; processing it - which implies analysing the received information and comparing it against previously gathered knowledge, based on past experiences; and formulating particular responses - also based on previous experiences.

Perception is in essence a highly creative process: although we relate to the same reality, we will perceive it in a different way according to what that environment means to each of us. In other words our experiences are the result of our perception with the senses. We experience by what we see, what we hear, smell, taste and touch. Without our senses there would be no experience. In architecture all senses are important, but

the sense of sight is very dominant. We could pay more attention to the other senses, as the combined perception of all the senses gives us our total experience of a space.

We leave so much of our spatial experience to chance if we leave the other senses untouched during the design process. Juhani Pallasmaa, an important Finnish architect, says about this: "[...] *modern design at large has housed the intellect and the eye, but has left the body and the other senses, as well as our memories, imaginations and dreams, homeless.*" The other senses also have powerful influence on our experience of a space. From our childhood we learn from our experiences with the world around us. By a variety of experiences the child quite instinctively learns to judge things according to weight, solidity, texture, heat-conducting ability. All this also holds true for architecture. As young children and infants we are constantly reaching grasping, fondling everything (as well as putting it in our mouths) as this is the best way to learn the "shape" of the world around us.

Each of the five senses uses different cues for exploring the environment and features a different perception range. When the architectural experience becomes multi-sensory, all the senses are equally experiencing the quality of the space, which will strengthen the existential experience. J. Gibson, famous American psychologist, said about it: "*The senses define the interface between the skin and the world, the interface between the opaque interiority of the body and the exteriority of the world.*" And Peter Zumthor remembers (from *Thinking Architecture*, 2005): "*There was a time when I experienced architecture without thinking about it. Sometimes I can almost feel a particular door handle in my hand, a piece of metal shaped like the back of a spoon. I used to take hold of it when I went into my aunt's garden. That door handle still seems to me like a special sign of entry into a world of different moods and smells. I remember the sound of the gravel under my feet, the soft gleam of the waxed oak staircase, I can hear the heavy front door closing behind me as I walk along the dark corridor and enter the kitchen, the only really brightly lit room in the house. [...] Memories like these contain the deepest architectural experience that I know. They are the reservoirs of the architectural atmospheres and images which I explore in my work as an architect.*"

Already in early times the vision was the leading sense and as result architectural design is meant to please it. One opportunity to dethrone this sense is to combine it with the others. Shadows and darkness are essential for the sense of vision to determine the depth and distance. The eye is the organ of distance, whereas touch is the sense of nearness, intimacy and affection.

The eye observes and investigates, whereas the touch approaches and feels. The sense of touch is the tool to provide information of texture, weight, density and temperature but it can also reveal the history and the origin of the matter. Hearing is a very incorporating sense and provides a three-dimensional atmosphere. Sounds reflect in a space, and that way it gives us an impression of its form and material. Steven Holl wrote on the subject of sound: *"We could redefine space by shifting our attention from the visual to how it is shaped by resonant sounds, vibrations of materials and textures."* Smell is essential to capture one's memory of the place. The nose makes the eyes remember. We need only a little amount of molecules of substance to trigger an impulse of smell in a nerve end, and we can smell more than ten thousand different scents. Architecture can stimulate the sense of taste. It means that architecture does not literally mean to kneel down and try to eat the stone bricks, but it means that architecture can make our mouth water just by the sight of appealing materials.

And Architects have this powerful and delicate tool: to contemplate design solutions in holistic terms that users will ultimately perceive. In that sense, architects are experience designers, brand developers and environmental psychologists. Beyond shelter, architecture is a stage set for life, a multisensory experience.

Theoretical framework: Modularity

Modularity, by definition, is “the degree to which a system's components may be separated and recombined”. The meaning of the word, however, can vary somewhat by context.

In nature, modularity refers to the construction of a cellular organism by joining together standardized units to form larger compositions, as for example, the hexagonal cells in a honeycomb. In the study of networks, modularity is a benefit function that measures the quality of a division of a network into groups or communities. In industrial design, modularity refers to an engineering technique that builds larger systems by combining smaller subsystems. In construction, modules are a bundle of redundant project components that are industrially produced before installation. Modularity as a means of measurement is also intrinsic to certain types of building; for example, brick construction is by its nature modular insofar as the fixed dimensions of a brick necessarily yield dimensions that are multiples of the original unit. Attaching bricks to one another to form walls and surfaces also reflects a second definition of modularity: “the use of standardized units that physically connect to each other to form larger compositions”.

The modular design in architecture is based on a module, as to say a unit that is repeated several times giving balanced proportions to the architectural product, assigned by the designer who guides the definition of all manufacturing steps.

In antiquity, the lack of universal measurement units made the use of the module absolutely essential: design using a module allowed to overcome the difficulties arising from the presence of different sizes in different locations of the world. This difference existed because, according to the power of a community, this could impose other communities the most advantageous units in carrying trade: for example in building construction where materials were combined from various places, such differences created problems that the architect resolved initially by establishing the reference unit to carry out the construction.

In classical architecture, from Vitruvius's essay “De Architectura” (15 a.C) as main reference, we know that the architectural module was considered not only a measure of magnitude or a unit that is repeated several times, but the system to achieve balanced forms in a building. These proportions were rules that defined the structural elements. The measurements of all the elements were taken with precise mathematical proportion relationships: the module was the diameter of the column; the thickness of the beam and the upper frames had to be twice the diameter of the column (2 modules) and the height of the column 10 times its diameter (10 modules). To compensate for the different stresses that occurred with the increase of the size of the building, the

proportions changed for different styles, recommended for different types of buildings, in function of their size.

The use of the module, though never completely shelved, and although no longer inspired by the column but to other units, was revived in the Renaissance period thanks to architects such as Filippo Brunelleschi, Leon Battista Alberti and Andrea Palladio with his “I quattro libri dell'architettura” (1570).

In the modern period, the birth of the science of construction allowed assessing the safety of design choices on scientific knowledge, making useless the use of the classical proportions that have been almost abandoned. The industrial productions have at the base of their development the serial repetition of a same element. The module reborn as a tool to simplify the construction: If the building is created with the assembly of a number of identical elements, we can speak about modular construction, where the module is the repeated structural element that from being “measure-module” becomes “object-module”. An example of modular construction is Paxton's Crystal Palace in London (1850). Anyway the Swiss born – French architect Le Corbusier (1887–1965) developed the Modulor, an anthropometric scale of proportions in the long tradition of Vitruvius, Leonardo Da Vinci's Vitruvian Man, the work of Leon Battista Alberti, and other attempts to discover mathematical proportions in the human body and then to use that knowledge to improve both the appearance and function of architecture. The system is based on human measurements (height of a man with his raised arm), the double unit, the Fibonacci numbers, and the golden ratio. Le Corbusier described it as a “range of harmonious measurements to suit the human scale, universally applicable to architecture and to mechanical things”.

In 1943, in response to the French National Organisation for Standardisation's requirement for standardizing all the objects involved in the construction process, Le Corbusier asked to consider a scale based upon a man with his arm raised to 2.20 m in height and he built up buildings considering the Modulor: the most famous example is the Unité D'Habitation in Marseille (1950). In contemporary architecture, modularity can refer to the construction of an object by joining together standardized units to form larger compositions, and/or to the use of a module as a standardized unit of measurement and proportion.

The beauty of modular architecture is that you can replace or add any component (module) without affecting the rest of the system: we speak about a design approach that subdivides a system into smaller parts called modules that can be independently created and then used in different systems.

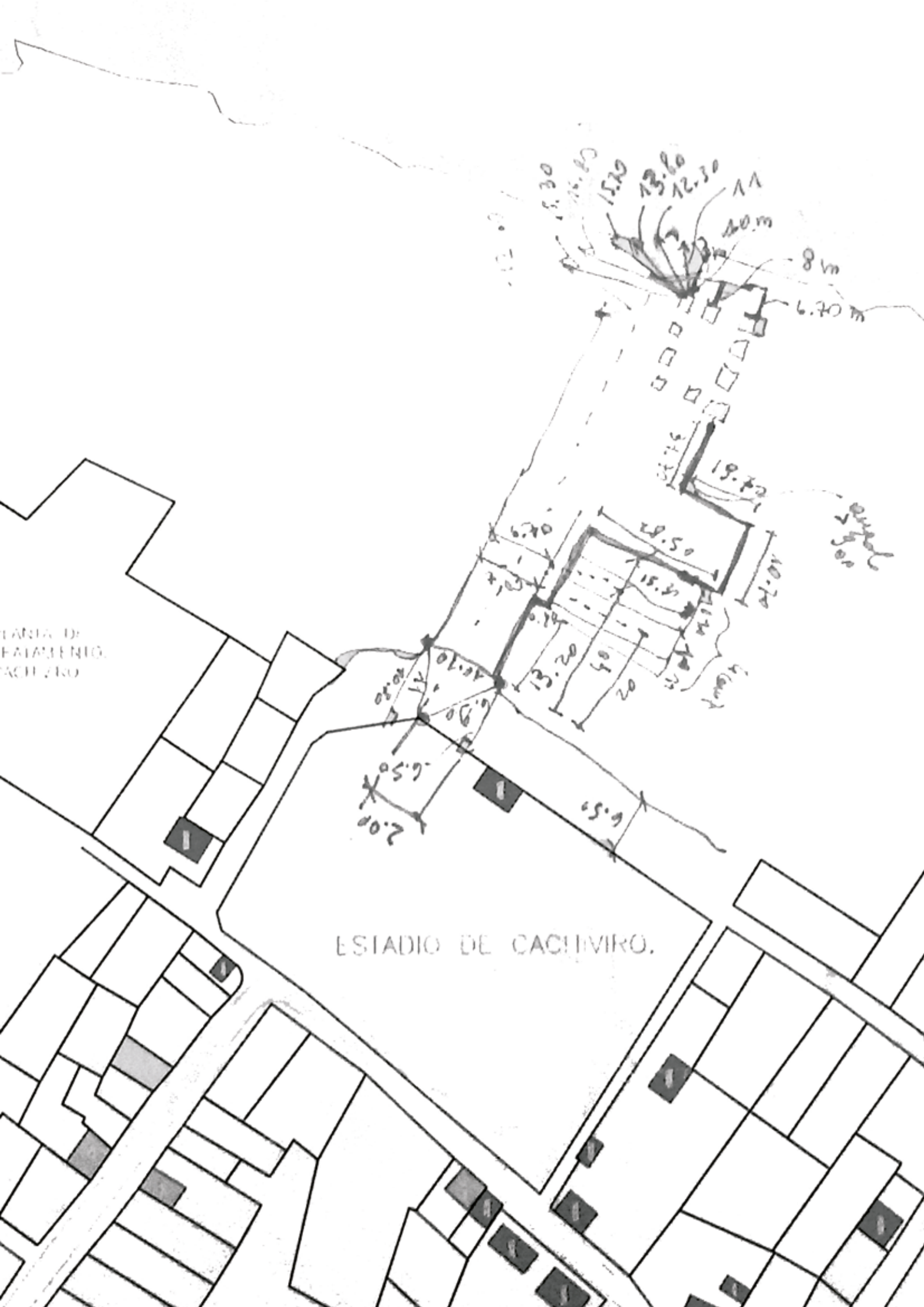
Functional partitioning into scalable reusable modules,

rigorous use of well-defined modular interfaces and making use of industry standards for interfaces can characterize a modular system. Besides reduction in cost (due to less customization, and shorter learning time), and flexibility in design, modularity offers other benefits such as augmentation (adding new solution by merely plugging in a new module), and exclusion. Moreover the shorter learning time is a great advantage in the context of auto construction where people without any architectural knowledge have to build up their own construction following a procedure that has to be as easy as possible. We can also say that modular design is an attempt to combine the advantages of standardization (high volume normally equals low manufacturing costs) with those of customization.

The beauty of modularity also lies in its link to Nature: the hexagonal cells in a honeycomb are the most poetical image of a modular living space created by a cooperating community.

PLANTA DE
ESTADIO DE
CACHIVIRO

ESTADIO DE CACHIVIRO.



Survey on site

Local population and the GAD helped us in better understanding and knowing the project area but the lack of official documents obliged us to do a survey on site through the use technical instruments.

The project are is located in Cachiviru community on the shore of the lake and its surrounded by coltivated fields on both sides and closed by a totora wall at the border with the lake. It has a total area of 1728 sqm. This place, thanks also to its closeness to the lake, is very important for the community and is used by local people as space for festivities, events and important ceremonies.

When we arrived, the only structure already present on site was a wooden structure of two floors built "illegaly" from the community and used as meeting space; they wanted to transform it in a coffee bar for the tourist that arrive there.

The 13th of June we started our measurement from the land perimeter, its difference of levels and its natural obstacles such as the totora pant. We misured the level of water knowing that it changes of 0.50 m during the year. The hardest part was the survey of th existing wooden structure made through the use of technical instruments such the tape measure and the distance-laser.

This survey allowed us to define the base on which build up the next design.

Photo: Sketch of the area and its borders during the on-site survey, the 13th of June 2015



**On-site survey:
perimeter and difference of levels**

We started our survey by measuring the perimeter of the area and its shape surrounded by private cultivated fields. The hardest part was the undefined and irregular border of the lake. The total area was calculated of 1728 sqm with any relevant difference of levels, just a small bump in proximity of the lake made artificially.



**On-site survey:
toora wall and water level**

Secondly we analyzed the presence of physical natural elements on the site such as the wall of toora that, from the water level, rises up till 3 meters of height for a width of about 10 meters from the land border inside the water. The water level, measured in that period one meter below the soil level, changes of 0.5m during the year according to the “rain” season or the “dry” one.



**On-site survey:
existing wooden structure**

The hardest measurement was the one of the existing structure made by wooden pillars and beams and based on concrete blocks. The roof, composed by brick tiles, reaches an height of 5.20 meters when the structure is developed on two floors. Due to its unaccessible height we needed technical instruments such as the distance-laser to complete the measurement.



Photo: Measurement of the existing wooden structure beams and their diameters

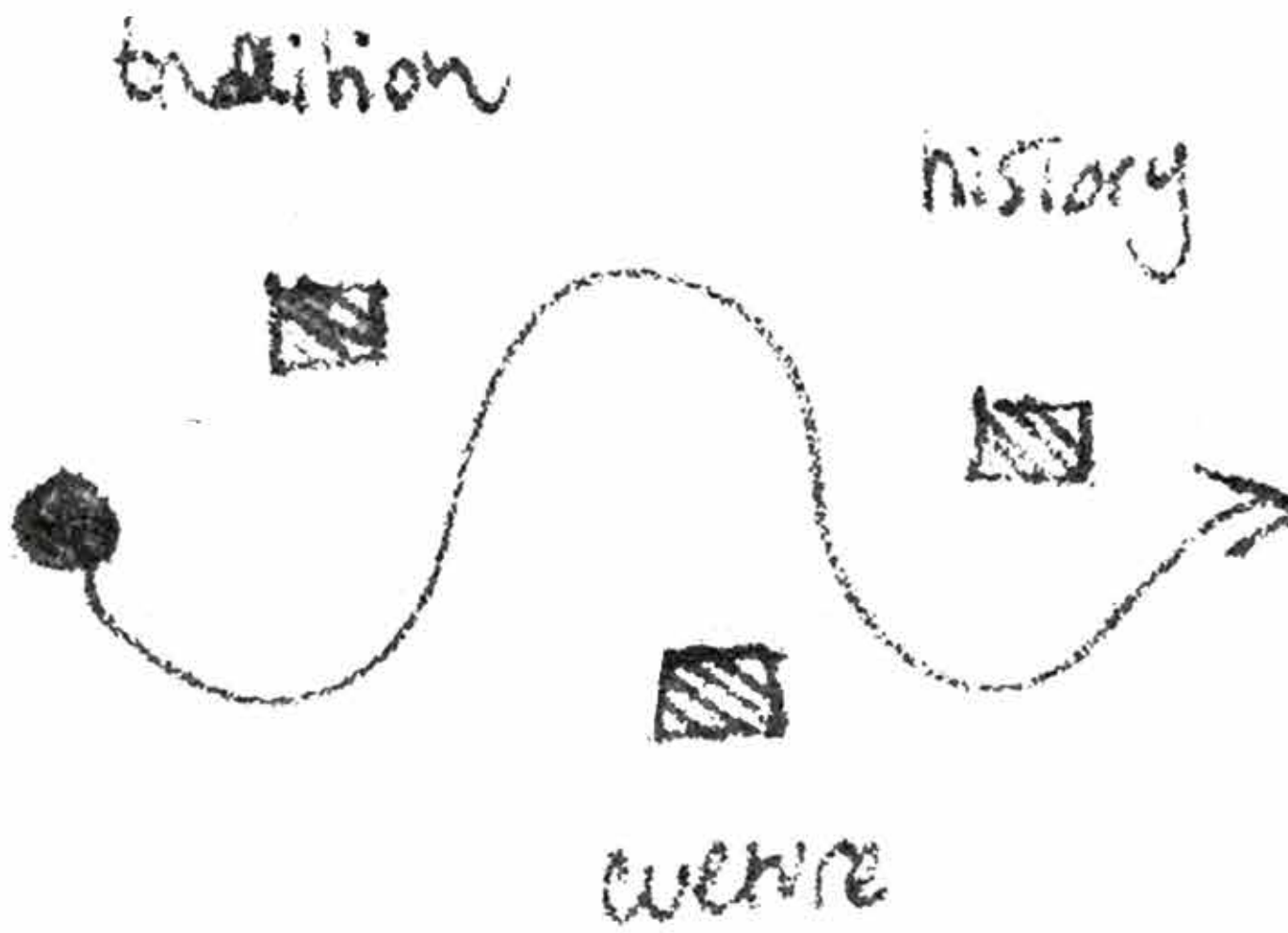


Photo: Measurement of the wooden structure height and roof inclination





Photo: Chiara checking the perimeter of the area with measuring tape.



Masterplan

Location: Community of Cachiviru, Parroquia de San Rafael del la Laguna, Otavalo.

The basic concept of our project was to “valorize what there is with what there is”. We propose an architecture with low environmental impact that, respecting the Genius Loci of the Place, valorizes the natural environment of the lake and exploits its materials (wood, totora, carrizo, light, water, air and people). We also wanted to create architectural spaces that can generate different atmospheres influencing the emotional state of a person, tourist or local.

What we proposed is a reinterpretation of the traditional concept of “pier”, intended as a journey through which the tourist, or better “traveller” can walk inside the every-day life of the community that, due to strong globalization and city model, it’s losing its own identity. On the base of a 3x3m grid, that is the dimension of minimum spaces, of the max span that wooden beams can reach as structural elements and that allowed us a great functionality and speed in the construction, we distributed linearly the different functions inside the area. Our site was characterized by a massive “wall” of totora that didn’t allow to reach and see the lake. With our project we emphasized this closeness giving at the same time two different ways to surpass it: up above the totora level (360°) or down at the water level (180°). We conceived the lake as a living element and we wanted people to experience it. That’s why we projected wooden dock-modules that float, move and dance with the waves.

But, as we described in the previous chapter, we had to deal also with the confused normative on land use and property. After all the meetings with the authorities of the Municipality and the Major Gustavo Pareja the final normative defines that:

- the water area of the lake is not subjected to any restrictions but any service or installation can’t be proposed. Forbidden the use of concrete.
- the first 70m from the water towards the inside land are a protected area in which basic services or solid wastes are not allowed.
- outside the limit of 70m everything can be built according to local normative.

This physical division became, during the approvation meeting, also a temporal strategic division of the construction phases of which, the Muelle-Mirador Kaymantá, was the first one to be approved.

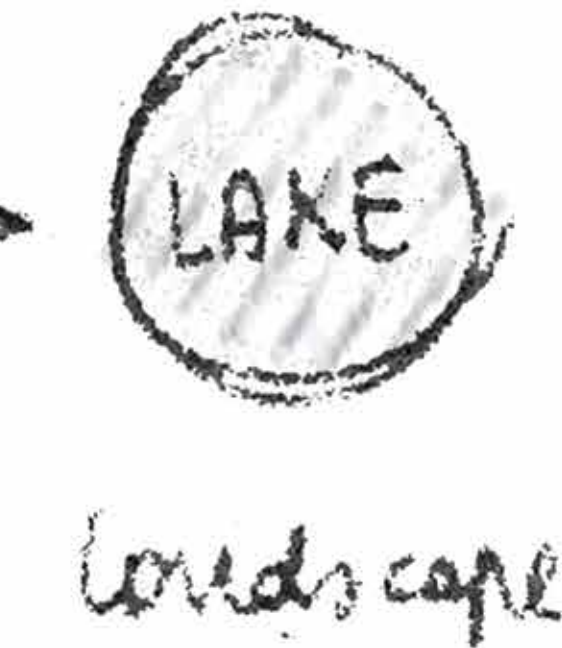
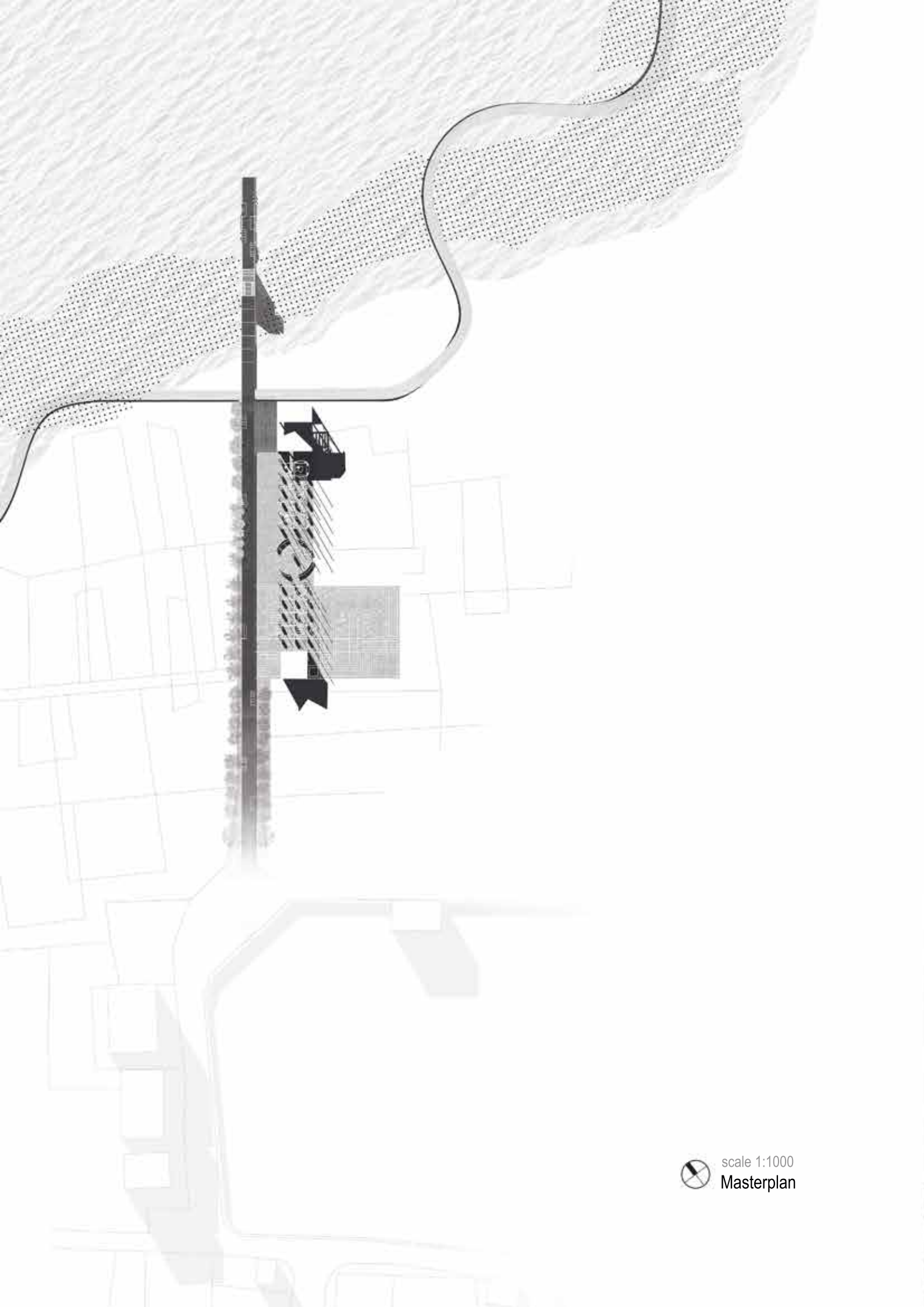


Photo: Sketch of the masterplan intended as a “travel” through the every-day life of the community.

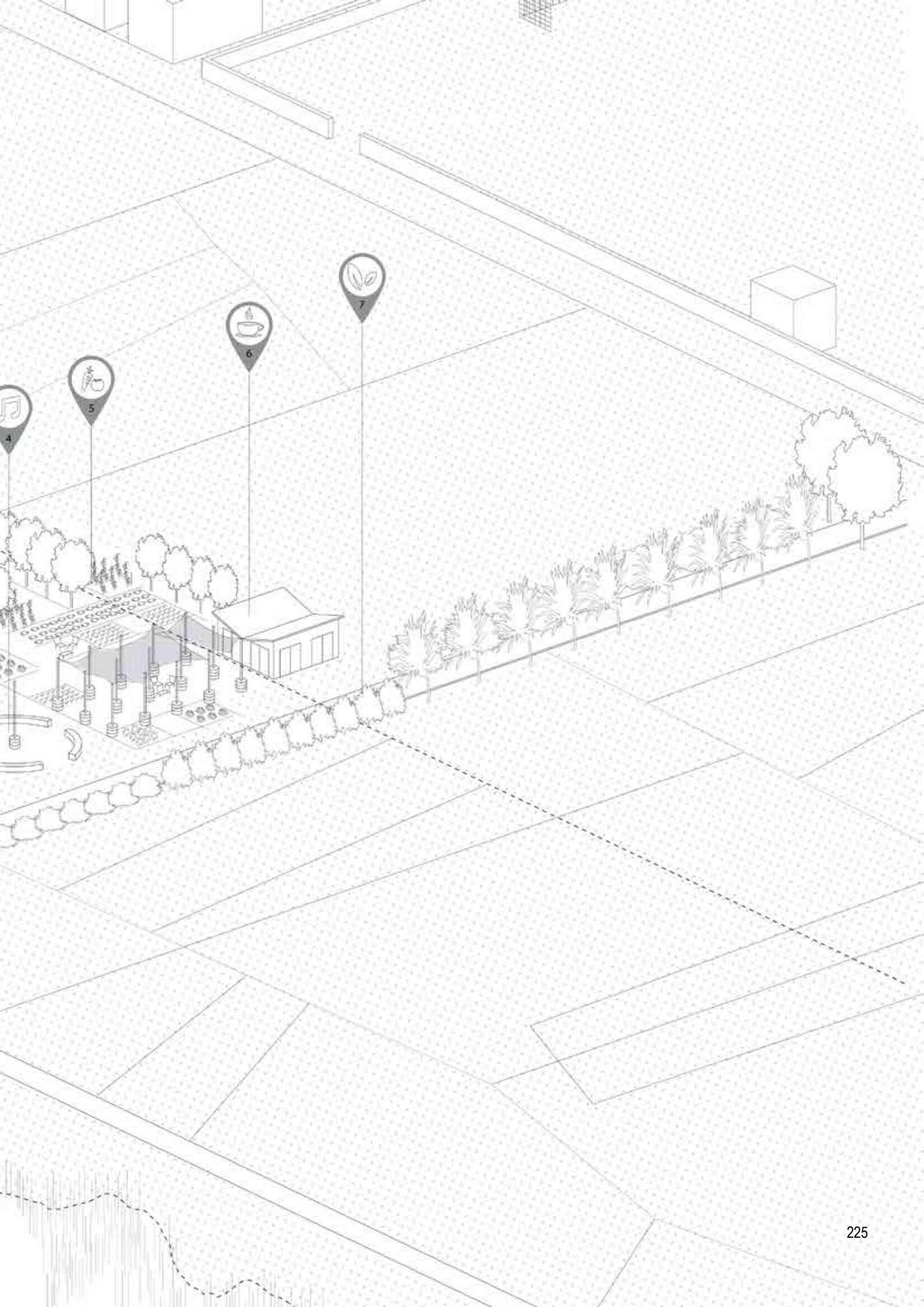


Urban Section
scale 1:1000



Project axonometry

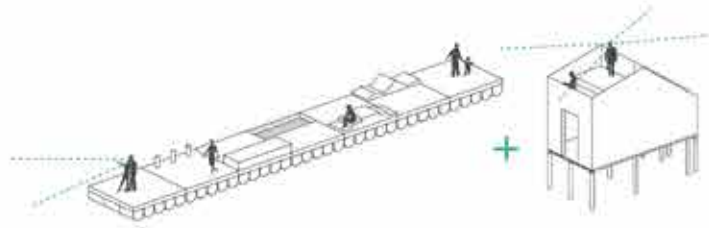




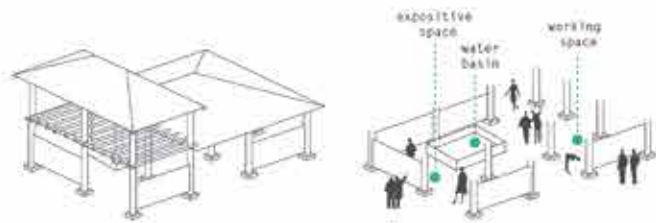
Spaces & functions



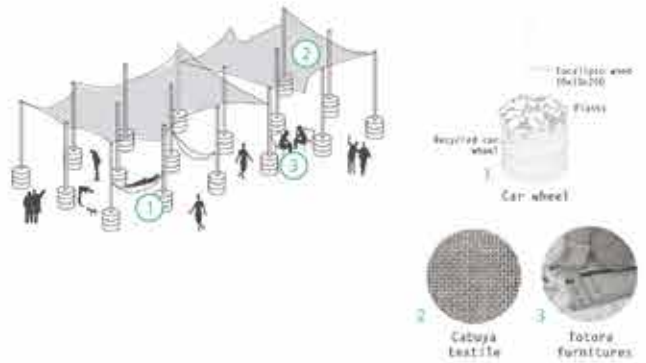
1_MUELLE MIRADOR:
composed by 12 modules to experience the lake from different levels and perspectives.



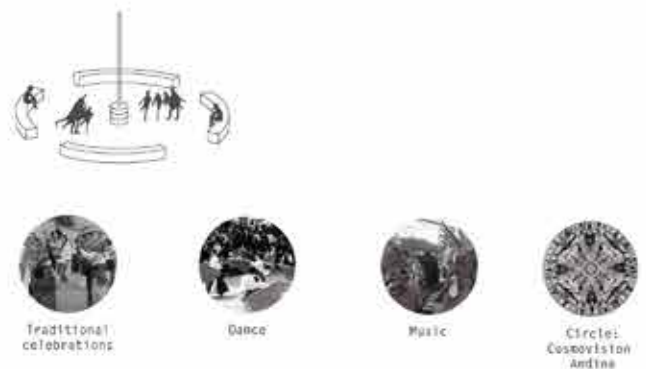
2_EXISTING STRUCTURE:
is reorganized as a space for workshops with totora.



3_LEISURE SPACE:
under traditional textile curtains aims to create a space for relax and leisure.

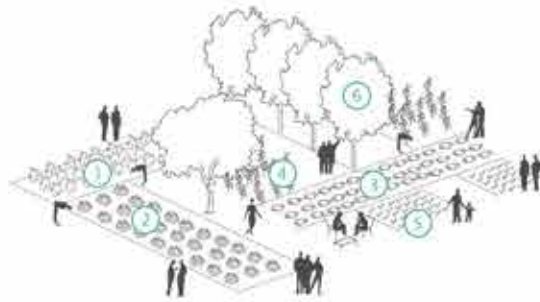


4_EVENT SPACE:
circular space used as meeting point during festivities and events.

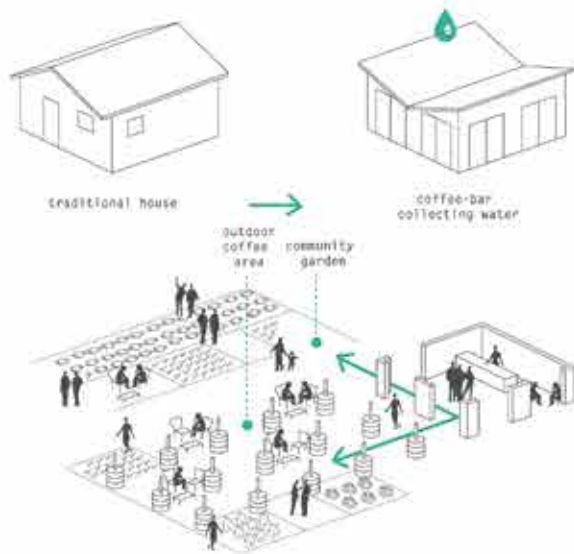




5_COMMUNITARIAN GARDEN:
where the community can cultivate
its own typical food.

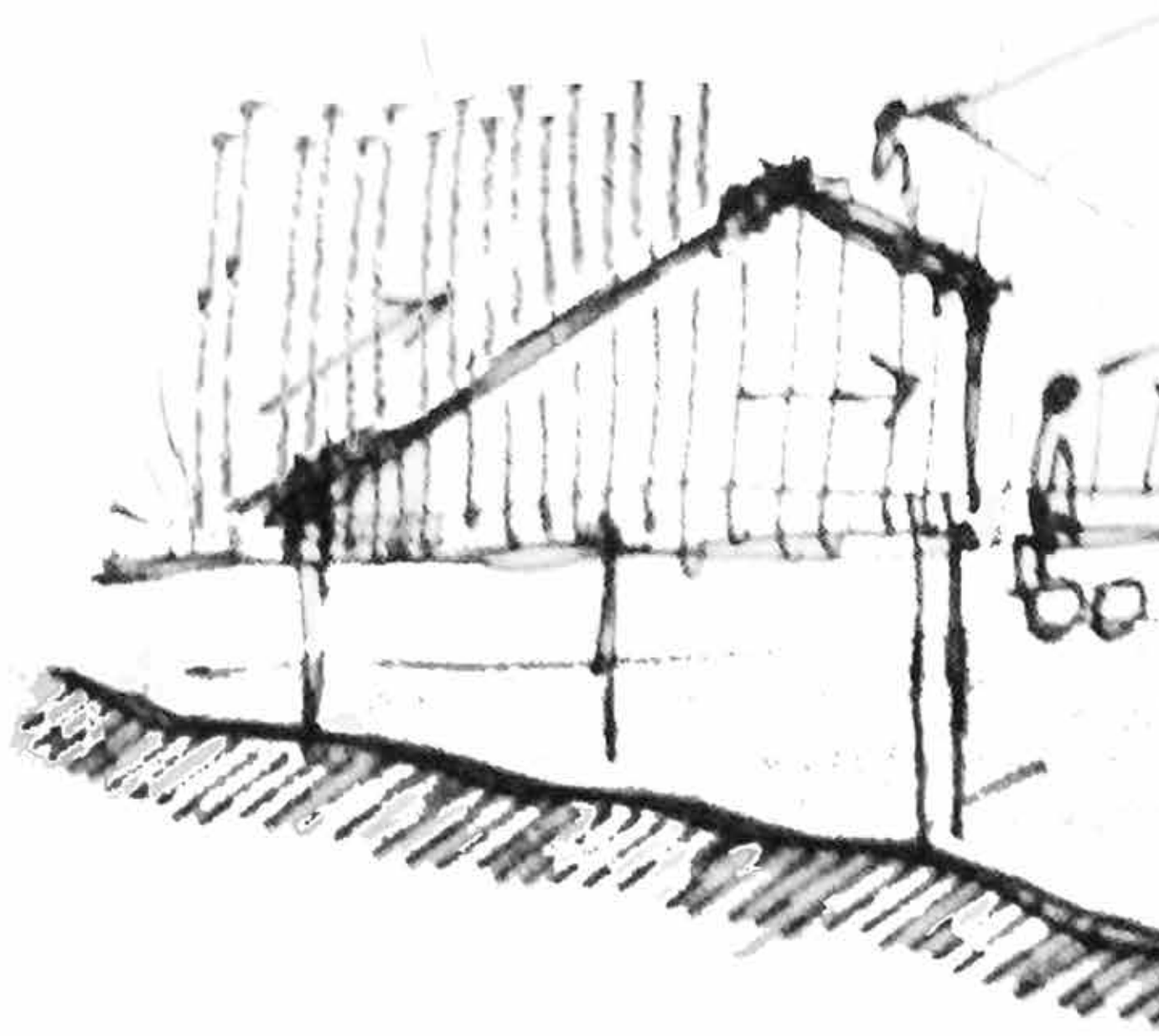


6_COFFEE BAR:
36m2 as internal space + external
space outside to enjoy views and
tastes.



7_NATIVE PLANTS:
replantation of native plants to valo-
rize the natural landscape and its
various vegetation.





Muelle-mirador & prototype

The Muelle-Mirador is composed by 13 modules (6 non-floating and 7 floating, 9mq each) based on a geometrical grid of 3x3m. Starting from this grid we consider each module as a platform on which we can put two kinds of devices: earth and water ones. The four non-floating modules of the walking path are conceived as simple platforms leading to the other two static platforms on which we placed the stairs and the Mirador (earth devices) from where you can experience the place through the sight sense; the Mirador is composed by an upper level to contemplate the lake standing above the totora wall (3 meters height) that grows on the shore and a lower level that works like a window on the Imbabura volcano and as an access to the floating dock.

For the water modules the idea is that the client, in relation to its needs and desires, can assemble them in an organic development that can expand, reduce, or transform. In some of these modules we propose to use 1/3 of the surface for furnitures and devices (seats, deckchair, net, ladder, docking) in order to live the water and enjoy the landscape view. These furnitures occupy 1x3 smq and are located on the right or on the left of the module in order to leave a central walkable path.

Regarding the choice of materials we selected natural materials related to the site such as SEIKE wood (structural elements), COLORADO wood and carrizo, a water plant similar to bamboo which usually grows at the border of the lake.

Since the project is intended to and for the community we decided to adopt easy techniques of construction trying to exploit their traditional techniques.

During the construction process, if for the part of walking path and mirador we were supported by the knowledge and experience of Darwin and his team of carpenters, for the floating module we verified its functionality and capability through a careful calculation and the realization of a prototype.

With an engineer we carried out some calculations obtaining 10 as number of plastic tanks needed to make one module floating properly.

But to be sure at 100% of the validity of these calculations we also build up the 14th of July, with the helps of Darwin and a collaborator, a prototype in scale 1:1.

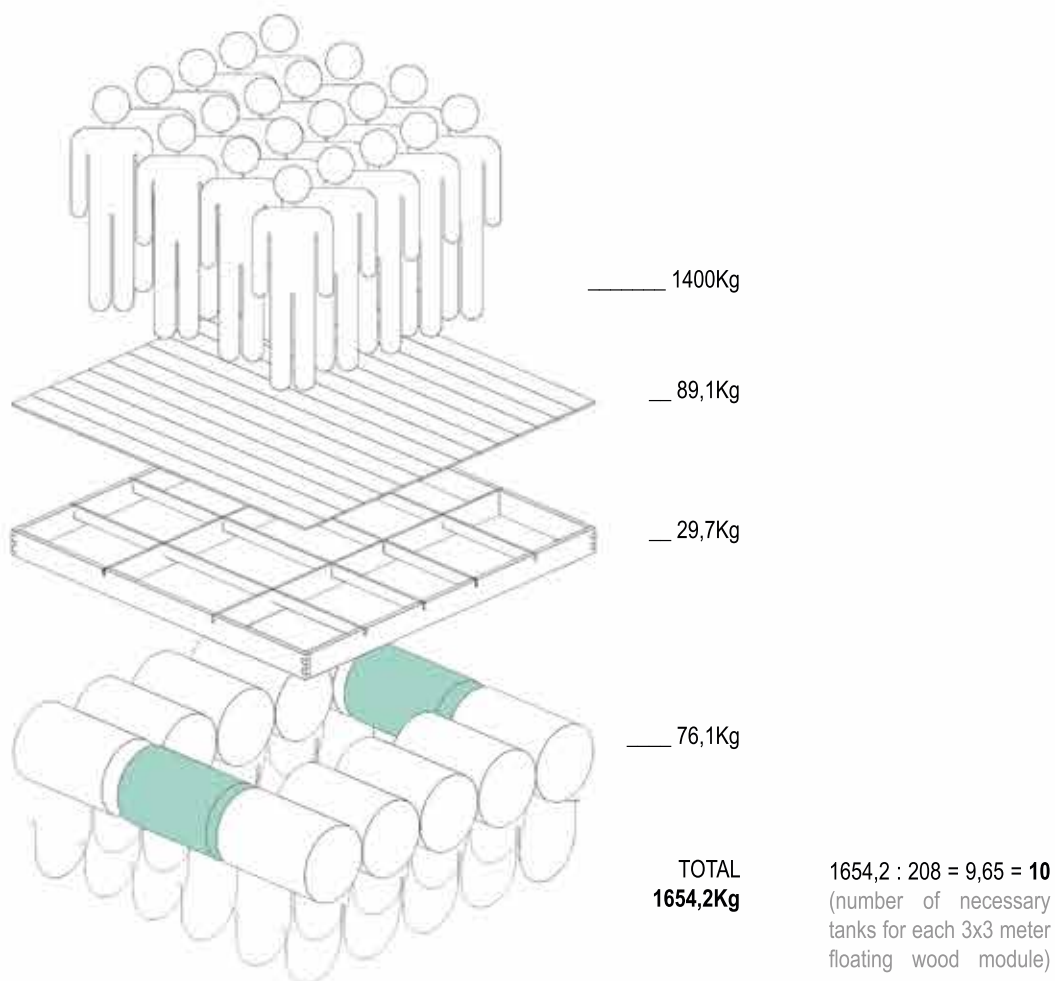
Photo: Sketch of the Muelle-mirador showing the perception views

Prototype

Before delivering the project to the Municipality we wanted to ensure that the floating modules were going to be secure and stable. With an engineer we carried out some calculations considering the number and weight of the wooden beams, the weight of the floor slabs and hypothetically thinking about 20 as the max number of people that could physically stand on our module (see attached document pag.386).

Computing the calculation we got that the number of plastic tanks needed to make the module floats properly was 10. But to be sure at 100% of the validity of these calculation we also build up, the night of the 14th of July, with the help of Darwin and his collaborator, a prototype in scale 1:1. The material used (wooden beams and tanks) and the compensation for the carpenters work were payed by our professor Patricio Yacelga.

The day after we put it in the water of San Pablo lake and we stand on it. We decided that for higher security and stability was better to add two more tanks on the two sides reaching a total number of 12 tankes needed for each floating module.



14th of July 2015
Building up the prototype

The night of the 14th of July we built up, in the house of Ramon Burgas, together with the carpenter Darwin and his collaborator, the first floating prototype. All the material needed (wooden beams and floor, tanks, metallic elements and working tools) were paid by our Professor Patricio Yacelga. The morning of the following day the prototype was ready to be tested.



15th of July 2015
Transportation of the prototype to the shore

Due to its weight and dimension it was impossible for us to transport the module till the water. Thanks to a small van of the community rented for that day we were able to transport the module to a small area close to the shore of the lake. Here, we tied the steel ropes around the tanks and we assured all together.



The prototype is tested!

It was quite difficult for us, that were only six, to turn this heavy structure into the water. So we asked to some local people their help and, thanks to a great team work, we put it in the water holding it with a rope to the land. We jumped on it: first one, than two, three, four, five! It was supporting us very well but the waves of the lake made it a bit unstable. We decided that, for higher security and stability, was better to add two more tanks, reaching 12 at total number of tanks needed for each module.





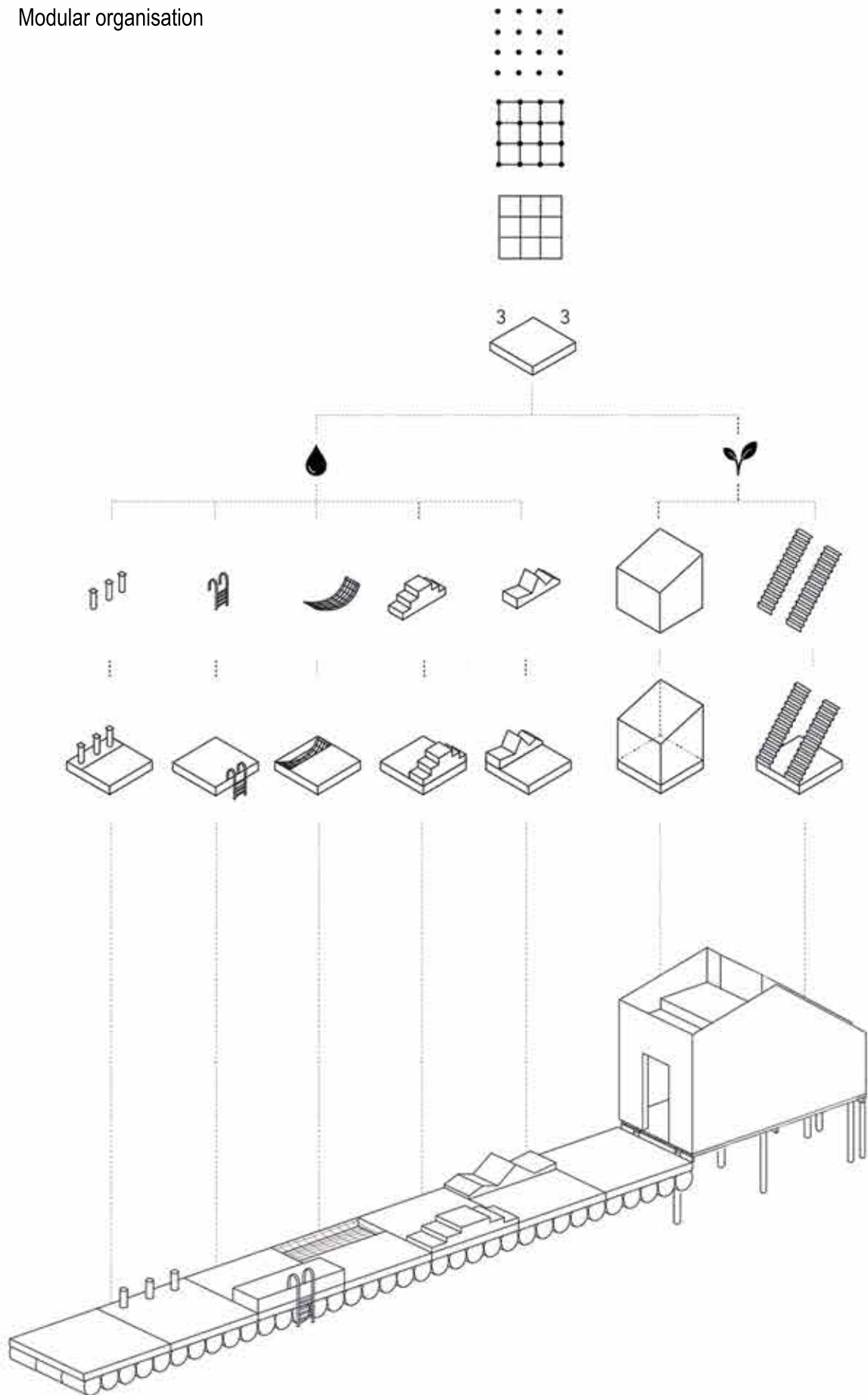


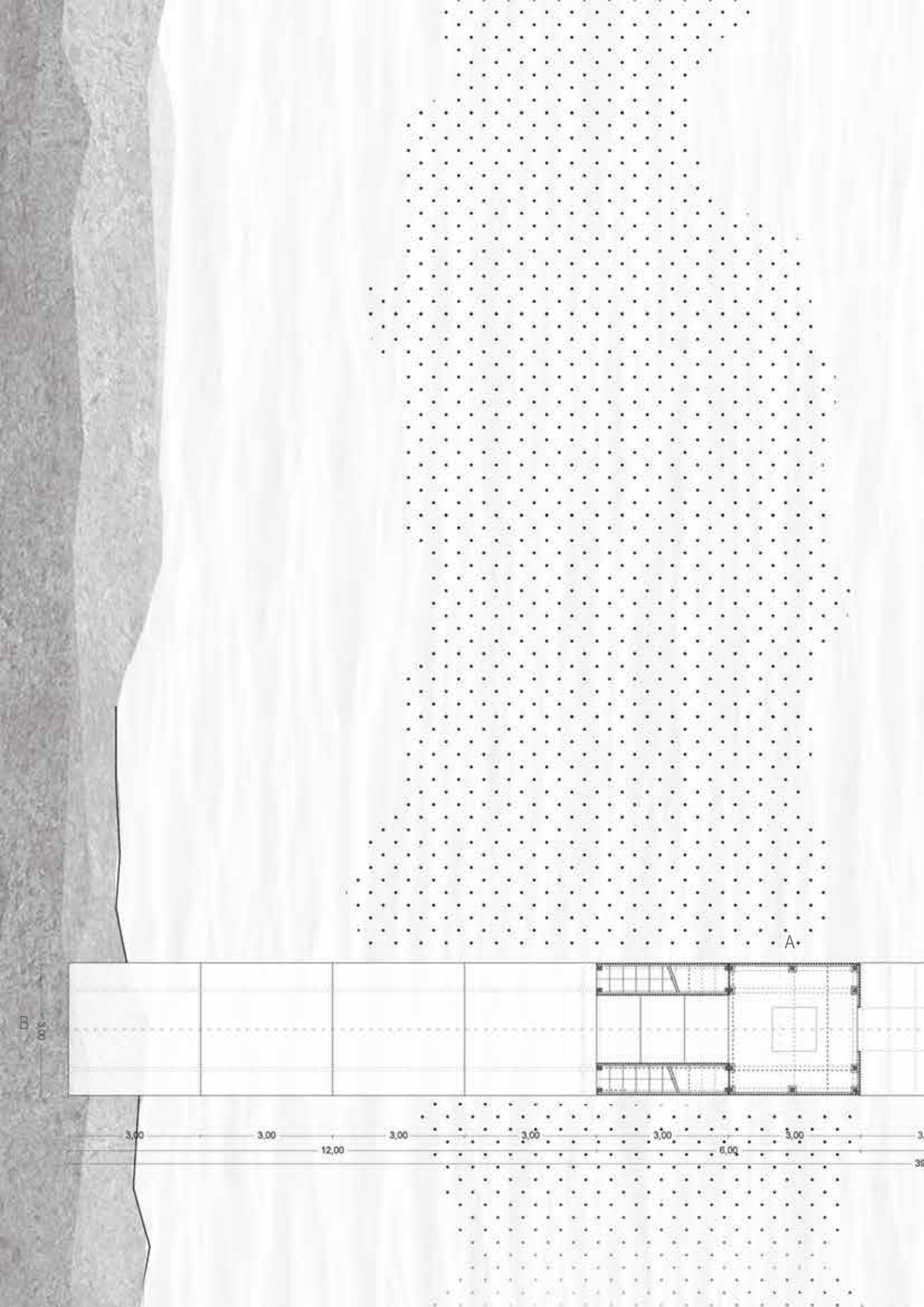
Photo: Us and our professors Marlowen Cuenca and Patricio Yacelga on the floating prototype.

Concept
Perception & Modularity



Modular organisation





A.

B

3,00

3,00

12,00

3,00

3,00

3,00

6,00

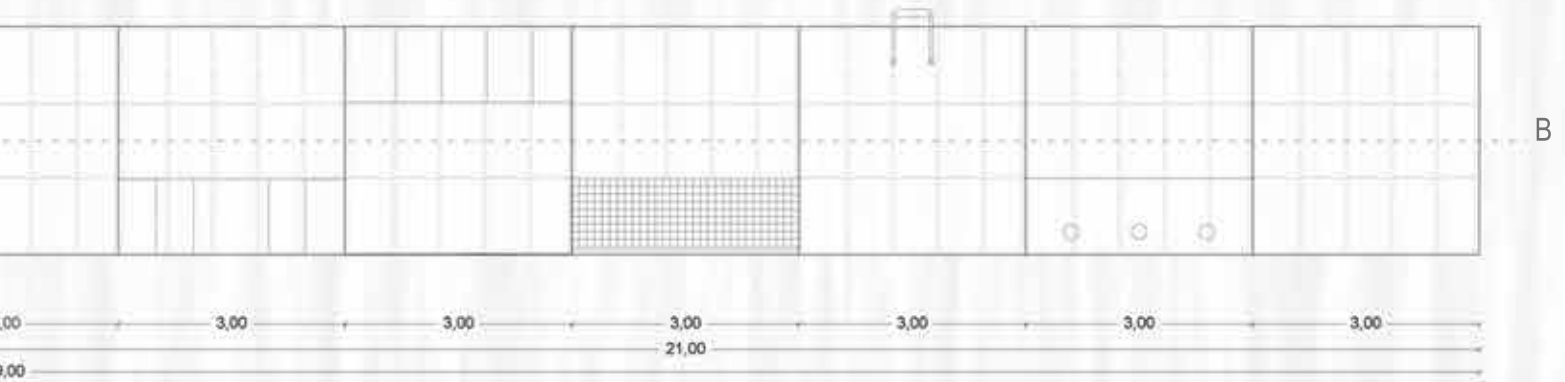
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Plan

scale 1:100



North-East Elevation
scale 1:100

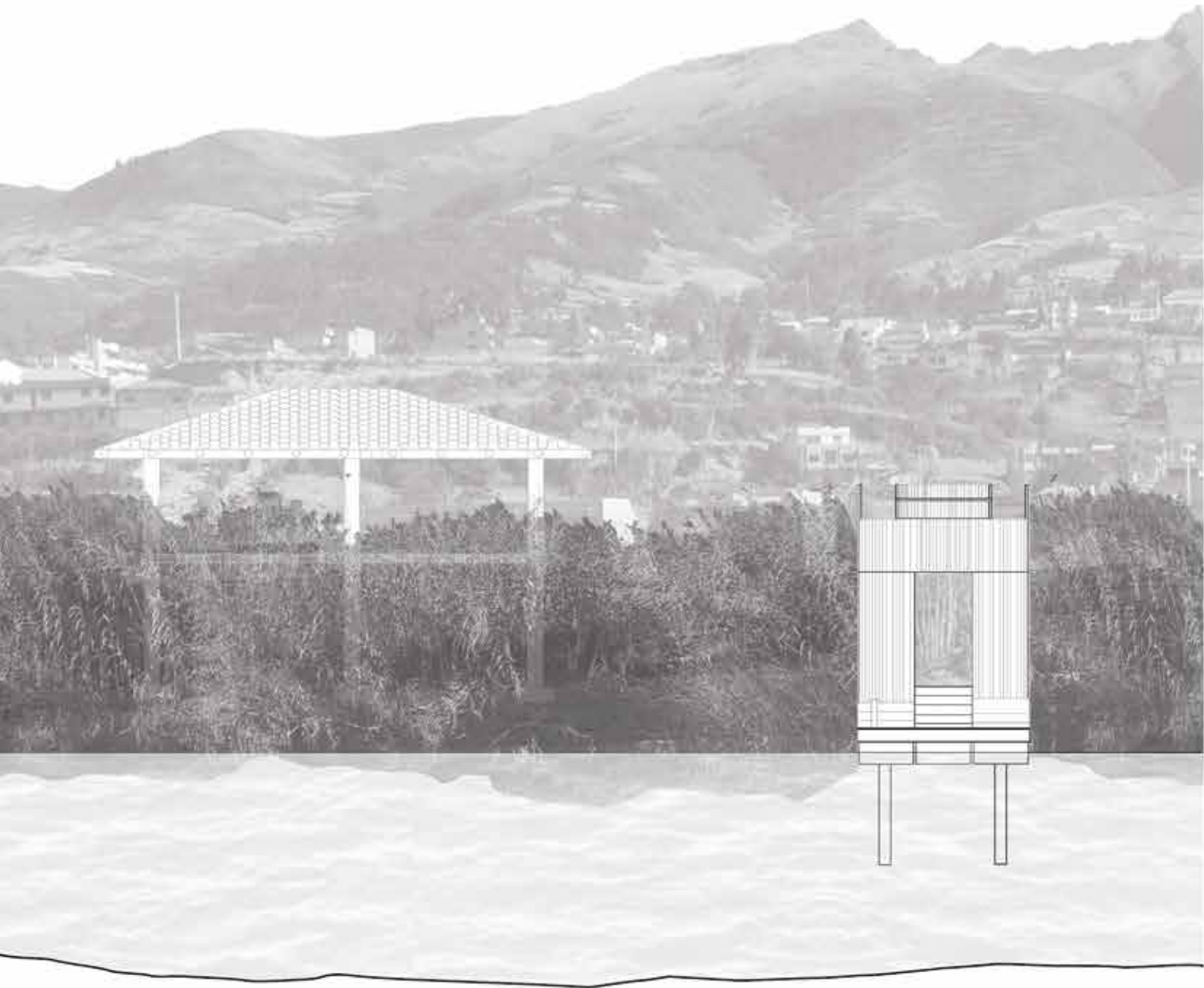
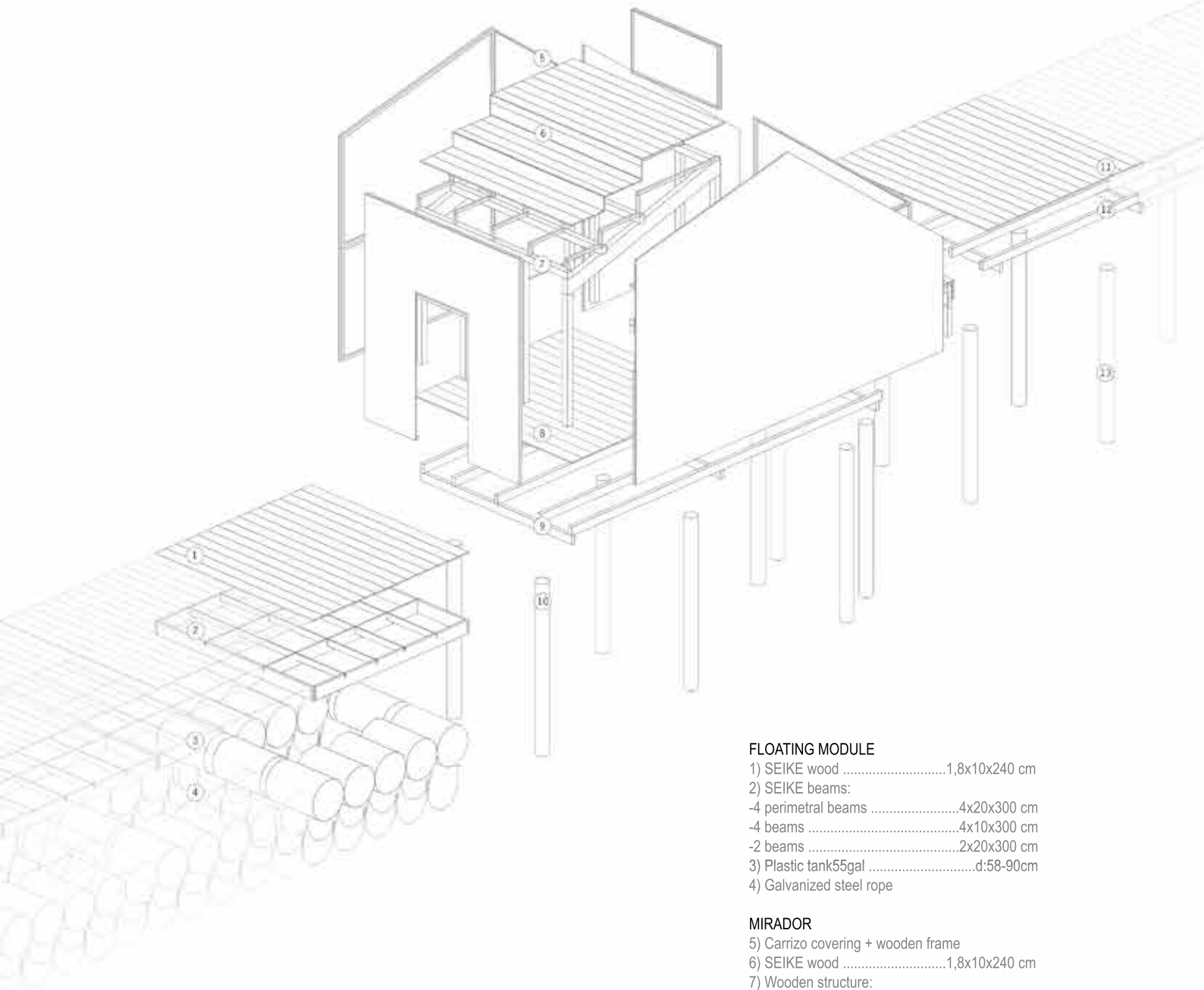




Photo: View of the project area arriving with the boat from the Lake during the "Caballitos crossing" competition.

Structure & materials



FLOATING MODULE

- 1) SEIKE wood1,8x10x240 cm
- 2) SEIKE beams:

 - 4 perimetral beams4x20x300 cm
 - 4 beams4x10x300 cm
 - 2 beams2x20x300 cm

- 3) Plastic tank55gald:58-90cm
- 4) Galvanized steel rope

MIRADOR

- 5) Carrizo covering + wooden frame
- 6) SEIKE wood1,8x10x240 cm
- 7) Wooden structure:

 - SEIKE wood columns10x10 cm
 - SEIKE wood beams10x10 cm

- 8) SEIKE wood1,8x10x240 cm
- 9) Wooden structure:

 - 2 COLORADO trasversal beams...6x13x600 cm
 - 5 COLORADO longitudinal beams6X13X300 cm

- 10) PALM SHOOT Supporting columns.....d:20

WALKING PATH

- 11) SEIKE wood1,8x10x240 cm
- 12) Wooden structure:

 - 3 COLORADO trasversal beams...6x13x600 cm
 - 5 COLORADO longitudinal beam 6X13X300 cm

- 13) PALM SHOOT Supporting column... .d:20 cm

SEIKE WOOD

Local wood, optimal for outdoor environments due to its resistance to water and rain.



COLORADO WOOD

Local wood, similar to Seike but lighter and with the advantage of reaching 6 meters length.



CARRIZO

Local plant similar to bamboo that grows in the lake shore. Useful for finishings.



PALM SHOOTS

Palm shoots used for foundations because of its resistance to water and its length (max. 12 meters).



PLASTIC TANKS

Recycled plastic tanks PLASTIGAMA of 55gal; dimensions of 58cm (diameter) and 90cm length.



GABION + STONES

Gabion with stones (1x1x3meters) used for foundation to avoid concrete.

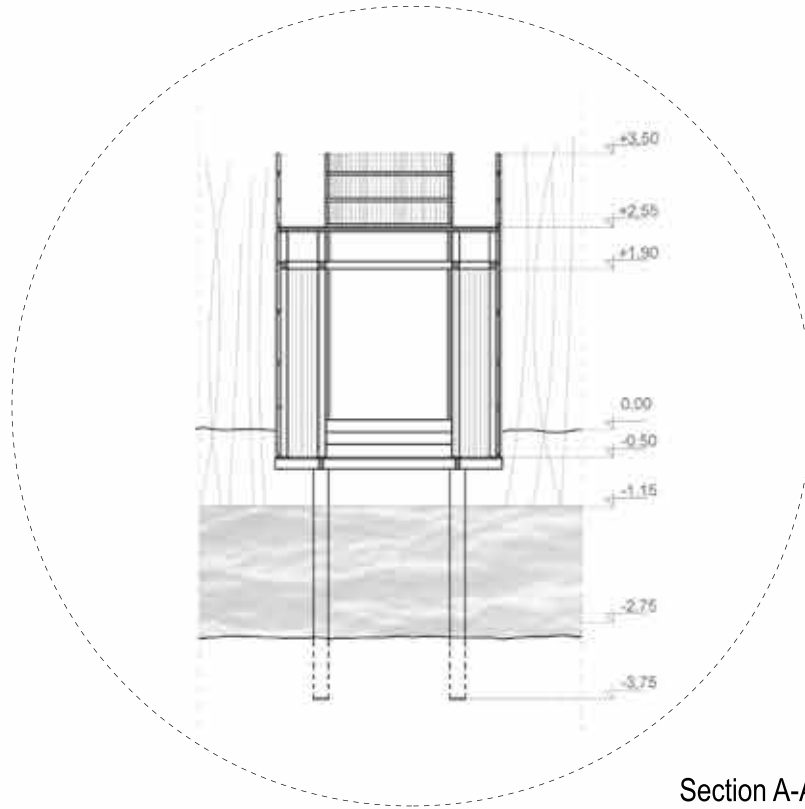


METALIC ELEMENTS

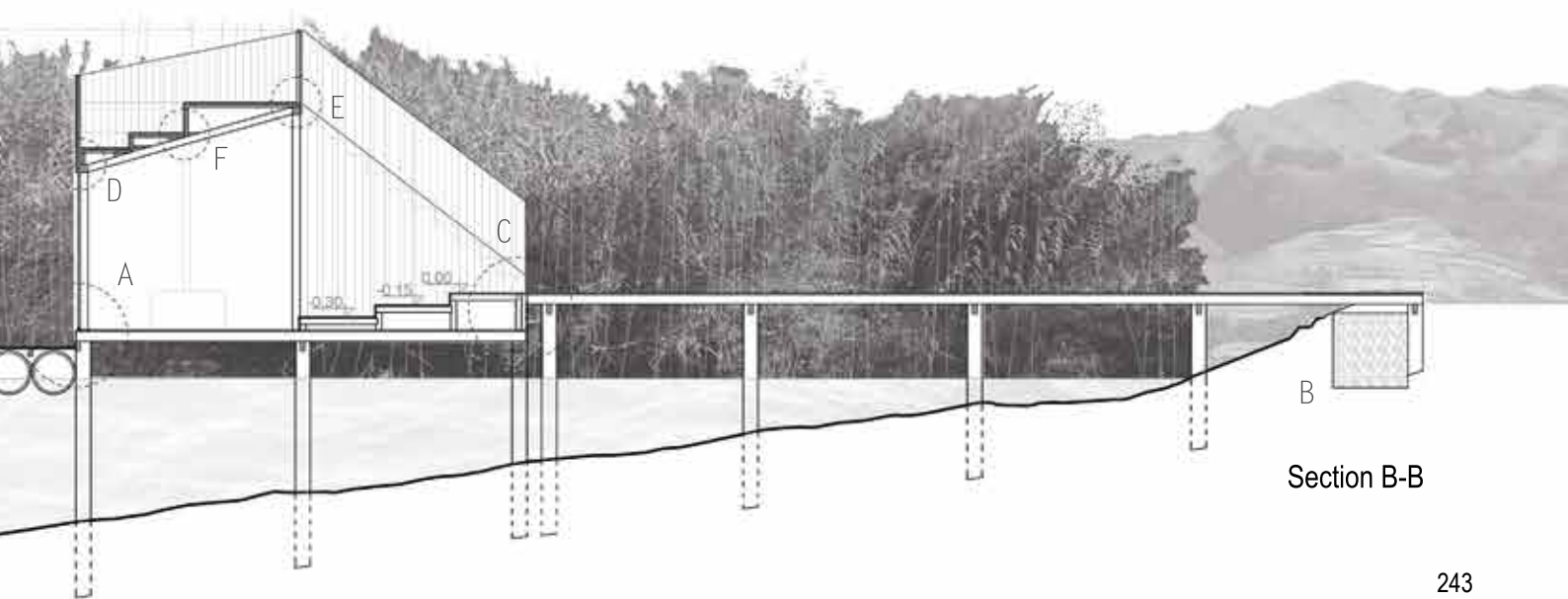
Metalic profiles and elements used for junction and reinforcement of the main materials.



Sections
scale 1:100



+3.50
+2.90
+2.55
+2.15
+1.90
+1.60



0.30

-0.15

1.00

D

F

E

C

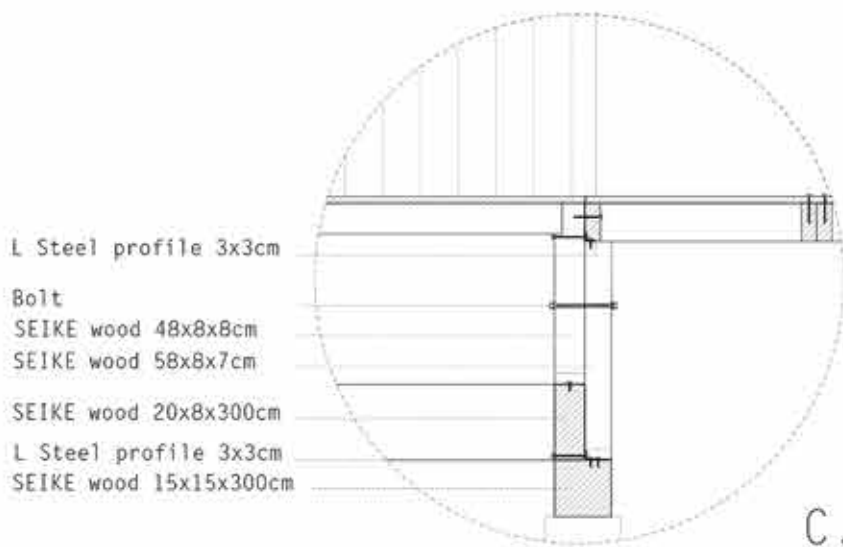
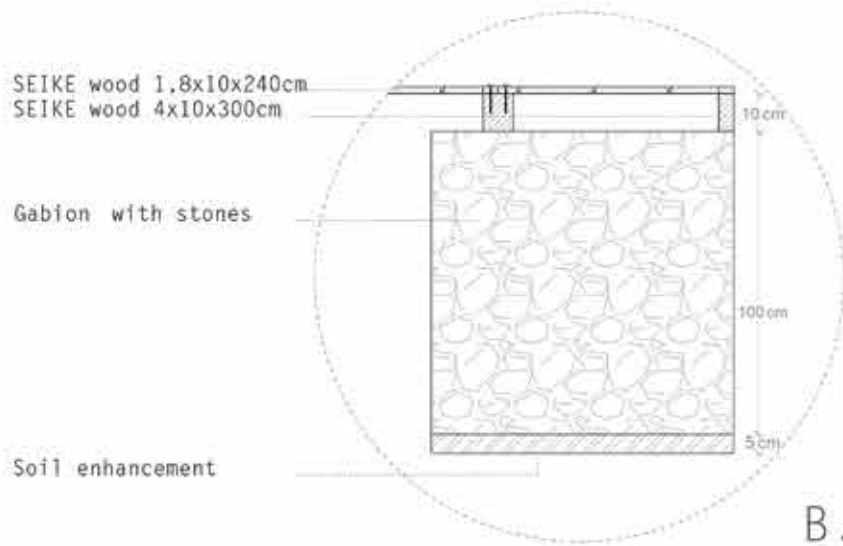
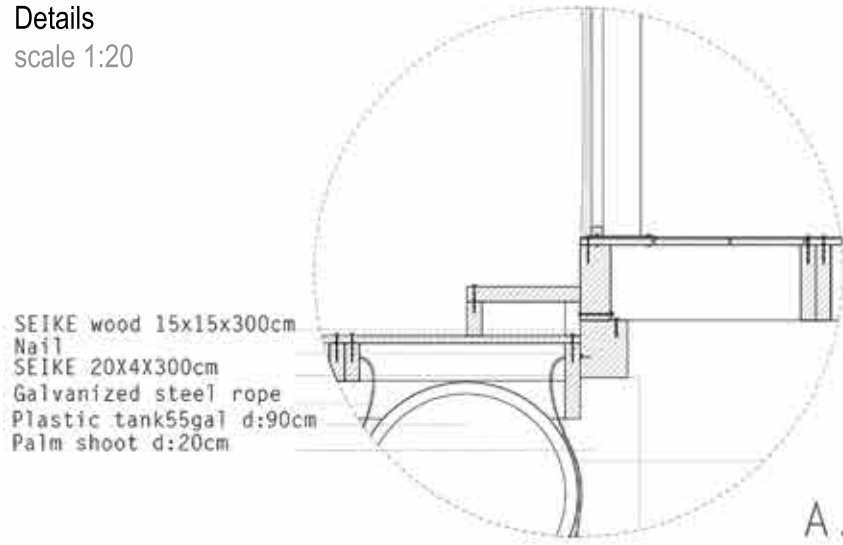
A

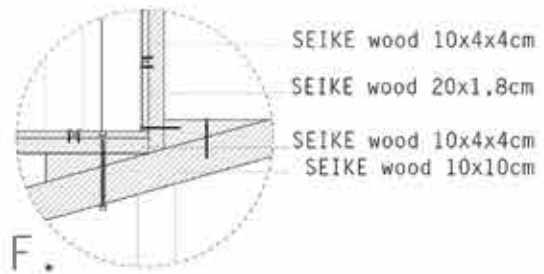
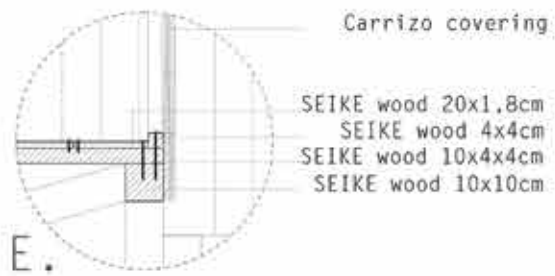
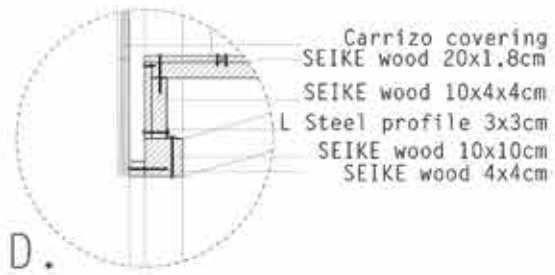
B

Section B-B

Details

scale 1:20







Came to the World

Photo: construction site as children playground!



www

Discovering

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Theoretical framework: Auto-construction

The term auto-construction (or self-construction) in architecture outlines "the strategies to replace with amateur actors the companies that, in an evolved productive structure, deal normally with the construction of the building on behalf of its future users".

Self-building is a practice always existed in human history; it was the main way in which our town centers have been built up. In Italy since the beginning of the century until the '50s an important part of the overall production of houses was self-constructed, mainly with individual and spontaneous initiatives. Later, with the strong specialization of labor and the increased legislative oversight, this practice gradually disappeared only to be rediscovered in the '70s in an organized and guided way. The northern European countries (England, Denmark, the Netherlands) and the United States, soon identified the auto-construction as a means to respond to housing needs, developing the first models of the new way of self-building. This practice raised the national interest in 1946 during the reconstruction phase so that in 1966 the government has taken charge of a rigorous national program. In the United States already during the '30s through the political "self help", the self-construction has seen its circulation coming to date with well-structured national programs such as S.H.O.P (Self-help Home Ownership Opportunity Programs) that annually makes available funds for the auto-construction managed through organization that are selected on the entire national territory. In Italy the first experience of self-construction was developed mainly in the north, thanks to the birth of no-profit associations and figures of interest such as Giuseppe Cusatelli. He is an architect, former professor of Politecnico di Milano, who in the '70s developed a constructive model easily approachable by non-professional builders; this was also possible thanks to the use of lightweight materials, easily used by a workforce of amateurs, that is not equipped with all the skills and high-technologies.

The self-construction has been transformed from spontaneous phenomenon to an organized guided process by which community citizens are able to build their own home, according to all the norms that regulate the building system, so as to provide all the performance of a building realized with traditional production method. Today the self-construction is quite widespread in Italy also thanks to the presence of many cooperatives and associations that promote and inform on the subject, the presence of a good number of publications, the interest of public opinion, but above all the comforting experience of many initiatives successfully concluded and a number of ongoing initiatives.

There are, however, legislative gaps that often slow down or hinder the birth of the initiatives and the lack of a national policy encouraging the development of

a national policy encouraging the development of precisely structured and organic programs can ensure greater coverage and continuity over time.

The self-construction is also a common practice in developing Countries and many NGOs, associations or public administrations, support it even drafting operational manuals intended for self-builders.

Traditional, innovative, guided, utopic and integrative: many are the faces of auto-construction around the world depending on the approach, the aim, the knowledge, the context, the culture and the people.

Regarding the traditional one, from ancient times the inhabitants of villages or peripheral urban neighborhoods are used to independently build the homes they need. The isolated or marginal communities also realize, thanks to the voluntary work, collective buildings of common interest. The work is usually unpaid and in these cases motivated by a relative scarcity of financial resources, which generally corresponds to a limited level of organization and specialization of local production structures. The technology is usually derived, without special attention, from the historical and geographical context that welcomes the construction; traditions are deeply rooted in places, so the persistence of building technologies is seen as a defense of the distinctive characteristics of a culture. Often, however, amateur builders reproduce the draft of functional technologies for rich and advanced production systems, as in the case of the metropolitan suburbs in developing countries where self-built shacks are crowded in unhealthy neighborhoods.

A symmetrical way of understanding the self-construction is the involvement of designers in the actual implementation of the project or prototype. For researchers, the investigation and innovation object is precisely the technology, used both in design as in building; technology that is extrapolated from the established relationship between disciplines and specializations to make it more appropriate in environmental and anthropological terms.

In the self-construction applied in an innovative way may be necessary that someone, technically most experienced than self-builders, guides them and assists them in the yard. It is not the case of the revival of the classic figure of the foreman that the builders probably would live as an external imposition, but a sort of counselor who knows how effective integrates into the group. His role will obviously not be of purely technical nature, which is to provide advice for a more expeditious execution of the work in progress, but will also have to act as a liaison between the group and the designer in order to make the self-construction an enriching experience for everybody. Technical competence cannot certainly be missed but it has to be

accompanied by the ability to participate in the common effort and motivation, to communicate with the group and to understand the internal dynamics.

An important example of guided auto-construction ideology is the Elemental program of the Chilean architect Alejandro Aravena, who especially deals with social housing and developed what he calls "incremental housing"; if with the economic resources available we can build a house of 40 m² (usually the most difficult part: structure, kitchen, bathroom), we must ensure that the family is able to build the other 40 m², but to obtain a quality result, the incrementality must be designed and people must be guided through meetings, surveys, workshops and should be aware of the restrictions in this regard. He thinks that we must not simply leave a building in half and wait for an individual to complete it, but it is necessary that the initial shape of the dwelling advances the way in which the self-construction allows a family to reach an acceptable living standard. Under this lens, the self-construction may cease to be seen as a problem but rather as part of the solution to the problem. The slum are usually seen as the impossibility of the population to access to formal homes, but can also be viewed as the enormous capacity of the population of self procure their own living space outside of the traditional mechanisms of society.

An example of auto-construction for the integration of disadvantaged groups is the Italian project of "Villaggio della Speranza".

It responds to the need expressed by 30 Gypsy (Sinti) from Veneto residents at the former municipal area of Via Tassinari in Padova, to improve their living conditions and to go out of exclusion. The creation of the Village combines the Municipal Administration availability with respect for Sinti traditions, as to say their will to live with their extended families. The project included the participation of the community to the technical meetings with the authorities of the City of Padua during the whole process of the project. The Sinti have attended a vocational training course for construction workers, took part in the concrete phase of self-building and entered by Cooperativa Muratori Padovana, they left 1/3 of the monthly salary as co-financing of the work. Currently the area and the accommodation is owned by the Municipality of Padua and were awarded for rent to Sinti families that, unlike what happens in municipal nomad camps across Italy, have entered into the contracts of utilities in their own name, paying their bills.

Unfortunately there are also negative experiences such as what happened in Ravenna. In 2003 the Municipality started the realization of 4 self-building projects: Piangi-pane, Savarna, Filetto and Sant-Alberto. Of the four projects, the fourth planned was never started, the first

was finished after six years with an enormous unforeseen investment of money, the second was completed after eight years, at a double cost with respect to the economic budget and the third one was abandoned because of association bankrupt.

It is anyway important to underline the positive aspects of auto-construction.

First of all it has an economic value because the people having a low income can access a home and be directly involved in the process, since the self-construction is a time of participation; it's especially aimed at those vulnerable groups who despite having an income do not have access to a house (young people, couples, immigrants) playing a strong role of aggregation, social inclusion and integration of immigrant families. Administrations, without incurring huge costs, can provide social housing and enable social inclusion initiatives, knowledge and stimulation for active citizenship.

It also has a social value because usually the projects are looming as a civil society workshop, not without tensions and conflicts, in which the members participate in the design and construction of living spaces, working cooperating together and knowing each other, implementing forms of mutual solidarity and mediation that facilitate collaboration and the dialogue between families, especially in view of possible future initiatives aimed at creating a genuine sustainable communities.

The environmental value of auto-construction is another important point: self-made architecture is usually attentive to quality, types, choice of materials and techniques to the new demands of environmental sustainability, trying to reduce as much as possible the environmental impact; being a participatory process initiatives they should have a major role in raising awareness of the environment and renewable sources.

We strongly believe that self-construction must be guided by professional figures to really work; it must be directed and assisted by professionals, defining precise arrangements and construction technology depending on the local context and culture. Furthermore particular attention should be given to the management over time of products made through a maintenance program to be implemented periodically.

The enthusiasm and attitude of the homebuilders group is a fundamental element for the success of the process on time and within budget, and it is one of the most difficult things to implement and maintain, given the enormous effort both physically and mentally needed to participate in a self-building initiative.



Bureaucratic process

After the official approval in the Municipality the most difficult and delicate phase was the dealing with money. The 30th of July we met the GAD of San Rafael in order to know how to finance the purchase of materials and the first phase of construction that had been brought on by a little group of carpenters.

Since we operated with a public Institution all the matters regarding money should have been managed through a legal telematic system according to which we had to provide three different pro-formas for each material (wooden pieces, plastic tanks and working tools) and between them select the winner ones which means the cheapest. In any case the total price of these materials should not have exceeded our quote proposed with the project, which means a total budget lower than

25000 dollars.

We went around Quito and Otavalo for about two weeks recollecting all the needed proformas; without the help and the experience of our professor Marlowen Cuenca and Patricio Yacelga this step would have taken much more time and money.

After the official reunion with the Junta Parroquial and a brief discussion the three winner proformas were selected. The next step was to come back to each winner provider in order to get the original "invoice" for each material, the only document through which was possible to officially transfer the money.

The 18th of August Jaime, the official treasurer of GAD, realized the online payment (after some technical problems). We had to wait around 5-6 days before getting the receipt of the transition and the confirmation of the arrival-time of each material.

Paralleling to this phase we also had to deal with the research of some professional and competent figures that could help us in the construction of the mirador.

Our professor, Patricio Yacelga, put us in contact with the carpenter that usually works with him: Darwin Zapater. He and his collaborator helped us in the construction of the first floating prototype and, saw the well-done job, we proposed him and his team (4 carpenters in total) to the GAD for the construction phase of the mirador

We also participated as mediators to the meeting between the Junta Parroquial and the carpenters where they discussed about their salary and the timetable related to the construction of the first part. Everything was signed in an official contract.

With the arrival of the first materials on site the construction could definitively start!

Photo: Children playing in the football field of Cachiviru with the arrived tanks for the floating modules.





30th of July 2015 Reunion with GAD

Before starting the process of construction one of the first important step was the dealing of the money. For that reason we met the Junta Parroquial in order to know how to financiate the purchase of materials and the first phase of construction that had been brought on by a little group of carpenters.



Recollecting proformas

Since we operated with a public Institution all the matters regarding money should have been managed through a legal telematic system according to which we provided three pro formas for each material (see attached document pag.388) in order to select the winner one that means the most affordable.



Meeting with Carpenters

We participated also to a meeting between the GAD and the carpenters intended to build the static part of the project -el Mirador- in order to decide about the money for their compensation and the time related to the construction of the first part. Everything was signed in an official contract.

Winner proformas

After a reunion with the Junta Parroquial the three cheapest proformas (one for wood, one for tanks and one for working tools) were selected (see attached document pag.400). At this point we had to come back to each winner provider in order to get the original "invoice", the only document through which was possible to officially transfer the money.



18th of August 2015 Transfer of money

The 18th of August the Junta Parroquial gave the start to the online payment. We had to wait around 5-6 days before getting the receipt of the transition. The next step was the arrivals of the first material on site!



27th of August Arrival of first materials

That day the wooden beams and columns arrived on site and with the help of community we started to verify if all materials ordered arrived in the correct quantity and in a good condition. We located them in a secure place protected from rain and sun.







Construction process

The construction process, started on August 24th, 2015 and ended on October 12th, 2015, has been the result of the strict collaboration between us and the community of Cachiviru: we can speak about participatory construction thanks to the indigenous tradition of “mingas”, for which the community was already used to work helping each other and on which we based our construction process. “Minga” by definition is “a collaborative work in which friends and neighbours volunteer their time, effort, and sometimes funds to achieve a shared goal for the betterment of the community”.

The construction can be divided into two phases according to the actors working on site. We have been always present on site with FAU Professors Arch. Marlown Cuenca (who took the technical responsibility of the project since we were just students) and Arch. Patricio Yaselga. In the first phase we have been helped by the group of four carpenters to build up the foundations, the boardwalk, the Mirador structure and stairs. We unfortunately had some problems with them since we questioned many times their way of working and they had to rebuild part of the stairs because it was not correct: for this reason they worked on site one week more with respect to their contract. In the second phase we were more “autonomous” and we worked in collaboration with the community for building up the floating part that was easier (thanks to the floating prototype previously built with the carpenters) and we knew exactly how to assemble the various pieces. We didn’t miss problems also in this phase: from the absence of the community to the constant need of buying more materials that seemed to be never enough, due to their loss or damage. Regarding materials, when we planned the floating modules’ construction we realized that the ordered wood was not enough for building up all the seven modules with furnitures, so we decided with the community to build up just five modules (including the prototype of which we just changed the damaged flooring) and two seat-furnitures; the surplus tanks have been stored by the community to be used in case of necessity or to build up an other floating module in the future. We documented day by day the whole process of construction through a “libro de obra” signed by us and by the president of Cachiviru (see attached document pag. 410).

What we surely learned is the enormous difficulty of an organization that has to deal with a lot of actors: today is often tomorrow and everything on construction site changes with respect to the paper drawings!

Photo: Children playing and carpenters working, construction site, Cachiviru.



Photo: Filling the gabion with stones, construction site, Cachiviru.



1° Week

August 24th-28th, 2015

Planned activities

In the first week of construction we planned to (1) Prepare, clean and level the construction soil. (2) Clean the Lake's shore from Totorá to make space for the construction. (3) Begin and finish the "replanteo in situ" (preparation of the site signing the principal points where to put the foundation palm shoots). (4) Receive, check, catalogue and treat all the ordered wooden pieces with varnish. (5) Do all the necessary procedures to purchase the last needed materials. (6) Begin and finish the positioning of foundation palm shoots.

Realized activities

In the first week of work an auxiliary of the Municipality of Otavalo proceeded to clean and level the soil with backhoe making earth movement (3x1x1m hollow) to place the gabion of stones; In addition the community proceeded to clean the Lake's shore to make space for the construction; we did various procedures for purchasing materials in Otavalo and the carpenters didn't show up; the day 27/08/2015 arrived the ordered wood in situ (a day later with respect to the planned timetable) and it was verified that all the wooden pieces were in optimal quality condition and a letter of receipt of materials was signed by us and José Peña, representing the Cachiviru community (see attached document pag. 415). We planned to begin the wood treatment with varnish but we just had time to organize and divide the wooden pieces according to their dimensions, placing them in the existing wooden construction on site. The day 28/08/2015 began the "replanteo in situ" (preparation of the site signing the principal points where to put the foundation palm shoots) but we didn't finish it; the gabion of stones was placed the last day of the week with the help of the community.

Site preparation

The community started to clean up the Lake's shore from totora and carrizo plants in order to make space for the construction.



Soil preparation

An auxiliary of Otavalo Municipality proceeded to clean and level the soil with a backhoe making a 3x1x1 meters hollow in order to make space for the gabion of stones put by the community.



Wood reception

We received the order of wood checking that all the pieces were in optimal quality condition and we classified them according to dimensions.



1° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

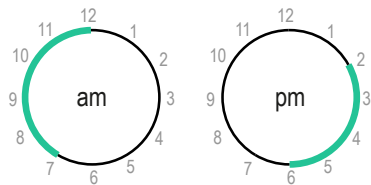
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



0%



100%



0%

PEOPLE WORKING ON SITE:

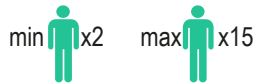
Responsables



Carpenters



Community



Auxiliary



- Site preparation
- Soil preparation
- Wood reception



- Slow process
- Timetable not respected



Photo: Maria transporting a big stone to be put into the gabion, construction site, Cachiviru.





Photo: Community preparing the soil to put the gabion of stones, construction site, Cachiviru.





Photo: Construction site situation - week 1: community working on soil preparation, Cachiviru.



Photo: Hammering foundations, construction site, Cachiviru.



2° Week

August 31st- September 5th, 2015

Planned activities

What we planned to do in this week was (1)Complete the totora cleaning in the Lake shore. (2)Begin and finish the treatment of all the wooden pieces with varnish. (3)Finish the “replanteo in situ” (preparation of the site signing the principal points where to put the foundation palm shoots). (4)Begin and finish the positioning of foundation palm shoots. (5)Begin the structural beams’ bolting with the foundation palm shoots.

Realized activities

The second week of construction started in a slow-mo-od since the first day there were no one on site except for us: neither the carpenters nor the community showed up! 24 people of the community just came the third day for helping us, while the carpenters arrived the second day of the week. The community finished the Lake's shore cleaning and we finished the "replanteo in situ" obtaining all the exact points where to put the foundation palm shoots; all the foundation palm shoots outside water (4) have been cut and positioned while just 4 over 17 have been cut and placed in the water (they have been hammered thanks to the floating prototype); the community started to treat the wood with varnish but didn't finish and we began the structural beams' bolting. At the end of the week we finished the bolting of structural beams together with the non-floating part (tot. 12 meters) even using metallic profiles and metal decks. Furthermore we continued the purchase of additional materials that had to be ended last week because something was always missing.

Wood treatment

The community began to treat the wood with varnish, starting from the structural beams to be bolt together with the foundation palm shoots and the flooring of the 12m boardwalk.



Foundations

We started to cut and place all the foundation palm shoots inside and outside the water (the ones into the water have been hammered thanks to the use of the floating prototype).



Beams' bolting (floor)

We bolt the structural beams to the foundations starting from the boardwalk, also using metallic profiles and metal decks.



2° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

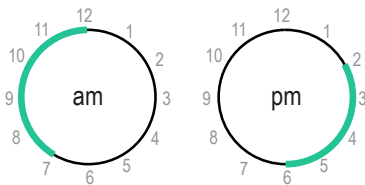
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



10%



70%



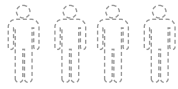
20%

PEOPLE WORKING ON SITE:

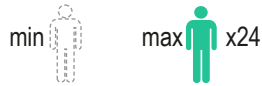
Responsables



Carpenters



Community



- Titora cleaning done
- Foundations' placement started
- Beams' bolting started



- Slow process
- Need of buying other materials



Photo: Belen and Marlon varnishing wood, construction site, Cachiviru.





Photo: Santiago and Wilson working on foundations-beams' stabilization, construction site, Cachiviru.





Photo: Construction site situation - week 2: carpenters working on boardwalk structure, Cachiviru.



Photo: Measuring beams, construction site, Cachiviru.



3° Week

September 7th-12th, 2015

Planned activities

In the third week of construction we planned to (1)Finish the treatment of all the ordered wooden pieces with varnish. (2)Finish the carpenters' task of build the 12 meters of boardwalk and the Mirador with the stairs. (3)Finish the positioning of all the foundation palm shoots and go on with the beams bolting. (4)Sign all the joints in the floating modules' beams.

Realized activities

In the third week of work we continued the treatment of wood with varnish, we finished the placement of all the foundation palm shoots and we continued the bolting of the structural beams. Furthermore we started to measure, straight off and cut the wooden pieces of 2,40m and 0,60m to be used for the flooring; we completed the flooring of the first 12 meters of the boardwalk and we began to assemble the Mirador with stairs and steps. Regarding the floating part, we began to draw and cut the joints of the beams to be assembled for creating the floating modules and we calculated the missing material (bolts, screws etc) to make a new order at the hardware store (the ordered materials arrived on site the 10/09/2015). We received the visit of a journalist of rete 24 interviewing the community and those in charge of the construction. At the end of the week we were done with the flooring of the first 12 meters of boardwalk, the Mirador was 80% built up (we built the right stair, we started to build the left stair) but unfortunately we had a discussion with carpenters for the bad work done, so we asked them to dismantle and assemble the stairs again.

Beams' bolting (Mirador)

We continued the bolting of the beams finishing the structural floor and starting to build up the structural beams of the Mirador.



Flooring

After measuring and cutting the necessary wooden pieces (already treated with varnish) of 2,40 and 0,60 meters, we completed the whole flooring of the boardwalk.



Mirador - started!

We began to assemble the Mirador with stairs and steps, but at the end of the week was 80% built up, missing the left stair.



3° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

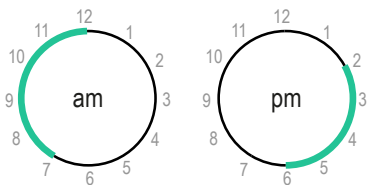
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



10%



10%



80%

PEOPLE WORKING ON SITE:

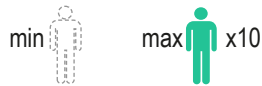
Responsables



Carpenters



Community



- Foundations' placement done
- Boardwalk's flooring done
- Tv interview



- Slow process
- Need of buying other materials



Photo: Wilson working on Mirador structure, (safe) construction site, Cachiviru.





Photo: Jaime, Jose and Gregorio bolting the flooring to the boardwalk structure, construction site, Cachiviru.





Photo: Construction site situation - week 3: children enjoying the view while "Negro" is working, Cachiviru.



Photo: Working on beams' bolting, construction site, Cachiviru.



4° Week

September 14th-20th, 2015

Planned activities

In the fourth week of construction we planned to (1) Finish the treatment of all the ordered wooden pieces with varnish. (2) Finish the carpenters' task of building up the 12 meters of boardwalk and the Mirador with the stairs. (3) Finish the positioning of all the foundation palm shoots and go on with the beams bolting. (4) Sign all the joints in the floating modules beams. (5) Cut all the 2,40m and 0,60m beams for flooring. (6) Cut and dry the carrizo for Mirador finishings.

Realized activities

In the fourth week of work carpenters dismantled and assembled the stairs again and the community cut and put to dry the carrizo for Mirador's finishings, the Mirador's railings have been assembled and four technicians of Ibarra Prefecture visited the work together with Eng. Torres of the Otavalo Municipality, who gave us suggestions on the stabilization of the structure. Moreover we received the visit of the authorities of Junta Parroquial together with the students of Universidad Central del Ecuador interested in developing their final architectural thesis in San Rafael. We finished to cut all the joints in the floating modules' beams and we measured and cut all the beams of 2,40m and 0,60m needed for floating modules' flooring. In date 15/09/2015 the carpenters finished their contractual work (12 meters of boardwalk and Mirador with stairs). In date 17/09/2015 we reviewed the project making comments to carpenters defining faults that have been arranged the same day. In date 18/09/2015 a "Acta de entrega recepcional provisional de la obra" (record of delivery about carpenters' work) was drawn up (see attached document pag. 405). and the ordered plastic tanks arrived on site, received by the President of Cachiviru community Gregorio Anrango and stored in the adjacent football stadium. In date 20/09/2015 we convened the community for the following day to clean and varnish all the wooden pieces, seal the tanks' caps, assemble the floating modules and cut more carrizo.

Floating - planning!

We measured and cut all the beams of 2,40 and 0,60 meters needed for floating modules' flooring and we cut all the joints in the structural beams in order to assemble the modules.



Tanks reception

The order of 60 plastic tanks to be used in the floating modules arrived on site; all the tanks have been stored in the adjacent football stadium.



Mirador - done!

The carpenters finished their contractual work building up the 12 meters of boardwalk and Mirador structure with stairs.



4° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

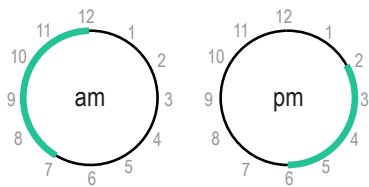
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



0%



70%



30%

PEOPLE WORKING ON SITE:

Responsables



A

C

M

M

P

Carpenters



Community

min



max



x9



- Boardwalk and Mirador done
- Carrizo's cut started
- Floating's planning



- Slow process



Photo: Mirador structure - lateral view, construction site, Cachiviru.



Photo: Boardwalk - view from the Mirador, construction site, Cachiviru.



Photo: Boardwalk and stairs- view from below, construction site, Cachiviru.





Photo: Construction site situation - week 4: children having fun on the Mirador, Cachiviru.



Photo: Cleaning the Muelle-Mirador, construction site, Cachiviru.



5° Week

September 21st-26th, 2015

Planned activities

In the fifth week of construction we planned to (1) Give a second-hand of varnish to the boardwalk and the Mirador. (2) Prepare and tie the carrizo finishing on the Mirador. (3) Assemble the structure and placing the flooring of all the floating modules. (4) Seal and place all the tanks in the floating modules putting them into the water.

Realized activities

The fifth week of work started in a slow mood again: the community, convened for the first day of the week, didn't show up, so we spoke to the President of the community to convene again a lot of people for the following days. We armed all the 4 floating modules bolting together all the beams (structural part and flooring) and we dismantled the old flooring of the prototype placing a new one. Furthermore we cut all the wooden strips where to tie up the carrizo finishing but due to a problem of electricity connection we couldn't bolt them in the Mirador structure. The community sealed and transported all the plastic tanks next to the Lake's shore, put a second hand of varnish in the boardwalk and Mirador and cleaned all the dried carrizo removing its external peel. Moreover we needed to buy once again additional material that was missing. At the end of the week all the 5 floating modules where structurally ready but tanks were missing; carrizo was ready to be tied up to the Mirador but we missed the wooden strips where to tie it.

Floating - started!

The 4 floating modules have been structurally built up; we also dismantled the old flooring of the prototype placing a new one.



Tanks' sealing

All the tanks have been sealed and transported next to the Lake's shore.



Wood varnishment

The community cleaned and put a second hand of varnish in the boardwalk and Mirador.



5° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

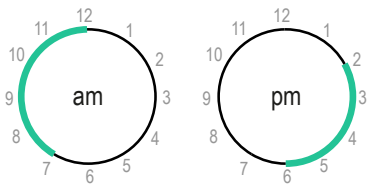
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



PEOPLE WORKING ON SITE:



- Floating modules started
- Carrizo ready to be tied



- Slow process
- Need of buying other materials
- Absence of community



Photo: Mirador varnishing work in progress (Patricio not really happy about the smell!), construction site, Cachiviru.





Photo: Floating modules' structure transportation, construction site, Cachiviru.





Photo: Construction site situation - week 5: "wet varnish, do not enter!" , Cachiviru.



Photo: Overturning a floating module, construction site, Cachiviru.



6° Week

September 28th - October 2nd, 2015

Planned activities

In the sixth week of construction we planned to (1)Tie all the tanks to the floating modules. (2)Built up seats furnitures for two floating modules and varnish all the modules again. (3)Position and tie all the floating modules into the water. (4)Tie carrizo finishing to the Mirador structure.

Realized activities

In the sixth week of work we turn over the floating modules, put all the tanks (12/each module) tying them with steel cable, turn them over again, built up two seats-furnitures in two of the floating modules, give a second-hand varnish to all the modules and finally put them into the water in the correct position: to tie them in between each other we decided at first to use a cotton rope but than we decided to use a steel chain for security reasons; in between the adjacent modules we put tires' pieces to avoid friction. We bolt all the wooden strips to the Mirador structure and we started to tie up the carrizo on them. Moreover there was the need of buying additional material once again. We received the visit of Ibarra Prefecture and Junta Parroquial authorities to review the advancement of the construction. At the end of the week all the floating modules where placed in the water, tied to the Mirador and in between each other.

Carrizo - started!

After cutting and putting to dry the carrizo, the community prepared it removing its external peel and started to tie it to the Mirador structure.



Tanks' placement

All the tanks (12/each module) have been tied to the floating modules' structure with a steel cable.



Floating furnitures

We built up two seats - furnitures in two of the floating modules and then we placed all the modules into the water.



6° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

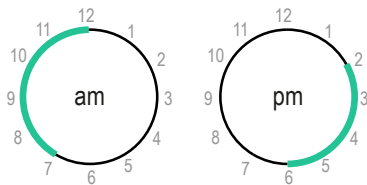
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



PEOPLE WORKING ON SITE:



- Floating modules into the water
- Carrizo's tying started



- Slow process
- Need of buying other materials
- Absence of community



Photo: Maria, Pilar and Carmen tying tanks, construction site, Cachiviru.





Photo: Community turning over floating modules to put the tanks, construction site, Cachiviru.





Photo: Construction site situation - week 6: Francisca, Jose and Jaime interlacing carrizo, Cachiviru.



Photo: Tying carrizo to the Mirador, construction site, Cachiviru.



7° Week

October 5th-12th, 2015

Planned activities

In the last week of work we planned to conclude the project construction checking and fixing the last details, also preparing the site for the inauguration scheduled for October, 13th.

Realized activities

The last week of work started with a big general “minga” where 50 people of the community have been convened due to a problem happened during the weekend: some tanks detached and went out from the floating modules’ structure and we needed to take them off the water and realize a better tying (for this reason we had to buy additional material once again). We finished to tie all the carrizo to the Mirador structure and we clean the whole project and the site itself. We also drawn up a “Acta de entrega recepcion definitiva de las obras” (record of delivery of the whole project) to be delivered to the GAD Parroquial (see attached document pag. 407). At the end of the week we were ready for the inauguration!

Carrizo - done!

The community finished to tie all the carrizo to the Mirador structure.



Floating - done!

We solved the tanks' problem happened in the weekend re-tying all the tanks to the floating modules and re-positioning them into the water.



Site cleaning

We cleaned the construction site to be ready for the inauguration!



7° Week SUM - UP!

NAME:

KAYMANTA | Muelle Mirador

OWNERS:

GAD Parroquial of San Rafael, Cachiviru community, ReyMolaKucha Association

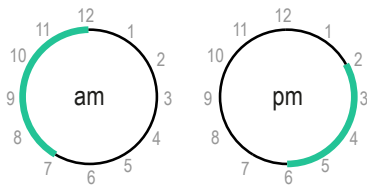
RESPONSABLES:

Arch. Marlown Cuenca with Agnese Grigis, Chiara Oggioni, Marta Petteni

WORKING DAYS:



WORKING HOURS/DAY:



WEATHER:



0%



100%



0%

PEOPLE WORKING ON SITE:

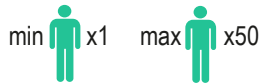
Responsables



Carpenters



Community



- Project construction done!
- Site cleaning for inauguration



- Slow process
- Need of buying other materials



Photo: hands tying carrizo, construction site, Cachiviru.





Photo: Community transporting floating modules into the water, construction site, Cachiviru.





Photo: Construction site situation - week 7: community preparing the last carrizo to be put on Mirador, Cachiviru.



Inauguration

The 13th of October 2015 we inaugurated our project with the community of Cachiviru, the authorities of the GAD Parroquial of San Rafael and of Universidad Central del Ecuador; the invitation was open to all the communities of San Rafael and to all the parroquias of San Pablo Lake. The inauguration's schedule follow their traditional way of celebrating: the community prepared typical local food and beverage, cooking in the existing wooden house on the Lake's shore and playing traditional music that accompanied us all day long. We started with thanksgiving speeches by San Rafael President Estela Aguilar, by Cachiviru President Gregorio Anrango, by FAU authorities and by us; than some delegates of Cachiviru community gave us thanksgiving presents and certificates, proceeding later with the traditional ribbon cutting ceremony under the totora's arches they put on the project's entrance. The most amazing moment of the inauguration has been the distribution of food ceremony: each woman of the community prepared and gave us a typical plate (usually made of rice, potatoes, legumes and mais) and we had to throw all the food together in a big container where all the people were supposed to take it with their hands and eat it all together; they also bought pizza for us (knowing that rice is not our favorite food!) and we shared it with the whole community eating in the green field around our project. Finally we took a lot of photos enjoying the Muelle-Mirador and the amazing view, looking at children playing on floating modules and adults dreaming of expanding the project. Taking stock of the whole process we realized that in few months they became our overseas big family and we built up (all together) something good, not without difficulties and not without joy. We will keep forever in our hearths and minds the peculiar sensation of realizing for the first time something that was just in our minds, all those happy eyes and the greatness of their sharing attitude

Photo: Receiving thanksgiving certificates and presents, Cachiviru.



Thanksgiving speeches and presents

Thanksgiving speeches have been done by the authorities of San Rafael, Cachiviru, Universidad Central del Ecuador and us; some delegates of Cachiviru community consigned us certificates and presents saying thanks for all the work done and all the moments spent together.



Ribbon cutting ceremony

Following the tradition, the Presidents Estela Aguilar and Gregorio Anrango cut the traditional inaugural ribbon under the totora's arches put by the community at the Project's entrance. The ribbon had the Ecuadorian flag's colours (yellow, blue and red) and from the ribbon they obtained bracelets that were given to us.



Traditional food ceremony

All the women of the community prepared and gave us traditional food (mais, rice, legumes, potatoes) that we put in a container creating a huge plate of food from which all the people could eat sitting in the green field around the Muelle-Mirador.



Photo: Rosita cooking traditional empanadas de queso in the wooden construction, Cachiviru.





Photo: Gregorio cutting the inaugural ribbon, Cachiviru.





Photo: Traditional food ceremony, Cachiviru.





Photo: Eating all together!, Cachiviru.





Photo: Muelle-Mirador - lateral view from the Lake's shore, Cachiviru.





Photo: Muelle-Mirador - frontal view from the Lake's shore, Cachiviru.



Photo: Muelle-Mirador - view from the floating modules, Cachiviru.



Photo: Muelle-Mirador - view from the inside, Cachiviru.





Photo: Muelle-Mirador - view from above, Cachiviru.





Photo: Muelle-Mirador - enjoying the view, Cachiviru.





Photo: Muelle-Mirador - view of the floating modules from the Lake's shore, Cachiviru.





Photo: A big family, Cachiviru.



The unbearable lightness of conclusion

www

Discovering,



It is hard to conclude something that has just born, in the Lake's water but also in ourselves.

We arrived in Ecuador with a bit of knowledge, some books read, an academic background and a lot of passion. We came back to Italy enriched by an amazing experience, many stories to tell and new eyes.

Cachiviru was not just the project site for our architectural ideas; it was a Place with a great potentiality and a loosing identity that needed to be rediscovered; it was a poor community who lives and works there, chasing city models of richness and progress; it was an indigenous Kichwa culture with its deep believing in Cosmo-vision and in the power of nature; it was a container of ideas, dreams, hopes, anxieties, passions; Cachiviru was the starting, developing and ending point of our process; we growth with it, we learnt with it, we loved it.

And here lies the real essence of Architecture that makes it so complex, rich and interesting.

We realized that Architecture can't be closed in itself inside rigid and impermeable borders, becoming every day more and more specialized and sectorial. Its richness lies in the constant research, experimentation, exploration, adventure but also failures and mistakes. For this reason the process, more than the final architectural product, is the real ability of an architect and the key value of this discipline.

Architecture is (and has to be) a holistic discipline able to explore different fields and surpass the frontiers with others disciplines without forgetting the centrality of "Man" in its application. Within our experience we touched it personally asking many time to ourselves if the figure of the Architect was enough in this so multidisciplinary dimension, where not only the "design and construction" aspects were involved but also the historical, cultural, social, economical and political ones. We understood that the Architect needs many secondary specialised figures that support him in his research and design.

Following this philosophical flow "Listening" become the key word of our approach. Listening to the Place first of all, that, as Architects, means to respect the place, to integrate with it, to concretize its essence. This assumes the believing of the Place as site with a precise identity always recognisable that has something to tell us.

And listening to people. There is always the temptation, for an Architect, to impose his own project, his vision, his style; many times we fall in love too deeply with our ideas closed in our personal pride. Instead we believe that is necessary a light approach, that doesn't mean superficial. Being light means being permeable like a sponge, able to assimilate the ideas of other and work like a team. That's why we involved the community in all the steps of our project.

We believe in the participatory design and in the guided auto-construction method as strong tools to reinforce the project and make it working better.

The aim is that the community takes possession of the project realized, feeling co-author of the outcome, able to take care of it in the future when the architect figure disappears. In our case the community idea is to make paying the tourist one symbolic dollar for the entrance into the Muelle-Mirador; not a lot, but enough for collecting small budgets and buying the materials needed for its maintenance.

For us this methodology is universal, but not absolute. We conceive it is an equation with some constants but many variables that change in relation to the Place, the kind of project, the people involved. A project with a Kichwa community in Ecuador is completely different from the project made with the same methodology (but different variables) in a small town in Sicily. And here it's the interesting point: this experience will be always unique in itself because the same variables can't be find somewhere else; maybe similar, but never the same. As the results we get.

But for the number of variables this methodology is also very difficult and delicate. It's a process that aims to work on the stratification of history, culture, society, politics and evolution of populations. Many times what these people would like is someone that arrives and impose his idea to them in name of richness and prosperous future; exactly what we are trying to avoid.

Our methodology aims to work firstly on people mentality making them aware of their great potentiality, their own identity, their culture and helping them in valorising these features. It's a slow and fragile process that many times, during our experience, seemed to be worthless like a small drop in the ocean. But it was always a drop, that we hope can power up the thinking machine of "who we are".

It is impossible to give a real conclusion to this amazing experience. The variety of activities and actors involved in it made it incredible unique. For sure, the number of obstacles and difficulties we had to surpass shaped our never-give-up attitude as architects and as people, making us aware of the concrete problems in the real world. We have been designers, sociologists, economists and carpenters putting in each task all own strength and will to make it real.

From the other hand, the great help we received, the generosity of this poor community, the sentimental bond that born with them made us feeling part of a big family and really grateful for this incredible occasion. Once the project was finished, the happiness of children and the community around us was a priceless satisfaction: every effort was worth.

But Kaymanta (which exactly means from here), hopes to be just a beginning. For the community, as starting point for a changing mind and as tool for upgrading the living condition of these indigenous and enhancing their spectacular places; and for us, hopeful this experience was just the first of many other wonderful adventures.

E' arduo concludere qualcosa che è appena nato, nelle acque del Lago ma anche in noi stesse.

Siamo arrivate in Ecuador con un po' di conoscenza, qualche buon libro letto, una preparazione accademica e tanta passione. Siamo tornate in Italia arricchite da un'esperienza unica, molte storie da raccontare e occhi nuovi per osservare il mondo.

Cachiviru non è stata solo l'area di progetto per le nostre idee architettoniche; è un Luogo con una grande potenzialità intrinseca ma non valorizzata; è una comunità indigena che (soprav)vive di ciò che ha, inseguendo modelli di ricchezza e progresso; è una cultura Kichwa radicata nella Cosmo-visione e nel potere della Natura; è un contenitore di idee, sogni, speranze, ansie e passioni; Cachiviru è stato il nostro punto di partenza, di sviluppo e di arrivo; con lui siamo cresciute, abbiamo imparato, abbiamo sbagliato, l'abbiamo amato.

E qui giace la vera essenza dell' Architettura che la rende così complessa, ricca e interessante.

Abbiamo capito che l'Architettura non può chiudersi in se stessa dentro bordi rigidi e impermeabili, diventando ogni giorno sempre più specializzata e settoriale. La sua ricchezza sta nella ricerca costante, nella sperimentazione, esplorazione, avventura ma anche negli errori e nei fallimenti. Per questo motivo il processo, più del prodotto finale, è la vera abilità di un architetto e il valore centrale di questa disciplina.

L' Architettura è (e deve essere) una disciplina olistica capace di esplorare campi diversi e varcare il confine con le altre discipline senza dimenticarsi della centralità dell' Uomo nella sua applicazione.

Durante la nostra esperienza abbiamo toccato questo aspetto personalmente, chiedendoci più volte se la figura dell' architetto fosse abbastanza in questa dimensione così multidisciplinare, dove non solo gli aspetti progettuali e costruttivi erano coinvolti, ma anche quelli storici, culturali, sociali, economici e politici. Abbiamo capito che gli architetti nel loro operato necessitano molte altre figure secondarie e specializzate che possano supportarli.

Seguendo questa linea di pensiero *ascoltare* diventa la parola chiave della nostra metodologia.

Ascoltare il Luogo prima di tutto, cioè rispettarlo e integrare il progetto con esso.

E *ascoltare* le persone. C'è sempre la tentazione, da parte di un architetto, di imporre la propria visione, o peggio, il proprio stile. Riteniamo invece che sia necessario un approccio leggero, che non significa superfluo. Essere leggeri significa essere permeabili come una spugna, capaci di assimilare le idee degli altri e lavorare come una squadra.

Ecco perchè abbiamo coinvolto la comunità in tutte le fasi del nostro progetto.

Crediamo che il disegno partecipato e l'auto-costruzione siano validi strumenti nel processo progettuale,

Lo scopo è che la comunità prenda possesso del progetto, sentendosi co-autore dello stesso, e capace di prendersene cura quando la figura dell'architetto svanisce. Nel nostro caso, l'idea della comunità, è quella di far pagare al turista, per l'entrata al *Muelle-mirador*, un dollaro simbolico; non molto, ma abbastanza per raccogliere piccoli fondi e comprare il materiale necessario al suo mantenimento.

Per noi questa metodologia è universale ma non assoluta. E' un'equazione con alcune costanti ma molte variabili che cambiano in relazione al Luogo, il tipo di progetto, le persone coinvolte. Un progetto con una comunità Kichwa in Ecuador sarà completamente diverso dal progetto realizzato con la stessa metodologia (ma variabili differenti) in un piccolo paese della Sicilia.

Ed è qui il punto interessante: questa esperienza sarà sempre unica e irripetibile poichè le stesse variabili non possono essere trovate altrove; magari simili, ma mai le stesse. Come i risultati che otteniamo.

Ma per il numero di variabili questo approccio è anche molto difficile e delicato. E' un processo che lavora sulla stratificazione della storia, della cultura, della società, della politica, e dell'evoluzione di un popolo. Spesso, ciò che queste popolazioni vorrebbero, è qualcuno che arriva e che impone la sua idea dall'alto, in nome di ricchezza e prosperità; esattamente ciò che vogliamo evitare. La nostra metodologia pretende di lavorare prima sulla mentalità delle persone, rendendole coscienti del grande potenziale di cui dispongono e della loro identità e successivamente aiutandole nella loro valorizzazione. E' un processo lungo e fragile che molte volte, nella nostra esperienza, ci è sembrato inutile, come una piccola goccia nell' Oceano. Ma è comunque una goccia che spera di generare un'onda più grande.

Ed è davvero impossibile dare una conclusione a questa esperienza fantastica. La varietà di attività e attori coinvolti l'ha resa incredibilmente unica. Sicuramente, il numero di ostacoli che abbiamo dovuto superare ha rafforzato la nostra determinazione come persone e come architetti, rendendoci consapevoli dei problemi reali che ci aspettano. Siamo state progettiste, sociologhe, economiste e costruttrici, mettendo in ogni compito il massimo dell'impegno per portarlo a termine. Dall'altra parte, il grande aiuto che abbiamo ricevuto, la generosità di chi ha niente e ti offre tutto e il legame sentimentale che è nato, ci ha fatto sentir parte di una grande famiglia e riconoscenti per questa bellissima occasione. Una volta che il progetto si è concluso, la felicità negli occhi dei bambini e di tutta la comunità è stata una ricompensa inestimabile: ogni sforzo era servito.

Ma Kaymanta (che letteralmente significa "da qui"), spera di essere solo un inizio. Per la comunità, nel miglioramento delle sue condizioni di vita e nella valorizzazione dei suoi paesaggi spettacolari; e per noi, speranzose che questa esperienza sia stata solo la prima di molte altre incredibili avventure.

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FAU - GAD Agreement

Official document attesting the agreement in between FAU of Universidad Central del Ecuador and GAD Parroquial of San Rafael de la Laguna inside the program of "*Vinculación con la Sociedad*", coordinated by Prof. Arch. Marco Ortiz.

It has been signed in date 9th of June, 2015 during the celebration of San Rafael day, by the FAU Dean Arch. Luciano Bonilla and the President of San Rafael Estela Aguilar.



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO

UNIDAD DE VINCULACIÓN CON LA SOCIEDAD

ACUERDO DE COOPERACIÓN INTERINSTITUCIONAL

COMPARECIENTES.-

Comparecen a la celebración del presente Acuerdo, por una parte la Facultad de Arquitectura y Urbanismo de la Universidad Central del Ecuador, legalmente representado por su Decano Arquitecto Luciano Bonilla, Msc., conforme consta en el documento adjunto; y, por otra parte, el Gobierno Autónomo Descentralizado Parroquial de San Rafael de la Laguna-Otavalo, legalmente representada por la Sra. Estela Aguilar Hinojosa Presidenta del GAD Parroquial, conforme se acredita en el documento que se anexa. Los comparecientes, convienen en suscribir, libre y voluntariamente, el presente Acuerdo de Cooperación Interinstitucional, al tenor de las cláusulas que a continuación se detallan:

PRIMERA: ANTECEDENTES.-

1. La Universidad Central del Ecuador, por su experiencia en programas de extensión universitaria y por mandato de la Ley Orgánica de Educación Superior -LOES- está en capacidad de ofrecer, a través de sus docentes y de sus estudiantes diversos programas de apoyo al desarrollo de la sociedad.
2. La Sección I del Modelo de Gestión de la Vinculación con la Sociedad establece que:
Vinculación con la sociedad *..“es el medio que permite a la universidad interactuar con su entorno, coordinando eficaz y eficientemente sus funciones de docencia, investigación y extensión de la cultura y los servicios, a la vez que favorece su capacidad de relacionarse con los sectores productivo y social en acciones de beneficio mutuo, lo que favorece su posicionamiento estratégico”* (Alcántar y Arcos, 2004, p. 6).
3. Por su parte el GAD Parroquial de San Rafael de la Laguna-Otavalo ha expresado su interés en contar con el apoyo de la UCE en la ejecución de actividades relacionadas con:
 - (i) Estudio Urbano-arquitectónico y turismo comunitario de la parroquia.
 - (ii) Diseño de Equipamiento Urbano y Comunal.
 - (iii) Diseño de Mobiliario Urbano
4. El GAD Parroquial de San Rafael de la Laguna-Otavalo mediante comunicación N° GAD-SRL-Oficio-00161, de fecha 27 de Mayo de 2015, solicitó la participación de la Facultad de Arquitectura y Urbanismo de la U.C.E., petición que ha sido aprobada por la Unidad de Vinculación con la Sociedad de la Facultad de Arquitectura y Urbanismo, con fecha 28 de Mayo de 2015.



UNIVERSIDAD CENTRAL DEL ECUADOR

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UNIDAD DE VINCULACIÓN CON LA SOCIEDAD

5. La UCE y el GAD Parroquial de San Rafael de la Laguna-Otavaló concuerdan en la importancia que tiene la realización de actividades orientadas al fiel cumplimiento de los objetivos superiores de las dos partes, que tendrán como marco de acción el presente Acuerdo y que se ejecutará de forma específica, en el marco de la planificación de actividades que se estime conveniente.

SEGUNDA: DEFINICIONES.-

En el presente ACUERDO los siguientes términos serán interpretados de la manera que se indica a continuación:

UCE.- Universidad Central del Ecuador

VCS.- Vinculación con la Sociedad

GAD PARROQUIAL DE SAN RAFAEL DE LA LAGUNA-OTAVALO.- Gobierno Autónomo Descentralizado Parroquial de San Rafael de la Laguna-Otavaló

TERCERA: OBJETO.-

En virtud de los antecedentes indicados, las partes resuelven suscribir el presente Acuerdo de Cooperación Interinstitucional con el cual el GAD Parroquial de San Rafael de la Laguna-Otavaló se compromete con la Facultad de Arquitectura y Urbanismo de la UCE a participar en la ejecución y el financiamiento de las actividades de los respectivos componentes del Proyecto que se anexa al presente convenio.

CUARTA: MECANISMOS DE COORDINACIÓN

El GAD Parroquial de San Rafael de la Laguna-Otavaló con el objeto de facilitar el cumplimiento de lo acordado en este instrumento, designará de manera inmediata al (la) responsable de la Institución para atender los términos de este Acuerdo.

Así mismo, las dos instituciones adoptarán en el futuro las medidas que se detecten como necesarias para el fiel cumplimiento de este Acuerdo.

QUINTA: PLAZO DE DURACIÓN DEL ACUERDO

El presente Acuerdo se suscribe por el plazo de UN AÑO. En todo caso, este plazo puede ser ampliado o reducido de común acuerdo entre las partes, bastando para ello un intercambio de comunicaciones entre los representantes de las dos Instituciones.



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO

UNIDAD DE VINCULACIÓN CON LA SOCIEDAD

SEXTA: COMPROMISO DE LAS PARTES.-

La UCE, a través de la Facultad de Arquitectura y Urbanismo se compromete a proporcionar la participación de los docentes facilitadores del proceso y de los estudiantes que conducirán el mismo.

El GAD Parroquial de San Rafael de la Laguna-Otavalo por su parte, se compromete a facilitar la participación de los actores involucrados, a entregar toda la información que sea necesaria y de la que disponen al momento de iniciar la ejecución del proyecto y a cofinanciar los desplazamientos y subsistencias del o los docentes y de los estudiantes que se desplacen al territorio en donde se va a ejecutar la experiencia.

SÉPTIMA: NATURALEZA DEL ACUERDO:

El presente Acuerdo es de naturaleza estrictamente civil, no existe por lo tanto relación laboral alguna entre las partes.

OCTAVA: CAUSAS DE TERMINACIÓN.-

El Acuerdo en condiciones normales terminará cuando se haya cumplido el objeto o por vencimiento del plazo.

Podrá terminar en forma anticipada por las siguientes causas:

- a) Por causa de fuerza mayor o caso fortuito, debidamente justificada por la parte que lo formule y dentro del plazo de treinta días de ocurrido el hecho, y se suscribirá la respectiva acta de terminación.
- b) Decisión de cualquiera de las partes en controversias no solucionadas de mutuo acuerdo.

En cualquiera de estos casos, las partes suscribirán el acta de liquidación final del Acuerdo, que contendrá el detalle de lo ejecutado.

NOVENA: SUPERVISIÓN.-

El GAD Parroquial de San Rafael de la Laguna-Otavalo autoriza a la UCE la supervisión en cualquier momento de las actividades y documentos que le corresponde realizar y procesar en virtud de las obligaciones que asume mediante este Acuerdo.

DÉCIMA: CONTROVERSIAS.-



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO

UNIDAD DE VINCULACIÓN CON LA SOCIEDAD

Las controversias que podrían originarse en la ejecución de este Acuerdo serán resueltas pronta y amistosamente entre las partes. No obstante lo indicado, en el caso de persistir los desacuerdos, cualquiera de las partes podrá decidir libre y voluntariamente la terminación del Acuerdo, particular que será comunicado por escrito a la otra parte.

DÉCIMA PRIMERA: NOTIFICACIONES.-

Cualquier notificación entre las partes se remitirá a las siguientes direcciones:

UCE, FACULTAD DE ARQUITECTURA Y URBANISMO: Ciudadela Universitaria, Ave. América y Bolivia. Quito.

GAD Parroquial de San Rafael de la Laguna-Otavalo: Calle Bolívar e Imbacochoa, San Rafael, Otavalo, Imbabura.

DÉCIMO SEGUNDA: DOCUMENTOS DEL ACUERDO.-

Son documentos habilitantes del convenio:

- 1.- Nombramiento y documento de delegación del Decano de la Facultad de Arquitectura y Urbanismo.
- 2.- Nombramiento y actas de posesión del representante legal del GAD Parroquial de San Rafael de la Laguna-Otavalo.
- 3.- Acta de Sesión o Asamblea del GAD Parroquial de San Rafael de la Laguna-Otavalo en la que se autoriza la firma del Acuerdo
- 4.- Solicitud escrita del GAD Parroquial de San Rafael de la Laguna-Otavalo


Para constancia y fe de aceptación, las partes suscriben este Acuerdo en tres ejemplares, en la ciudad de Quito a los veintiocho días del mes de mayo del año dos mil quince.

POR LA UCE

POR LA ENTIDAD CONTRAPARTE



ARQ. LUCIANO BONILLA Msc.
DECANO DE LA FACULTAD
DE ARQUITECTURA Y URBANISMO



SRA. ESTELA AGUILAR HINOJOSA
PRESIDENTA
GAD PARROQUIAL DE SAN RAFAEL DE LA
LAGUNA



UNIVERSIDAD CENTRAL DEL ECUADOR
RECTORADO

Oficio No. 438-HCU-2014
Quito, 1 de octubre de 2014

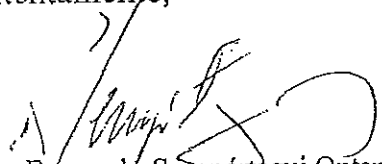
Señor Arquitecto
DANY LUCIANO BONILLA URBINA
DOCENTE DE LA FACULTAD DE ARQUITECTURA Y URBANISMO
Presente

Señor Docente:

En calidad de Rector de la Universidad Central del Ecuador y de conformidad con lo que dispone el Art. 53 de la Ley Orgánica de Educación Superior y Art. 20 del Estatuto de la Universidad, **DESIGNO** a usted **Decano de la Facultad de Arquitectura y Urbanismo**, a partir de la presente fecha.

A fin de registrar esta designación, le solicito acercarse al Departamento de Talento Humano y presentar la documentación pertinente.

Atentamente,



Dr. Fernando Sempertegui Ontaneda
RECTOR

Nora S.



**GOBIERNO AUTÓNOMO DESCENTRALIZADO
PARROQUIAL DE SAN RAFAEL**
RUC: 1060019600001
SAN RAFAEL – OTAVALO – IMBABURA

San Rafael de la Laguna a, 27 de mayo del 2015
GAD-SRL- Oficio.- 00161
Administración 2014-2019

Arquitecto
Luciano Bonilla
DECANO DE LA FACULTAD DE ARQUITECTURA Y URBANISMO DE LA UCE
Quito
Presente.

De mi consideración:

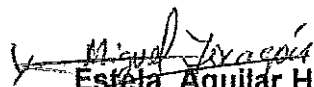
Reciba un cordial saludo de parte del GAD – Parroquial de San Rafael de la Laguna, a la vez desearle el mejor de los éxitos en sus delicadas funciones que desempeña.

La parroquia de San Rafael está actualizando el plan de desarrollo y ordenamiento territorial en donde surgieron las necesidades en el diseño arquitectónico de los proyectos.

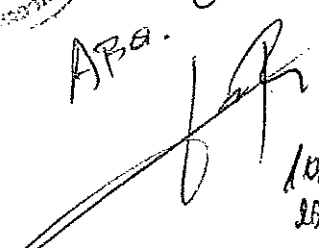
Por esta razón, la presente tiene la finalidad de solicitarle muy comedidamente que nos apoye con la cooperación interinstitucional para realizar la vinculación con la comunidad y la sociedad en la elaboración de los diseños arquitectónicos de los proyectos emprendidos por la parroquia.

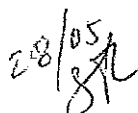
Esperando contar con su valiosa aceptación, me suscribo.

Atentamente;


Estela Aguilar Hinojosa
PRESIDENTA DEL GAD – SAN
RAFAEL



ABA. 
10/28
28/5/2015

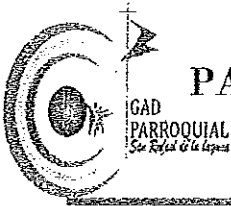
28/05


SAN RAFAEL, DESARROLLAMOS JUNTOS NUESTRO FUTURO

Dirección: Calle Bolivar e Imbakochoa

E-mail: gad.sanrafael@gmail.com

Teléfono: 2918 - 508



**GOBIERNO AUTÓNOMO DESCENTRALIZADO
PARROQUIAL DE SAN RAFAEL DE LA LAGUNA**

RUC: 1060019600001

SAN RAFAEL – OTAVALO – IMBABURA


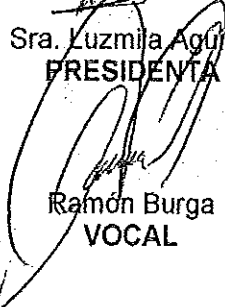
RESOLUCIÓN GAD-PSRL 2015-0006

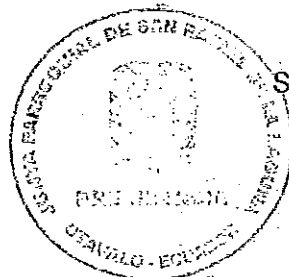
DE ACUERDO AL COOTAD, Art. 67.- Atribuciones de la Junta Parroquial Rural.- a la junta parroquial rural le corresponde:


Literal a) Expedir acuerdos, resoluciones y normativa reglamentaria en materias de competencia del gobierno autónomo descentralizado parroquial rural, conforme a este código.


De acuerdo a esta ley, en reunión extraordinaria del Gobierno Parroquial de San Rafael de la Laguna, a los 25 días del mes de Mayo del 2015, se resuelve por decisión unánime de todos los miembros de la junta solicitar la cooperación interinstitucional a la Universidad Central del Ecuador para realizar la vinculación con la comunidad y la sociedad en la elaboración de los diseños arquitectónicos de los proyectos emprendidos por la parroquia.

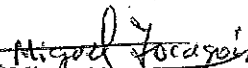
Para constancia de la resolución tomada firman todos los miembros de la junta del Gobierno Parroquial de San Rafael de la Laguna.


Sra. Luzmila Aguilar
PRESIDENTA

Ramón Burga
VOCAL




Sr. José Manuel Aguilar
VICEPRESIDENTE


Sr. Juan Aguilar
VOCAL


Sr. Miguel Tocagón
VOCAL

SAN RAFAEL, PLANIFICAMOS JUNTOS NUESTRO FUTURO

Dirección: Calle Bolívar e Imbakocha

E-mail: gad.sanrafael@gmail.com

Teléfono: 2918 - 508

Contest

Official document attesting San Rafael de la Laguna as winner of the "*Imbabura diversa y productiva*" contest, emanated by Ibarra Prefecture.

In this document you can find all the information about the initial terms of the project to be constructed before December, 2015: location, dimensions, volumes and materials of the floating cabañas.

Furthermore in this document is specified the management model of the future project: GAD Parroquial of San Rafael de la Laguna + Cachiviru community + Rey Mola Kucha Association.



GAD PROVINCIAL
DE IMBABURA

GOBIERNO AUTÓNOMO DECENTRALIZADO PROVINCIAL DE IMBABURA

Programa de incentivos "Imbabura: Diversa y Productiva"



PREFECTURA
DE IMBABURA

FORMULARIO PARA LA PRESENTACION DEL PROYECTO PRODUCTIVO, EMPRENDIMIENTO O INICIATIVA

1. DATOS DEL PROYECTO

NOMBRE DE LA INICIATIVA/PROYECTO:		CONSTRUCCION DE CABAÑAS FLOTANTES A BASE DE TOTORA EN EL LAGO SAN PABLO (IMBAKUCHA), PARA EL FOMENTO DEL ECOTURISMO COMUNITARIO	
CÓDIGO ASIGNADO: espacio llenado por el GAD PROVINCIAL			
SECTOR AL QUE APLICA:		ARTESANIAS	
		TURISMO	X
		AMBIENTE	
		AGROPECUARIO	
TIPO DE PROYECTO:	individual	asociativo	X
TIEMPO DE DURACION DEL PROYECTO:	6 años		

2. IDENTIFICACION DE LA ENTIDAD POSTULANTE

NOMBRE DE LA ENTIDAD	GOBIERNO AUTÓNOMO DECENTRALIZADO PARROQUIAL DE SN RAFAEL DE LA LAGUNA							
TIPO DE IDENTIDAD:	GAD Parroquial <input checked="" type="checkbox"/>	Colegios de Profesionales <input type="checkbox"/>	Empresa Privada <input type="checkbox"/>	ONG <input type="checkbox"/>	Empresa Comunitaria <input type="checkbox"/>	Clubs Ecologicos <input type="checkbox"/>	Otro <input type="checkbox"/>	
	Asociaciones. <input type="checkbox"/>	Cooperativas <input type="checkbox"/>	Entidad Academica <input type="checkbox"/>	Gremio <input type="checkbox"/>	Juntas de Aguas <input type="checkbox"/>	cooperaciones <input type="checkbox"/>		
REPRESENTANTE LEGAL:	NOMBRE	ESTELA LUZMILA AGUILAR HINOJOSA					EMAIL	esthela.luzmila@hotmail.com
	TELEFONO	062 918 508					MOVIL	0991250195
RUC:	1060019600001							
DIRECCION:	Parroquia San Rafael, calle Bolívar e Imbakucha							
TELEFONOS:	062 918 508					EMAIL	gad.sanrafael@gmail.com	
PAGINA WEB:	www.sanrafaeldelalaguna.gob.ec					RESPONSABLE DEL PROYECTO: José Chalán		

4. CARACTERIZACION GENERAL DE LOS USUARIOS

No. USUARIOS DEL PROYECTO	TOTAL MUJERES				TOTAL HOMBRES			
		INDIGENAS		3	INDIGENAS			
	MONTUBIOS			MONTUBIOS				
	AFROECUATORIANOS			AFROECUATORIANOS				
	MESTIZOS			MESTIZOS				
	JOVENES (menores a 25 años)		1	JOVENES (menores a 25 años)				3

5. ANTECEDENTES

CUAL ES LA IDEA DE EMPRENDIMIENTO/ INICIATIVA USTED (ES) TIENEN.	
1	<p>un emprendimiento que nace de los dirigentes de la asociación, dirigentes y cabildos de la comunidad con el objetivo de aprovechar los recursos naturales que existen. En la comunidad de Cachiviro existe una estructura organizativa para el desarrollo comunitario, conformada una organización jurídica para realizar actividades turísticas, la comunidad comprometida para el desarrollo de la economía comunitaria y el apoyo del Gobierno Local para apoyar y fortalecer en las diferentes emprendimientos productivos.</p> <p>El proyecto consiste en construir 4 cabañas flotantes a base de fibra natural (Totorá, planta acuática nativa de la Parroquia), para aprovechar el Lago San Pablo Imbakucha y ofrecer a los turistas una estadía acogedora sobre el lago.</p> <p>La iniciativa es con la finalidad de aprovechar los recursos naturales que tiene la parroquia, el lago San Pablo, la Totorá y la diversidad de la flora y fauna lacustre, que lo caracteriza a nivel local, provincial y nacional.</p> <p>La construcción de las cabañas flotantes será con técnicas ancestrales que hasta la actualidad practican y conservan los pobladores de la comunidad. La dimensión de las cabañas será de 16 metros cuadrados, capacidad para dos personas, las cabañas será equipadas con camas tradicionales, un velador tradicional.</p> <p>Esta iniciativa se encuentra en el programa de Turismo Comunitario del Plan de Desarrollo y Ordenamiento Territorial de San Rafael de la Laguna, en el proyecto "Dotación de una infraestructura turística comunitaria", por esta necesidad los dirigentes de la comunidad, los dirigentes de la asociación Rey Mola Kucha impulsan este emprendimiento para aprovechar Los recursos naturales existentes en la zona.</p>

POR QUE CREE USTED QUE SU EMPRENDIMIENTO/PROYECTO O INICIATIVA VA A FUNCIONAR	
1	El proyecto es una iniciativa única en la provincia con el fin de practicar un turismo ecológico con hospitalidad y amabilidad de su gente.
2	La decisión y el compromiso de la comunidad y los dirigentes de la asociación están orientadas en el fomento del ecoturismo - comunitario
3	El proyecto cuenta con el respaldo del GAD Parroquial de San Rafael en el proceso de formulación, ejecución, seguimiento y evaluación del proyecto.
4	La construcción de cabañas tradicionales se realizará con las técnicas de saberes ancestrales que hasta la actualidad la comunidad mantiene

QUE PROBLEMAS O LIMITANTES HA IDENTIFICADO USTED PARA SU EMPRENDIMIENTO/PROYECTO O INICIATIVA	
1	Falta de recursos económicos para avanzar con la iniciativa
2	Falta de apoyo del ministerio de rama en este tipo de emprendimientos
3	Falta de capacidad técnica para realizar estudios del proyecto.
4	Falta de conocimiento en creación de microempresas

COMO HA PENSADO SOLUCIONAR LOS PROBLEMAS O LIMITANTES PARA SU EMPRENDIMIENTO/PROYECTO O INICIATIVA	
1	Articulando a los Gobiernos Autónomos Descentralizados Cantonal y Provincial.
2	Gestionando la iniciativa a las carteras de estado que tiene competencias en este tipo de emprendimientos
3	Realizando la Gestión de Cooperación Internacional
4	Articulando al Instituto Nacional de Economía Popular y Solidaria para mejorar las capacidades y técnicas de servicio
CUALES SON LAS PERSPECTIVAS PARA QUE SU EMPRENDIMIENTO/PROYECTO O INICIATIVA CRESCA O SE MANTENGA EN EL TIEMPO	
1	Realizar un modelo de gestión en donde se involucre la comunidad, la asociación Rey Mola Kucha y el Gobierno Parroquial
2	Realizar talleres de capacitación en temas de administración, gestión y sostenibilidad del proyecto.
3	Estructurar a micro empresa comunitaria avalada por la Super Intendencia de Economía Popular y Solidaria para su sostenibilidad
QUIENES ESTARAN INVOLUCRADOS EN SU EMPRENDIMIENTO/PROYECTO O INICIATIVA	
1	Gobierno Autónomo Descentralizado Parroquial de San Rafael de la Laguna
2	Asociación de turismo comunitario "Rey Mola Kucha"
3	Comunidad de Cachiwiro

7. PRESUPUESTO

VALOR TOTAL DEL PROYECTO	US\$				
COFINANCIAMIENTO PREFECTURA DE IMBABURA	25.000				
TOTAL APORTE DE LA CONTRAPARTIDA	10.000				
	15.000				
DETALLE DE APORTE DE CONTRAPARTIDA					
APORTE ENTIDAD POSTULANTE	US\$			EFFECTIVO	VALORADO
APORTE ENTIDADES SOCIAS	13.500		GAD SAN RAFAEL	13.500.00	13.500.00
	1.500		ASOCIACION REY MOLA KUCHA	1.500.00	1.500.00

DESCRIPCION DEL APORTE DE POSTULANTE
<p>El aporte de la contrapartida correrá por la cuenta del GAD San Rafael de esta forma incentivar directamente a los beneficiarios del proyecto.</p> <p>La asociación Rey Mola Kucha por su parte esta dispuesto a poner la contraparte en la mano de obra para realizar las cabañas flotantes a base de la fibra natural (Totora).</p> <p>La comunidad de cachiwiro por ser un beneficiario más del proyecto esta predispuesto en colaborar en las mingas para realizar la limpieza del lugar, así mismo apoyar en la construcción de las cabañas.</p>

Legal permissions:

Linea de fabrica pp. 369

Official document released by the *Catastro* of Otavalo Municipality, signed by the *Catastro* Director Manuel Pedro Ramirez, attesting the limits of the project area (Cachiviru community, San Rafael de la Laguna).

Permiso ambiental pp. 371

Official document released by Otavalo Municipality, signed by the Director of Environmental Management Department Eng. Karen Teran, attesting the environmental feasibility of the project.

Permiso de construcción pp. 377

Official document released by Otavalo Municipality, signed by the Director of Civil Engineering Department Eng. Vicente Gualsaqui, attesting the construction feasibility of the project.




GOBIERNO AUTÓNOMO
DESCENTRALIZADO
MUNICIPAL DE OTAVALO

CERTIFICADO

El suscrito Director de Avalúos y Catastros del Cantón Otavalo, en forma legal
CERTIFICO:

Que el sitio donde se implantará el proyecto “ Muelle Flotante” en la Comunidad de Cachiviro, Parroquia San Rafael, se encuentra ubicada en el área de protección y amortiguamiento del Lago San Pablo, por lo tanto es una área Municipal.

Otavalo, 14 de Julio del 2015


Arq. Pedro Manuel Ramírez
DIRECCIÓN DE AVALÚOS Y CATASTROS

Dirección: García Moreno # 505/ Telf.: 06 2 920-460/ 06 2 925-566
Fax: 06 2 920 - 404 / www.otavalo.gob.ec
OTAVALO - ECUADOR

 Nueva
OTAVALO
ADMINISTRACIÓN
2014 - 2019





PERFIL DE LA OBRA: *KAYMANTA/DESDE AQUI*

1. DATOS GENERALES DEL PROYECTO

1.1. NOMBRE DEL PROYECTO/OBRA/ACTIVIDAD: *KAYMANTA/DESDE AQUI*

1.2. UNIDAD EJECUTORA: PROYECTO FIN DE CARRERA - FACULTAD DE ARQUITECTURA
DEPARTAMENTO DE COORDINACIÓN DE RELACIONES INTERNACIONALES.

RESPONSABLE. Arq. Marlown Cuenca Gonzaga

PRE PROFESIONALES. Agnese Grigis
Chiara Oggioni
Marta Petteni

1.3. TIPO DE CONTRATACIÓN- FASE:

TIPO DE CONTRATACIÓN/FASE	CONTRATACIÓN	ADMINISTRACIÓN DIRECTA
Estudios		
Construcción		x

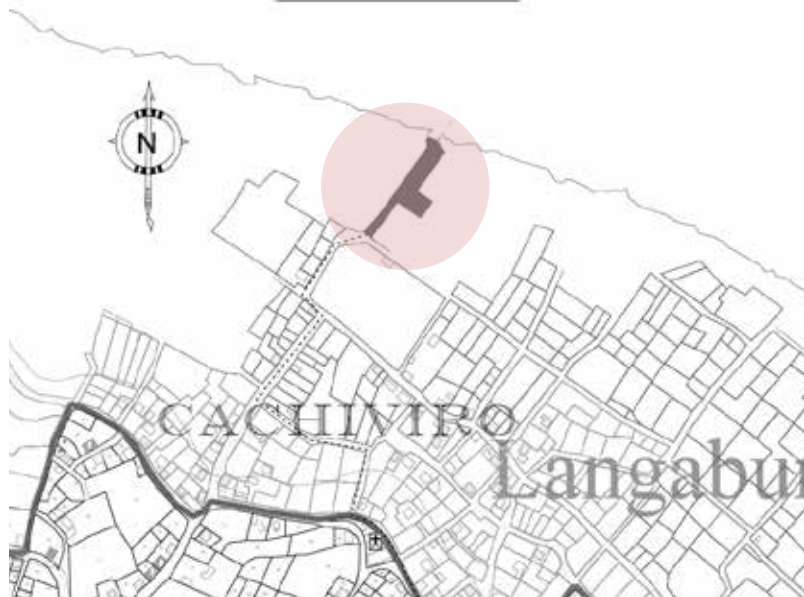
1.4. LOCALIZACIÓN:

Provincia: Imbabura
Cantón: Otavalo
Parroquia: San Rafael de la Laguna
Comunidad: Cachiviru



GOBIERNO AUTONOMO
DESCENTRALIZADO
MUNICIPAL DE OTAVALO

UBICACION



La obra en mención, se encuentra ubicado: *La comunidad de Cachiviru, perteneciente a la Parroquia de San Rafael de la Laguna, cerca al Estadio Gustavo Pareja.*

1.5. GEOREFERENCIACIÓN DE LA OBRA - UTMWGS8417 S

(El polígono se encuentra inscrito entre los siguientes Puntos referenciados):

Shape	X	Y	Tipo	Descripción
1	UTM0021936	17N0809287	Punto	
2	UTM0021928	17N0809305	punto	
3	UTM0021912	17N0809274	punto	
4	UTM0021904	17N0809289	punto	



2. DIAGNÓSTICO DEL PROBLEMA O NECESIDAD

2.1. IDENTIFICACIÓN DEL PROBLEMA O NECESIDAD:



Identificación de la topografía del terreno

Imagen 1:

Identificación de la topografía del terreno

Imagen 2:

El problema principal es la falta de valorización del Lago San Pablo y la necesidad de un espacio público que sea para el turista pero antes de todo para la comunidad.

3. MARCO LÓGICO DEL PROYECTO

3.1. OBJETIVOS:

General

Dotar a la comunidad de Cachiviru y a la Parroquia de San Rafael de un espacio público de turismo comunitario; objetivo primario es la valorización del Lago San Pablo y de su entorno natural.

Específicos

- 1.- Valorizar el patrimonio paisajístico, ambiental, cultural del Lago San Pablo*
- 2.-Dotar a la parroquia con un espacio público que sea antes de todo para la comunidad y luego para el turista*
- 3.- Promover un turismo comunitario y no de consumo en un entorno ambiental rural*



4. DESCRIPCIÓN DEL PROYECTO

Lo que se propone **en el lago** es un muelle – mirador cuya única función es lúdico-recreativa y de descanso. **Muelle-mirador (3x42m, 126m²)** compuesto de 14 módulos ensamblables (cada módulo: 3x3m, 9m²) hecho de madera seike recubierto de totora y organizado con mobiliario urbano sobre el mismo. En uno de los 14 módulos hay dos escaleras de madera (ancho: 60cm) que suben de 3m hasta un mirador que ocupa el espacio de un otro módulo; abajo del mirador se crea un espacio de contemplación con vista directa al lago y al Imbabura. El muelle flota sobre tanques de plástico reciclado (55 galones); cada módulo flota sobre 8 tanques: el n° tot. de tanques utilizados es 56. Hay también 16 palos de madera que permiten la estabilidad del muelle en el agua. Lo que se propone **en los 70m** es la creación de un espacio efímero compuesto de palos de madera y cortinas removibles para el descanso, la danza y el juego de los niños. Por otro lado se propone usar la estructura de madera ya existente como un lugar para que la comunidad tenga un espacio-taller en donde puedan enseñar sus capacidades artesanales y de esta manera ser una atracción para el turista, se lo concibe como un espacio abierto que se relaciona con el entorno visual y espacialmente en donde no se proyectan instalaciones ni sanitarias ni hidráulicas. **Espacio lúdico y de descanso (6x46m, 276m²)** organizado de manera efímera con 37 palos de madera de eucalipto implantados en el suelo (10x10cm, con altura de 2,50m) localizado a lo largo de la pasarela (este) y al sur de la estructura existente de madera. Encima de los palos se podrá colgar una cortina hecha de cabuya o tejidos típicos del lugar, fácilmente removible: el objetivo es de organizar un espacio de descanso donde los niños puedan jugar, los jóvenes tocar la guitarra, bailar o simplemente relajarse. **Re-organización de la estructura de madera existente** localizada a la orilla del lago y compuesta solo de palos de madera y techo de tejas. El objetivo es de disfrutar de este espacio de manera que pueda ser integrado en nuestro proyecto deviniendo un espacio-taller donde la comunidad pueda enseñar su trabajo artesanal de la totora al turista. La totora necesita ausencia de viento para que pueda ser trabajada entonces proponemos simplemente el posicionamiento de esteras de totora colgadas a la estructura existente (cuando necesario) para tener un reparo del viento.

5. ESPACIO FÍSICO DEL PROYECTO

5.1 Área total del proyecto: 2.031 m²

5.2 Área de Implantación: 666m²

5.3.- Área de Agua Potable, red de alcantarillado y red de energía eléctrica: el sitio no cuenta con estos servicios.

6. ESPACIO FÍSICO DEL PROYECTO

6.1 En la primera fase: se construirá un muelle mirador, un espacio de descanso y se readecuará el espacio para un taller de totora.

6.2 En la segunda fase: se construirá con la construcción de una cafetería y un huerto comunitario.



7. DETALLE DE EQUIPO Y HERRAMIENTA

Carretilla reforzada tomate	u	47,04	1	47,04
Palas	u	9,09	3	27,28
Combo 20 lib.	u	30,00	2	60,00
Barra	u	35,00	1	35

8. MATERIALES E INSUMOS A UTILIZARSE

ITEM	UNIDAD	PRECIO UNITARIO	CANTIDADES	SUBTOTAL
OBRAS PRELIMINARES				393,00
Movimiento de tierras	m3	2,80	10	28,00
Replanteo en situ	m2	2,80	70	196,00
Mejoramiento de suelo	m3	6,00	5	30,00
Gavión electrosoldado estándar 3x1x0.5	m3	51,00	1	51,00
Piedra bola	m3	11,00	8	88,00
INICIO DE MUELLE EMPOTRADO EN SUELO FIRME (5 BLOQUES de 3m x3m)				933,60
Puntales de Chonta 5m	u	30,00	12	360,00
Cuartón 10cm x 3cm cepillado	u	3,00	16	48,00
Cuartón 10cm x 4cm cepillado	u	3,00	18	54,00
Listón 5cm x 4cm cepillado	u	3,00	4	12,00
Tablón seike 3mx4cmx20 cm.	u	11,92	5	59,60
Duela de Seike	u	5,00	80	400,00
MUELLE FLOTANTE ANCLADO (7 BLOQUES de 3m x3m)				2.493,52
Cuartón 10cm x 3cm cepillado	u	3,00	56	168,00
Cuartón 10cm x 4cm cepillado	u	3,00	72	216,00
Listón 5cm x 4cm cepillado	u	3,00	14	42,00
Tablón seike 3mx4cmx20 cm.	u	11,92	56	667,52
Duela de Seike	u	5,00	280	1.400,00
MUELLE MIRADOR CON TERRAZA ANCLADO (2 BLOQUES de 3m x3m)				1.307,40
Columnas para espacio de transición	u	18,00	18	324,00
Columnas terraza 3mx10cmx10cm	u	20,00	6	120,00
Vigas terraza 10x10	u	20,00	3	60,00
Cuartón 10cm x 3cm cepillado	u	3,00	25	75,00
Cuartón 10cm x 4cm cepillado	u	3,00	15	45,00
Listón 5cm x 4cm cepillado	u	3,00	15	45,00
Tablón seike 3mx4cmx20 cm.	u	11,92	20	238,40
Duela de Seike	u	5,00	80	400,00
PINTURAS Y PRESERVANTES DE MADERA				314,18
Preservante de madera KL-3	4000 cc	9,05	5	45,25
Sellador para madera (Vernín Altos Sólidos)	gl	17,25	6	103,50
Barniz Supremo	4000 cc	11,96	8	95,68
Thinner comercial (diluyente tecni thifier laca)	4000 cc	13,95	5	69,75
METALICOS				727,41
Malla M 4 15 (6.25x2.40)	M2	29,43	1	29,43
Clavos chicos 2; 2 1/2", 3", 3 1/2" (30kg)	Caja	63,83	3	191,48
Platina en ángulo 12x3mm	u	12,00	2	24
Cuerda metálica galvanizada	m	1,50	175	262,5
Placas 18x18x3mm	u	10,00	22	220

Elaborado por: Arq. Sandy Muenala

Fecha de elaboración: 16 de Julio de 2015

Revisado y Aprobado por: Ing. Vicente Gualsaquí Morales.



GOBIERNO AUTÓNOMO
DESCENTRALIZADO
MUNICIPAL DE OTAVALO

MEMORANDO-N°822-2015-OOPP

PARA: Ing. Karen Terán Portelles
DIRECTORA DE GESTIÓN AMBIENTAL

DE: Ing. Vicente Gualsaqui M.
DIRECTOR DE OBRAS PÚBLICAS

ASUNTO: En texto

FECHA: 14 de julio de 2015

Adjuntó al presente sírvase encontrar en físico y en archivo magnético la ficha ambiental para el proyecto de fin de Carrera de la Universidad Central del Ecuador, la cual está elaborado por estudiantes de la facultad.

Proyecto: **AL RITMO DE LA NATURALEZA: VALORIZACIÓN DE LO QUE HAY CON LO QUE HAY**
Responsable.- Arq. Marlown Cuenca Gonzaga
Pre-profesionales.- Agnese Grigis
Chiara Oggioni
Marta Petteni

Particular que ponga en su conocimiento para fines consiguientes.

Atentamente,

Ing. Vicente Gualsaqui M.
DIRECTOR DE OBRAS PÚBLICAS



GOBIERNO MUNICIPAL DE OTAVALO
SECRETARÍA DE GESTIÓN
Fecha: 14/07/2015 12:28
Recibido por: Alexandra A.

Dirección: García Moreno # 505 / Telf: 06 2 920 - 460 / 06 2 924 - 566
Fax: 06 2 920 - 404
OTAVALO - ECUADOR

Nuevo
OTAVALO
ADMINISTRACIÓN
2014 - 2019

INFORME DE REGULACIÓN (URBANO/RURAL) DEL CANTÓN OTAVALO "PARA EDIFICAR"

N° VSM: 0

INFORME: N° 266 / 2015

FECHA: Otavalo, 14 de julio de 2015

PROPIETARIO PROPIEDAD MUNICIPAL "GADMC-O"

CEDULA "

DIRECCION: FRENTE AL ESTADIO DE CACHIVIRO

CLAVE CATS "

SECTOR CACHIVIRO

PARROQUIA SAN RAFAEL DE LA LAGUNA

Nombres de las calles y Avenidas	Ancho de calzada existente	Ancho de acera existente	Referencia de línea de Fca.
Frontal:			
Lat. Derecho:			
Lat. Izquierdo			
Posterior:			

CALLES A PROYECTARSE

	CALZADA	ACERA	ACERA	TOTAL	OBSERVACIONES
Frontal:					
Lat. Derecho:					
Lat. Izquierdo					
Posterior:					

DIMENSIONES DEL PREDIO		RETIROS:		ALTURA DE EDIFICACIÓN	
Frente (según escrituras):		Frontal:	3,00 mts	Nro. de Pisos:	2 (dos)
Fondo (según escrituras):		L. derecho:	3,00 mts	Altura máxima:	6 (seis) mts
Área (según escrituras):		L. izquierdo	3,00 mts	Cos:	70%
Forma:	REGULAR	Posterior	3,00 mts	Cus:	140%

ZONIFICACION:	RURAL	TIPO:	AGRICOLA
---------------	-------	-------	----------

DISPONIBILIDAD DE SERVICIOS

Agua potable:	NO	Calzada:	SI
Alcantarillado:	NO	Bordillo:	NO
Luz Eléctrica:	NO	Acera:	NO

SITUACION ACTUAL DE LA PROPIEDAD

Afectada totalmente:	NO	Parcialmente:	SI
Tiene cerramiento	NO	En línea de fábrica	NO

INFORMES ADICIONALES

El predio en mención SE ENCUENTRA AFECTADO POR ENCONTRARSE EN LA ZONA DE AMORTIGUAMIENTO, CONSERVACIÓN y PROTECCIÓN DEL "LAGO SAN PABLO", Mantener la franja de protección de 50,00m de las orilla del lago hacia el lote, mas 20.00m adicionales de zona de amortiguamiento del Lago San Pablo, además deberá identificar y mantener el retiro de 12,00m de radio con respecto a las vertientes, ojos de agua, acuíferos y pozos de agua naturales existentes en el sitio. (Ordenanza Municipal que determina las áreas sujetas a conservación y protección de C.O.). Sección II, Art. 10, de la regulación del uso del suelo y recursos naturales. (Vigencia un año)

NOTA:

- Presentación de planos (art. 139) cuadro para sellos de 15 x 15 cm. en el extremo inferior derecho; incluir en el mismo el número de informe y fecha emitida de la línea de fábrica.

Arq. Nancy Cabascango
Técnica de Planificación



Fernando Vizarrea
Técnico de Planificación

Technical plans & economic budget:

Official technical plans and economic budget of the project, signed by: Prof. Arch. Marlown Cuenca who took the technical responsibility of the project, San Rafael GAD Parroquial President Estela Aguilar, Cachi-viru Community President Gregorio Anrango, President of Rey Mola Kucha Association José Espinosa and us. These documents have been delivered to Otavalo Municipality where the Director of Urban Planning Department Byron Velasco signed them giving the architectural permit.

**PRESUPUESTO REFERENCIAL PARA LA CONSTRUCCION DEL MUELLE Y REHABILITACION
CENTRO DE ARTESANIAS**

COMUNIDAD CACHIVIRU - SAN RAFAEL - LAGO SAN PABLO

FECHA: 13/07/2015

FACULTAD DE ARQUITECTURA - UCE


ITEM	UNIDAD	PRECIO UNITARIO	CANTIDADES	SUBTOTAL
OBRAS PRELIMINARES				393,00
Movimiento de tierras	m3	2,80	10	28,00
Replanteo en situ	m2	2,80	70	196,00
Mejoramiento de suelo	m3	6,00	5	30,00
Gavi3n electrosoldado est3andar 3x1x0.5	m3	51,00	1	51,00
Piedra bola	m3	11,00	8	88,00
INICIO DE MUELLE EMPOTRADO EN SUELO FIRME (6 BLOQUES de 3m x3m) (4)				933,60
Puntales de Chonta 5m	u	30,00	12	360,00
Cuart3n 10cm x 3cm cepillado	u	3,00	16	48,00
Cuart3n 10cm x 4cm cepillado	u	3,00	18	54,00
List3n 5cm x 4cm cepillado	u	3,00	4	12,00
Tabl3n seike 3mx4cmx20 cm.	u	11,92	5	59,60
Duela de Seike	u	5,00	80	400,00
MUELLE FLOTANTE ANCLADO (7 BLOQUES de 3m x3m)				2.493,52
Cuart3n 10cm x 3cm cepillado	u	3,00	56	168,00
Cuart3n 10cm x 4cm cepillado	u	3,00	72	216,00
List3n 5cm x 4cm cepillado	u	3,00	14	42,00
Tabl3n seike 3mx4cmx20 cm.	u	11,92	56	667,52
Duela de Seike	u	5,00	280	1.400,00
MUELLE MIRADOR CON TERRAZA ANCLADO (2 BLOQUES de 3m x3m)				1.307,40
Columnas para espacio de transici3n	u	18,00	18	324,00
Columnas terraza 3mx10cmx10cm	u	20,00	6	120,00
Vigas terraza 10x10	u	20,00	3	60,00
Cuart3n 10cm x 3cm cepillado	u	3,00	25	75,00
Cuart3n 10cm x 4cm cepillado	u	3,00	15	45,00
List3n 5cm x 4cm cepillado	u	3,00	15	45,00
Tabl3n seike 3mx4cmx20 cm.	u	11,92	20	238,40
Duela de Seike	u	5,00	80	400,00
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Thinner comercial (diluyente tecni thifier laca)	4000 cc	13,95	5	69,75
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Malla M 4 15 (6.25x2.40)	M2	29,43	1	29,43
Clavos chicos 2; 2 1/2", 3", 3 1/2" (30kg)	Caja	63,83	3	191,48
Platina en 3ngulo 12x3mm	u	12,00	2	24
Cuerda metalica galvanizada	m	1,50	175	262,5
Placas 18x18x3mm	u	10,00	22	220
HERRAMIENTAS MENORES				169,32
Carretilla reforzada tomate	u	47,04	1	47,04
Palas	u	9,09	3	27,28
Combo 20 lib.	u	30,00	2	60,00
Barra	u	35,00	1	35


DIRECCION TECNICA Y CONSTRUCCION				3000,00
Técnico T1	u	1000,00	3	3000
BUB TOTAL				9.338,44
COSTOS INDIRECTOS 15%				1.400,77
TOTAL				10.739,20

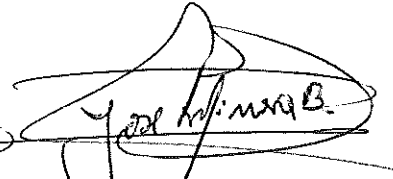
NOTA: Estos valores son referenciales de materiales y no contabilizan mano de obra
 NOTA: no incluye impuestos IVA de costos generales

Arq. Marlown Cuenca Gonzaga
 Técnico Responsable del Presupuesto.

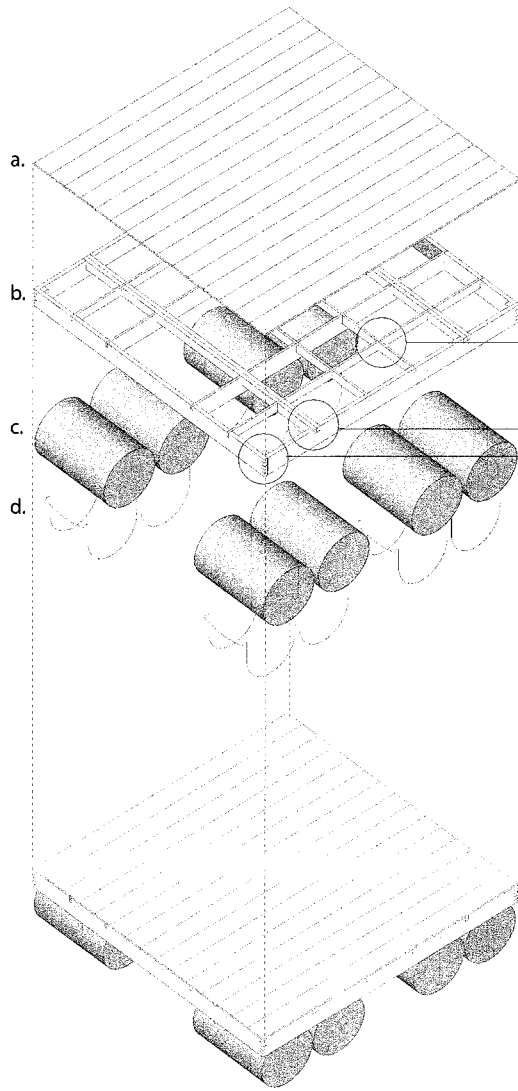



 Estela Aguila

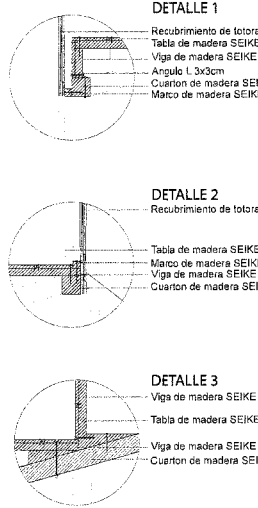

 Gregorio Arango


 Jose Espinosa Burgos

MODULO FLOTANTE 3X3m : DETAILLE CONSTRUCTIVO



- a. Tabla de madera SEIKE 20x300x1,8cm
- b. Viga de madera SEIKE tratada y barnizada (4 unit.20x300x4cm; 2 unit.20x300x2cm; 4 unit. 10x300x2cm; 2 unit. 20x300x8cm)
- c. Tanque de plastigama 55 galiones; d: 58-60; larg. 90cm
- d. Cuerdas de acero; d:1cm



Tanque de plastigama
plastigama
55 galiones;
d: 58-60; larg. 90cm

Escalera de
metal

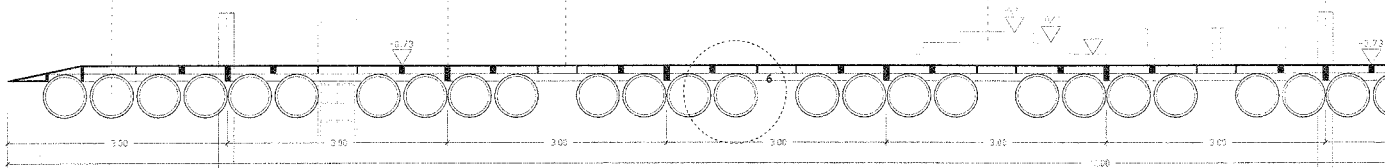
Piso: tablas de madera
SEIKE tratada y barnizada
240x20x1.8cm

Mobiliario de madera
SEIKE tratada y barnizada

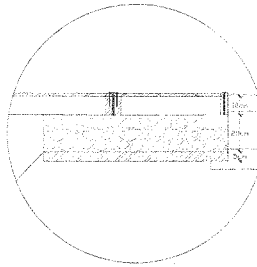
Palos de madera
chonta d:20cm

Malla de madera SEIKE
tratada y barnizada 3x3m

Palos de madera
chonta d:20cm



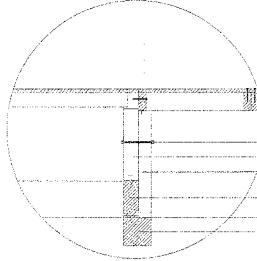
E 20X1,8cm
E 10x4x4cm
KE 10X10cm
E 4X4cm



DETALLE 4

Madera SEIKE tratada y barnizada 1.8x10x240cm
Madera SEIKE tratada y barnizada 4x10x300cm
Gaviones
Mejoramiento de suelo

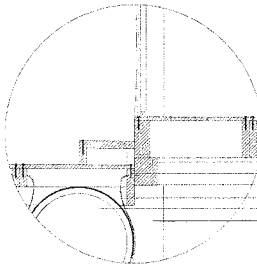
E 20X1,8cm
E 4x4cm
10x4x4cm
KE 10X10cm



DETALLE 5

Perno
Viga de madera SEIKE tratada y barnizada 48x8x8cm
Viga de madera SEIKE tratada y barnizada 58x8x7cm
Viga de madera SEIKE tratada y barnizada 20x8x300cm
Angulo L 3x3cm
Viga de madera SEIKE tratada y barnizada 15x15x300cm

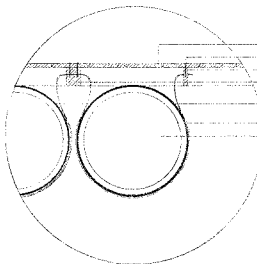
10x4x4cm
E 20X1,8cm
10x4x4cm
KE 10X10cm



DETALLE 6

Viga de madera SEIKE tratada y barnizada 15x15x300cm
Clavo
Viga de madera SEIKE tratada y barnizada 20x4x300cm
Cuerda de acero galvanizada 6.5mm
Tanque de plastico PLASTIGAMA - 55gallones d:58- 90cm
Palo de madera d:20cm

DETALLE 7

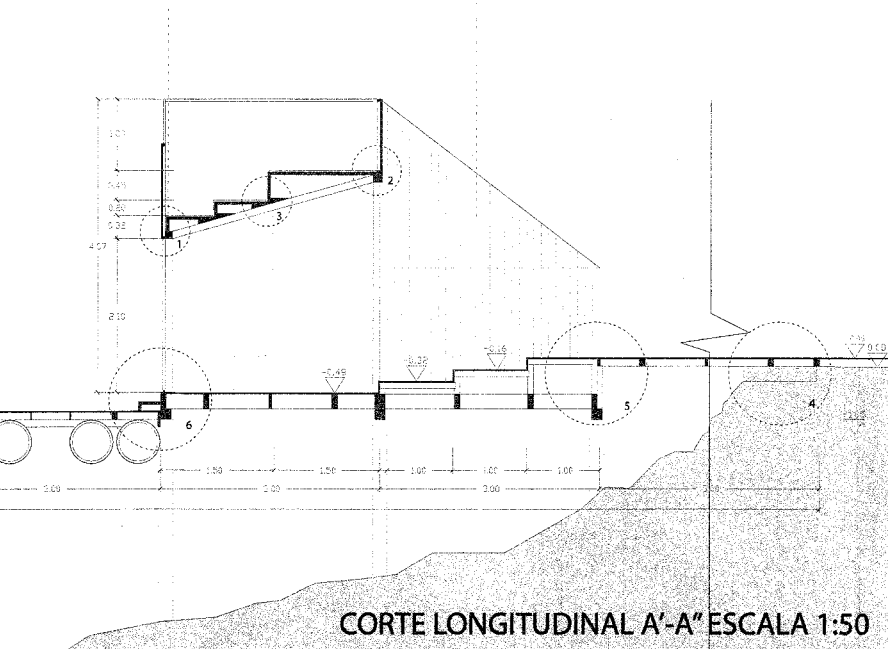


Madera SEIKE tratada y barnizada 1.8x10x240cm
Clavo
Viga de madera SEIKE tratada y barnizada 10x2x300cm
Viga de madera SEIKE tratada y barnizada 10x8x300cm
Cuerda de acero galvanizada d:5mm
Tanque de plastico PLASTIGAMA - model 5492- 55gallones d:58- 90cm

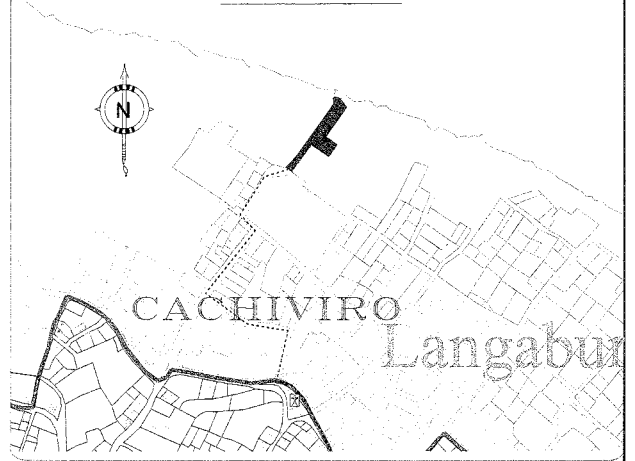
DETALLES CONSTRUCTIVOS 1:20

Estructura de madera SEIKE con palo de 10x10cm

Recubrimiento de totora y carrizo



UBICACION



CONVENIO

UNIVERSIDAD CENTRAL DEL ECUADOR
POLITECNICO DI MILANO

MUELLE FLOTANTE- COMUNIDAD CACHIVIRO ASOCIACION REY MOLA COCHA

COORDINADOR UNIVERSIDAD CENTRAL
Oscar Dario Jara Vinuesa

IDEADO, DISENADO Y ELABORADO POR ESTUDIANTES PRE-PROFESIONALES TRABAJO DE FIN DE CARRERA :

AGNESE GRIGIS
CHIARA OGGIONI
MARTA PETTENI

FACULTAD DE ARQUITECTURA
DEPARTAMENTO DE CORDINACION DE RELACIONES INTERNACIONALES

PROYECTO :
AL RITMO DE LA NATURALEZA: VALORIZACION DE LO QUE HAY CON LO QUE HAY

CONTIENE :

MASTERPLAN
PLANTA ARQUITECTONICA
CORTE ARQUITECTONICO
DETALLES CONSTRUCTIVOS

UBICACION:

COMUNIDAD CACHIVIRO

DIBUJADO POR: ESTUDIANTES

ESCALA: INDICADA

LAMINA: A2 de 2

ETAPA- 1º FASE

FECHA: JULIO 2015

TECNICO RESPONSABLE

Arq. Marlowy Cuenca Gonzaga
Relaciones Internacionales- FAU
GAD M 40 034- 2015

PARROQUIA SAN RAFAEL DE LA LAGUNA

Estela Aguilar Hinojosa
Presidenta GAD San Rafael

PRESIDENTE DE CACHIVIRO

Gregorio Anrango Aguilar
Presidente de Cachiviro

PRESIDENTE ASOCIACION REY MOLA COCHA

Jose Espinosa
Presidente de Rey Mola Cocha

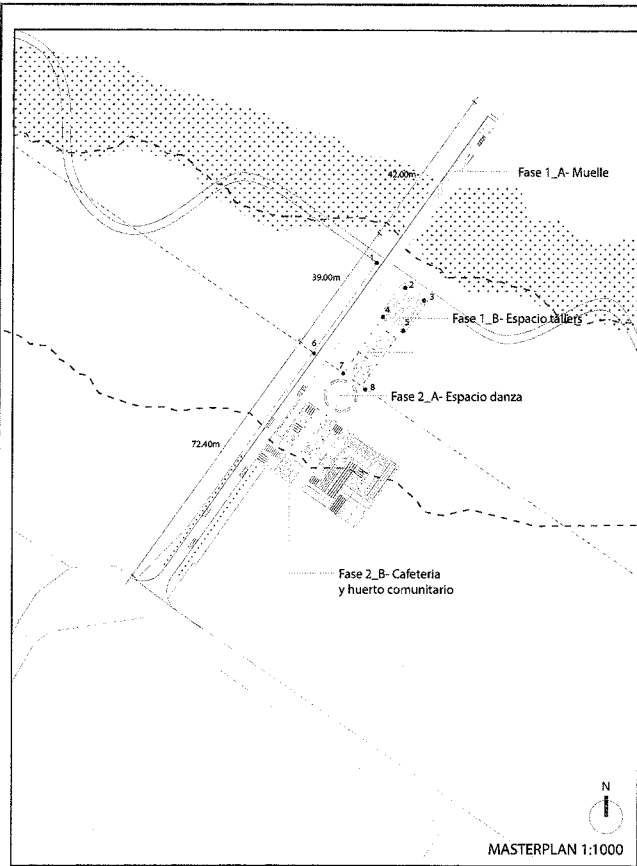
NOTAS TECNICAS:

G.A.D.M CANTÓN OTAVALO
PLANOS APROBADOS
DIRECCIÓN DE PLANIFICACIÓN

REGULACIÓN URBANA Y RURAL
FECHA:

G.A.D.M CANTÓN OTAVALO
PLANOS APROBADOS

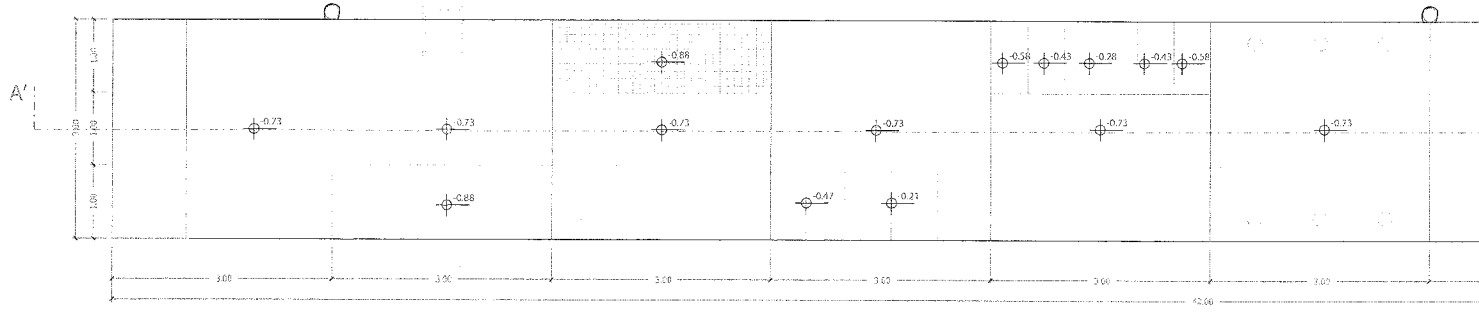
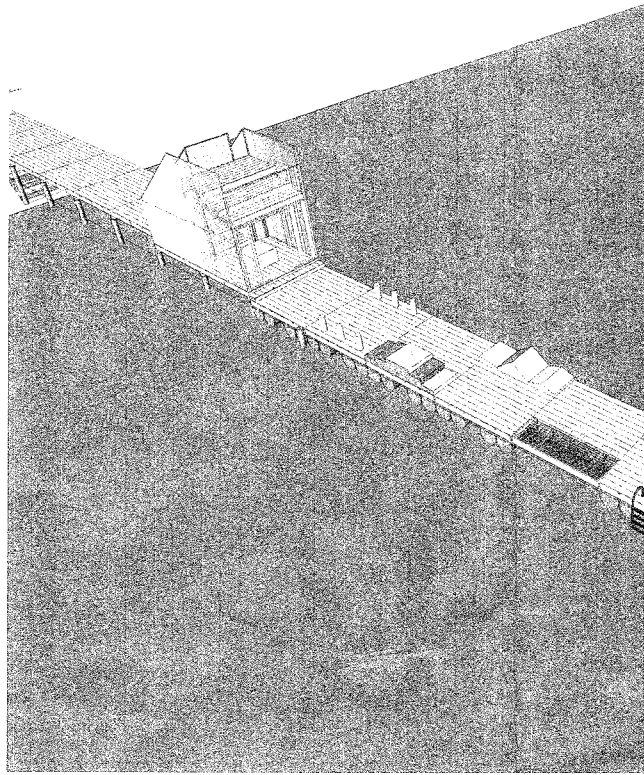
DIRECCIÓN DE PLANIFICACIÓN
FECHA:

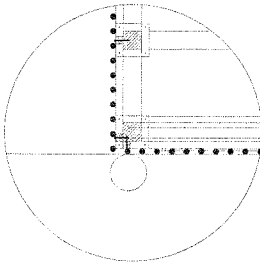
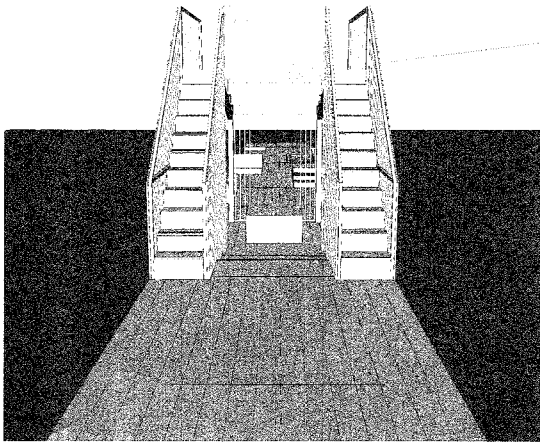
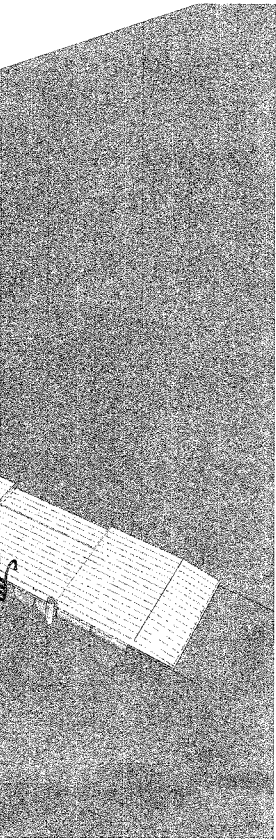


COORDENADAS GEOGRAFICAS DEL AREA:

- 1_ Y: 17 N 0809287- X: UTM 0021936
- 2_ Y: 17 N 0809298- X: UTM 0021930
- 3_ Y: 17 N 0809305- X: UTM 0021928
- 4_ Y: 17 N 0809295- X: UTM 0021922
- 5_ Y: 17 N 0809298- X: UTM 0021920
- 6_ Y: 17 N 0809274- X: UTM 0021912
- 7_ Y: 17 N 0809286- X: UTM 0021908
- 8_ Y: 17 N 0809289- X: UTM 0021904

- Agua
- Entre los 70m
- Area de proteccion 50m + area de amortiguamiento 20m
- Entre los 70m
- Afuera de los 70m

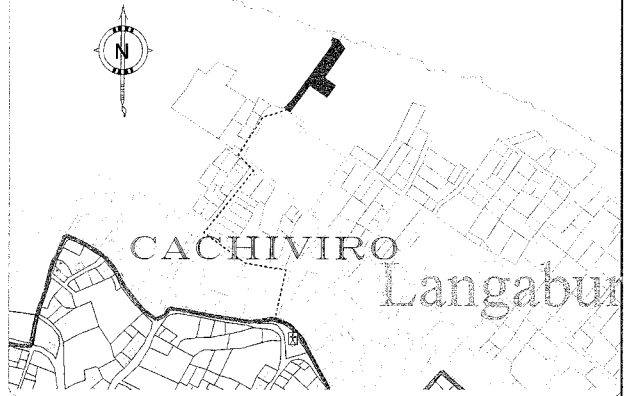




DETALLE A_4 ESCALA 1:20

Cuartern de madera SEIKE tratada y barnizada 10x10cm
 Cuartern de madera SEIKE tratada y barnizada 10x10cm
 Marco de madera SEIKE 4x4cm
 Carrizo 2cm

UBICACION



CONVENIO

- UNIVERSIDAD CENTRAL DEL ECUADOR
- POLITECNICO DI MILANO

MUELLE FLOTANTE- COMUNIDAD CACHIVIRO
 ASOCIACION REY MOLA COCHA

COORDINADOR UNIVERSIDAD CENTRAL
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UBICACION: COMUNIDAD CACHIVIRO

DIBUJADO POR: ESTUDIANTES

ESCALA: INDICADA

LAMINA:
 A 1 de 2

ETAPA- 1º FASE

FECHA:
 JULIO 2015

TECNICO RESPONSABLE

Arq. Marlowyn Cuenca Gonzaga
 Arq. Marlowyn Cuenca Gonzaga
 Relaciones Internacionales- FAU
 6429100 034-2015

PARROQUIA SAN RAFAEL DE LA LAGUNA

Estela Aguilar Hinojosa
 Estela Aguilar Hinojosa
 Presidenta GAD San Rafael

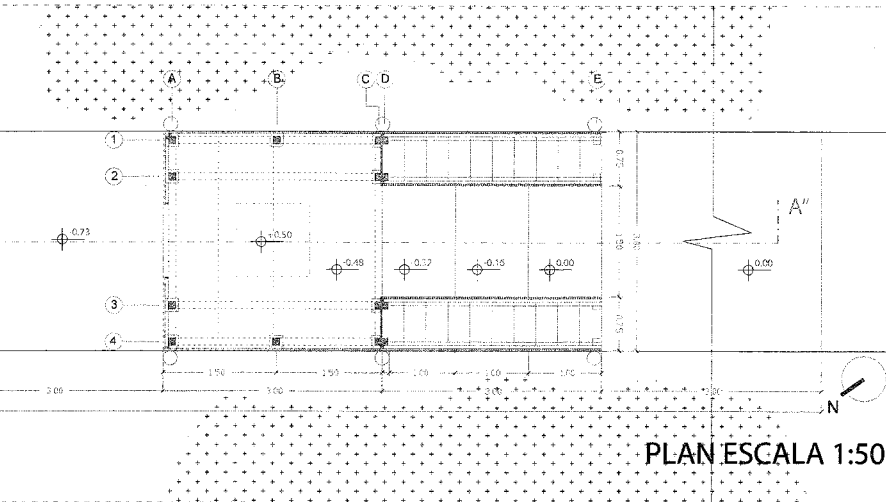
PRESIDENTE DE CACHIVIRO

Gregorio Anrango Aguilar
 Gregorio Anrango Aguilar
 Presidente de Cachiviro

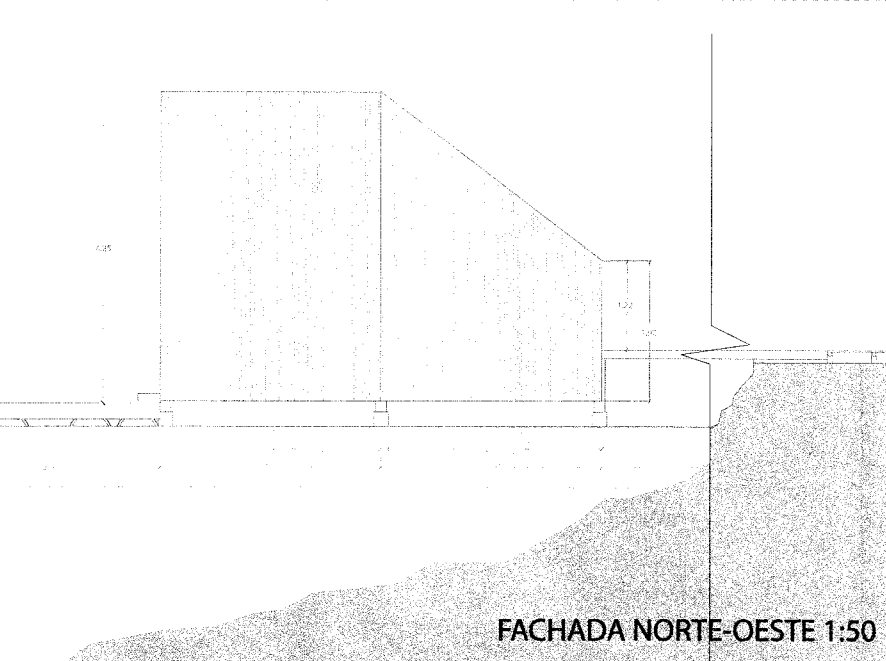
PRESIDENTE ASOCIACION
 REY MOLA COCHA

Jose Espinosa
 Jose Espinosa
 Presidente de Rey Mola Cocha

PLAN ESCALA 1:50



FACHADA NORTE-OESTE 1:50



NOTAS TECNICAS:

Arq. Marlowyn Cuenca Gonzaga

G.A.D.M CANTÓN OTAVALO
 PLANOS APROBADOS
 DIRECCIÓN DE PLANIFICACIÓN

REGULACIÓN URBANA Y RURAL
 FECHA:

Gregorio Anrango Aguilar
 G.A.D.M CANTÓN OTAVALO
 PLANOS APROBADOS

DIRECCIÓN DE PLANIFICACIÓN
 FECHA:

6 JUL 2015

Load capacity calculation:

Official document attesting the load capacity calculation done before building up the prototype of a floating module 3x3meters, signed by Prof. Eng. Maurilio Alaba.



Calculo de la capacidad de carga: Modulo flotante del muelle 3m x 3m = 9m²

VIGAS (grandes) EN MADERA TRIPLEX (peso especifico de la madera triplex = 550Kg/m³)

Medidas: 0,018m x 0,2m x 3m

Cantidad: 10

Volumen: 0,018m x 0,2m x 3m = 0,0108m³

Peso de 1 viga: 0,0108m³ x 550kg/m³ = 5,94Kg

Peso de 10 vigas: 5,94Kg x 10 = **59,4Kg**

VIGAS (pequeñas) EN MADERA TRIPLEX (peso especifico de la madera triplex = 550Kg/m³)

Medidas: 0,018m x 0,5m x 3m

Cantidad: 2

Volumen: 0,018m x 0,5m x 3m = 0,027m³

Peso de 1 viga: 0,027m³ x 550Kg/m³ = 14,85Kg

Peso de 2 vigas: 14,85Kg x 2 = **29,7 Kg**

TABLA (piso) EN MADERA TRIPLEX (peso especifico de la madera triplex = 550Kg/m³)

Medidas: 0,018m x 3m x 3m

Cantidad: 1

Volumen: 0,018m x 3m x 3m = 0,162m³

Peso de 1 viga: 0,162m³ x 550Kg/m³ = **89,1Kg**

Imaginario peor de 20 personas sobre un modulo (0,45 personas para m²): 70Kg x 20 = **1400Kg**

Hipótesis de modulo flotante sobre 8 tanques de plástico (55 galones):

Peso de 1 tanque de 55 galones = 9,5 Kg , Carga que puede sostener = 208Kg

Peso de 8 tanques de 55 galones = 9,5Kg x 8 = **76Kg**

Carga total= 59,4 + 29,7 + 89,1 + 76 + 1400 = **1654,2 Kg**

1654,2:208 = 7,95 = **8 (N° DE TANQUES NECESARIOS/modulo de 3x3m)**

Quito, 30/06/2015

ING.
MAURILIO
ALABA

Pro-formas of wood:

Official pro-formas of wood done in three different places to get the lower price.



DEPOSITO Y CERRAJERIA
SAN FELIPE
 VENTA Y PREPARACION DE TODA CLASE DE MADERA

MATRIZ: Av. Iñaló 58 y Río Corrientes • Telf.: 2867235 • Cel.: 9991197956 / QUITO - ECUADOR

R.U.C. 1708133374001

PROFORMA

Nº 001444

ARRIETA MARQUEZ AMERICA YOLANDA

Cliete: GAS SAN FELIPE DE LA LAGUNA

RUC: 1060019600001 Teléfono: 062949508

Dirección: C/ BOLIVAR UMBANUCHA SAN FELIPE

	DIA	MES	AÑO
Fecha	04	07	2015

CANT.	DESCRIPCION	V. UNIT.	V. TOTAL
90	tablones de Septe. 20x4	20.54	1848.50
364	tabulelos de Septe. 11x18x3	6.25	2275
52	Pregos de 10x4x3m	10.27	534.04
18	Pregos 2x20x3m	10.27	184.86
60	tuos de 5x2x2.40	2.68	160.80
12	Pregos de 10x8x3m	20.54	246.48
4	Pregos de 4x10x3m	10.27	41.08
ABONO: _____ SALDO: _____		Subtotal	5290.26
Son: _____ USD		IVA 0 %	
F. Emisor 		IVA 1.2 %	634.89
F. Adquiriente _____		TOTAL USD	5925.65

ORIGINAL: ADQUIRENTE / COPIA: EMISOR



VILLAMARIN SILVA
JOSE VIRGILIO

RUC. 0501232094001


PROFORMA

Nº 0001689

VENTA DE: Vigas de Chanul y todo tipo de madera de Costa
Sierra y Oriente, Duchas machihembradas - Molduras
Barrederas - Mangones

Dirección: Av. General Rumiñahui S/N y Av. Atahualpa
Telefax: 2871-651 / 0999 739-673
E-mail: tecnimadera@hotmail.com SANGOLQUI - RUMIÑAHUI

Fecha: 06-08-2015
 Cliente: Cobi. Procequia San Rafael de Jal. RUC/CI. 10600196001
 Dirección: Calle Blasius Porque Paita. Telf.: 061918508

Cantidad	DESCRIPCION	VALOR UNITARIO	VALOR TOTAL
90	Toldanes Sij K 230x20x38	18,50	1665
60	Piomas Sij de 230 x 5 x 4.	2,60	156
12	Piezas Sij de 230 x 8 x 8	19.	228
4	Piezas Sij de 230x10x11	9,90	39,60
90	Toldanes Galonado 230 x 20 x 3,80	13,50	1215
364	Toldas Sij de 230 x 14 x 1,8	4,90	1785,60
52	Piomas Sij de 230 x 10 x 3,8	9,90	514,80
18	piezas Sij K 230 x 20 x 1,8	9,40	169,20
 F. AUTORIZADA		SUBTOTAL	5773,20
		DESCUENTO	
		IVA 12%	692,78
		IVA 0%	
		TOTAL USD. \$	6465,98



"EL SEIKE"
CARPINTERIA EN GENERAL

SANI DURAN VICENTE LUCIO

SE VENDE Y SE PREPARA
TODA CLASE DE MADERA

SE TRABAJA TODA CLASE DE
MUEBLES PARA LA CONSTRUCCION
Clósets, Puertas, Muebles de Cocina y Baño, Tapamarcos
Barrederas, Duela, Media Duela, Lacado
y Relacado de sus Muebles

CALIFICACION ARTESANAL

Nº 89307

Dirección: Zamora y Río Pita, Lote Nº 7
Telf.: 2867-510 / 0998 736-690
ALANGASI - QUITO

RUC. 1703905875001
NOTA DE ENTREGA

Nº 0000114

Fecha: 6-8-2015
 Cliente: Ob. Parroquia San Rafael de la
 RUC/CI.: _____ Telf.: _____
 Direc.: Proforma.

CANT.	DESCRIPCION	V. UNITARIO	VALOR TOTAL
120	tablones colorado	15	1800
364	tablas sople 11x1.8	4.80	1747.20
52	lapuercos sople 10x4	9	468
18	tablones colorado 20x1.8	8	144
60	tablas sople 5x1.8	2.30	138
12	puercas sople 8x8	9	108
4	Pistones sople 10x4	0.09	36


FIRMA AUTORIZADA

RECIBI CONFORME

SUBTOTAL	4441.20
IVA 0%	
IVA 2%	532.94
TOTAL USD. \$	4974.14

Pro-formas of plastic tanks:

Official pro-formas of plastic tanks done in three different places to get the lower price.



FERRETERIA " SAN VICENTE "

TODO PARA EL PLOMERO

Distribuidor de Material Sanitario, Griferías, Medidores, Bombas de Agua Hidroneumáticos en las marcas: Myers, FIV, Italiano, Hidro 3, Plastigama, Cobre, Red White, Janeco, Edesa, FV, etc.

PROFORMA

Nº 021990

Matriz: Av. América N17 19 y Río de Janeiro
 Telfax: 2528-676 Cel.: 099 805 139 Quito

Fecha:

Cliete:

Dirección:

R.U.C./C.I.:

Provincia:

	Cant.	DETALLE	V. Unitario	VALOR TOTAL
1	60	Tanques esgalares plstg	37.81	2268.60
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

 PROVEEDOR	TOTAL	
	DESCUENTO	
	SUBTOTAL	2268.60
	IVA 0%	
	IVA 12%	272.23
	TOTAL \$	2540.83

CLIENTE

20001 - 22000

Pro-formas of technical tools:

Official pro-formas of technical tools done in three different places to get the lower price.

FRANQUICIA DISENSA

1792349524001

GARCIA MORENO S7-81 Y JUAN MONTALVO
022344560Comferval Cia. Ltda.
R.U.C. 1792349524001Usuario: vendedor 1
Impreso desde: FACTURACION1
Fecha de Impresión: 04/08/2015 18:18:47
Page 1 of 1**COTIZACIÓN No. 0005053**

Tipo Venta: PUNTO DE VENTA 1

Caja: CAJA GENERAL 1

Cliente: 9999999999999 - CONSUMIDOR FINAL: GAO PARROQUIAL SAN RAFAEL DE LA UAGUANA

Dirección: CONSUMIDOR FINAL: C/ BOLIVAR Y IMBAWUCHA, SAN RAFAEL

Teléfono: 062918508

RUC: 106001960000-1

Fecha de Emisión: 04/08/2015 18:18:44

F. Validez: 31/12/2015 18:18:44

Código	Descripción	Cantidad	Unidad	Precio	Subtotal
1-00001853	KALIPEGA DE 1 GALON	1.00	UNIDAD	44.6429	44.6400
1-00004654	TIÑER GALON	4.00	UNIDAD	5.5357	22.1400
1-00003552	BARNIZ CRISTAL GALON	10.00	UNIDAD	18.4821	184.8200
1-00003653	MADEROL GALON.	10.00	UNIDAD	12.0536	120.5400
1-00005310	TORNILLO YESO 8X3	5.00	UNIDAD	2.5000	12.5000
1-00005637	TORNILLO YESO 8*11/2	30.00	UNIDAD	1.1607	34.8200
1-00007044	CABLE ACERO 1/4"	125.00	METLIN	1.0714	133.9300

seiscientos diecinueve y 80 / 100

ESTO ES UNA COTIZACION, NO REPRESENTA UN DOCUMENTO
LEGAL.

Subtotal gravado:	12.00 %	553.39
Subtotal exento:	0 %	0.00
Descuento:	0.0000 %	0.00
Subtotal gravado descuento:		553.39
Subtotal exento descuento:		0.00
IVA:		66.41
ICE:		0.00
Total:		619.80

COMERCIAL KYW S.A

ALTOIMPRESORES AUTOMATIZACION S.R.L. 1116449266 DEL 23/FEB/2015
CONTRI BUENTE ESPECIAL- RESCL. SRI. 5368

AGENCIA 08 (SAN RAFAEL)
RLC : 1790041220001
TELF : 864908
CIUDAD: QUITO

PROFORMA No. 292762
DOCUMENTO SIN VALOR COMERCIAL

RLC : 1060019600001 Cod. Cliente: 888885 0
Sr.(s) : CCB. PARRCO SAN RAFAEL DE LA LAGUNA
DI RECCION : CTA/ALO SAN RAFAEL CALLE BOLI VAR. PARQUE CENTRAL
TELEFONO: 062918508
VENDEDOR : FREDDY HENEDIA

FECHA DE EMISION: 2015/08/06 Pag.: 1
VALIDO HASTA : 2015/10/30

MATERIALES VARIOS

19

CODIGO	DESCRIPCION	CANT.	PREC-UNIT	TOTAL
27766	BROCHA LI ZA 6" MANCO BLANCO	10	7,535714	75,36
28088	KLI MA BARN Z MATE/EXTERIOR CL	10	27,419643	274,20
28851	SUPER MADERA 1CL	10	11,919643	119,20
29351	THINNER TECN LACA CL	5	15,589286	77,95
59137	TORNILLO NEGRO 2 1/2X6 P/ACRILERADO	500	0,035714	17,86
59161	TORNILLO NEGRO 1 1/2X8 P/ACRILERADO	2000	0,026786	53,57
187496	PEGA TUBOS PVC 3785CC KALI PEGA	1	44,473214	44,47
483605	JCO GRI LLETES 1/8" 20PZ MIBRO	5	6,357143	31,79
625485	COMBO C/MANCO 8LB 36" TRUPER	2	23,651786	47,30
760560	CABLES ACERO ACERO PVC 7X7 3/32" FIERO	130	0,401786	52,23

* --- > CODIGOS EXENTOS DE IVA	SUBTOTAL	:	793,93
	IVA	:	95,27
PAGLE COMO PAGLE KYW LE OFRECE LOS MEJORES PRECIOS	TOTAL	:	889,20

FI RMA : 
COMERCIAL KYW S.A

FI RMA : _____
CL IENTE

Esta Proforma tiene validez solo con el nombre, firma del vendedor y sello de COMERCIAL KYW S.A

En el caso de existir cambios en los precios de nuestros proveedores nos veremos obligados a actualizar precios en el momento de la facturación previo su conocimiento.


Autorizado
2015-08-06

Invoices of winning pro-formas:

Official invoices of wood, plastic tanks and technical tools done in the three winning places.



DEPOSITO Y CERRAJERIA
SAN FELIPE

VENA Y PREPARACION DE TODA CLASE DE IMPRESA

MATRIZ: Av. Bolívar 58 y Río Corrientes

SUCURSAL: Urb. Mirasierra Av. Bolívar s/n • Telf.: 2867235 • Cel.: 0991197556 / QUITO - ECUADOR

CONTRIBUYENTE OBLIGADO A LLEVAR CONTABILIDAD

R.U.C. 1708133374001
FACTURA
S 002-001-00 0024277
ARRIETA MARQUEZ AMERICA YOLANDA
FECHA DE AUTORIZACION: 15 DE MAYO DEL 2016
FECHA DE CADUCIDAD: 15 DE MAYO DEL 2016
AUT. SRI. 1116922850

Cliete: *Cob. Parroquial San Rafael de Otavalo*

RUC. *1060019600001* Teléfono: _____

Dirección: *Otavalo - San Rafael*

	DIA	MES	AÑO
Fecha			

CANT.	DESCRIPCION	V. UNIT.	V. TOTAL
90	tablonas de Seike 20x4x3	20,54	1848,50
364	tablillas de Seike 11x18x3	6,25	2275
52	Piezas de 10x4x3 mt.	10,27	534,04
18	Piezas de 2x20x3 mt.	10,27	184,86
60	tiras de 5x2x2,40	2,68	160,80
12	Piezas de 10x8x3 mt.	20,54	246,48
4	Piezas de 4x10x3 mt	10,27	41,08
ABONO: _____ SALDO: _____		Subtotal	5290,26
Son: _____ USD		IVA 0 %	
F. Emisor _____ F. Adquiriente _____		IVA 1,2 %	634,89
		TOTAL USD	5925,65

ARSOLEDA JARA ALVARO LEONEL - A&C IMPRESORES - R.U.C. 1712093287001 - Aut SRI 3509 - Del 28601 al 024800
ORIGINAL: ADQUIRENTE / COPIA CELESTE: EMISOR / COPIA AMARILLA: SIN DERECHO A CREDITO TRIBUTARIO (ARCHIVO)



PROVEEDORES DE SERVICIOS Y MATERIALES AL POR MAYOR Y MENOR DE
 CONSTRUCCIÓN, PINTURA, ELECTRICIDAD
 Matriz.: Ramírez Av. 10 de Agosto N15-21 y Ríofrío
 Dirección: Local Comercial Av. 10 de Agosto y Ramírez Dávalos S/N.
 E-mail: adm@macroferreteria.com
 www.macroferreteria.com

BONILLA TAPIA JESSICA SUSANA
 RUC: 1716797848001
FACTURA
 S-002-001- 0006009
 Aut. SRI: 1116890514
 Fecha de Autorización: 06/ABRIL/2015
 Documento Categorizado: NO



Gobierno Autónomo Descentralizado parroquial rural
 San Rafael de la Laguna.
 Quito, 2015/08/06
 Pdvsa, Imbachiudo San Rafael
 1060019600001
 062918508

x10 Breda Liza 6"	5.95 con IVA	59.50
x10 Barniz Mate Exterior Galon *	26.10 con IVA	261.00
x10 Modelol Galon	15.50 con IVA	155.00
P x5 thiner Galon laca	7.20 con IVA	36.00
x20 Cajas de 100 unidades Tornillo Negro 1 1/2 x 8.	3.20 con IVA	16.00
x5 Cajas de 100 unidades Tornillo N2 1/2 x 8	2.25 con IVA	45.00
P x1 Galipega 3785 CC.	48.00 con IVA	48.00
x5 Juego Giletas 1/8." 20 P2.	8.00 con IVA	40.00
x2 Combos 8 libras 36"	20.00 con IVA	40.00
x130 Cable Acero PUC 7x7 3/32"	0.45 con IVA	58.50
		Total con IVA: 759.00

RECIBI CONFORME
 INCHIGLEMA LEMA MARIO PATRICIO RUC: 1707078348001 AUT. 7751 • CEL: 0990251002 • Email: graficas@hotmail.com • TEL 0004801 AL 0006900
 ORIGINAL CLIENTE • COPIA EMISOR
 VENDEDOR
 VALIDO HASTA 06/ABRIL/2016

Records of delivery:

Acta de entrega recepción provisional pp. 405

Official document attesting the record of delivery about carpenters work (boardwalk and mirador with stairs) signed by us and Prof. Arch. Marlown Cuenca.

Acta de entrega recepción definitiva pp. 407

Official document attesting the record of delivery about the whole work (floating modules included) signed by us and Prof. Arch. Marlown Cuenca.



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO
CARRERA DE ARQUITECTURA

Quito, 10 de Septiembre de 2015

Sra.

ESTELA AGUILAR

PRESIDENTA DE LA PARROQUIA DE SAN RAFAEL DE LA LAGUNA
ECUADOR

Presente

ACTA DE ENTREGA
RECEPCION PROVISIONAL DE LA OBRA:

FISCALISACION DEL TRABAJO DE CARPINTERIA EN LA
CONSTRUCCION DE MUELLE-MIRADOR

En la comunidad de Cachiviru, en la parroquia de San Rafael de la Laguna, a los 17 días de Septiembre 2015 los técnicos llegaron a las 12.15 para la reunión con la Presidenta de la parroquia Estela Aguilar.

Se efectúan las observaciones a la obra entregada por los carpinteros detallando las siguientes observaciones:

1. Pasamano no limado
2. Tablas de duelas con fallas
3. Filo de pasamano
4. Pernos salidos
5. Tiras viejas
6. Hueco en el inicio de la grada
7. Falta de una tabla abajo del mirador
8. Huecos en la grada superior del mirador

A las 17.00 los técnicos vuelven al sitio para averiguar las modificaciones pedidas. Se han corregido las fallas observadas en los puntos anteriores.

MISIÓN

Formar profesionales en los campos del diseño arquitectónico, urbano, construcción edilicia, conservación y rehabilitación del patrimonio material, inmaterial y natural y el ordenamiento del territorio; con una sólida base científica, técnica, ambiental y humanística; en la teoría y en la práctica, con una estructura instrumental flexible que permita actualizar permanente y dinámicamente el conocimiento arquitectónico y urbano, diversificar la actividad profesional y adaptarla a los procesos de cambio de acuerdo a las demandas presentes y futuras de la sociedad.

VISIÓN

La Facultad de Arquitectura y Urbanismo de la Universidad Central del Ecuador, será una institución académica innovadora a la vanguardia de la investigación y producción del pensamiento crítico para el manejo planificado y creativo del hábitat humano, integrando los avances científicos, tecnológicos, estéticos, ambientales con identidad propia, que respondan a las demandas del cambio nacional y global instrumentalizando permanentemente los procesos de calidad y la excelencia académica.



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO
CARRERA DE ARQUITECTURA

Atte profesor responsable

ARQ. MARLOWN CUENCA GONZAGA

Arq. Pre professionale MARTA PETTENI

Arq. Pre professionale CHIARA OGGIONI

Arq. Pre professionale AGNESE GRIGIS

MISIÓN

Formar profesionales en los campos del diseño arquitectónico, urbano, construcción edilicia, conservación y rehabilitación del patrimonio material, inmaterial y natural y el ordenamiento del territorio; con una sólida base científica, técnica, ambiental y humanística; en la teoría y en la práctica, con una estructura instrumental flexible que permita actualizar permanente y dinámicamente el conocimiento arquitectónico y urbano, diversificar la actividad profesional y adaptarla a los procesos de cambio de acuerdo a las demandas presentes y futuras de la sociedad.

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UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO
CARRERA DE ARQUITECTURA

**ACTA DE ENTREGA RECEPCION DEFINITIVA DE LAS OBRAS:
MUELLE-MIRADOR KAYMANTA**

- A. CONSTRUCCION DE GAVION
- B. CONSTRUCCION DE PASARELA Y MUELLE-MIRADOR
- C. CONSTRUCCION DE LOS MODULOS FLOTANTES

En la comunidad de Cachiviru, en la Parroquia de San Rafael de la Laguna, a los 17 días de Septiembre 2015 se reúnen los miembros de la Junta Parroquial de San Rafael de la Laguna encargados de efectuar la recepción definitiva del CONTRATO DE EJECUCION DE LA OBRA MUELLE-MIRADOR KAYMANTA, la misma que esta integrada de la siguiente manera: Sra. Estela Aguilar Presidenta de la Junta Parroquial de San Rafael y administradora de la obra, y los profesores de la Universidad Central Arq. MARLOWN CUENCA GONZAGA y Arq. PATRICIO YACELGA, y las estudiantes pre-profesionales Marta Petteni, Chiara Oggioni y Agnese Grigis, quienes en calidad veedores designados por la Universidad Central dentro del convenio de vinculación nro. 123456789, quienes convienen en suscribir la presente ACTA DE ENTREGA RECEPCION DEFINITIVA de las obras, al tenor de las siguientes clausulas:

Los contratos se ejecutaron de acuerdo a PRESUPUESTO REFERENCIAL aceptado por la Junta Parroquial, suscrito 25 de julio Entre la Junta parroquial de San Rafael de la Laguna y los profesores designados por la Universidad Central Facultad de Arquitectura, para la veeduría de las obras.

PRIMERA: ANTECEDENTES

Los trabajos se ejecutaron de acuerdo a lo establecido por el GAD de San Rafael y la Facultad de Arquitectura de la Universidad Central del Ecuador, suscrito el 9 de Junio 2015, dentro del marco de proyecto de vinculación con la sociedad, en calidad de veeduría de las obras.

A. CONSTRUCCION DE GAVION

MISIÓN

Formar profesionales en los campos del diseño arquitectónico, urbano, construcción edilicia, conservación y rehabilitación del patrimonio material, inmaterial y natural y el ordenamiento del territorio; con una sólida base científica, técnica, ambiental y humanística; en la teoría y en la práctica, con una estructura instrumental flexible que permita actualizar permanente y dinámicamente el conocimiento arquitectónico y urbano, diversificar la actividad profesional y adaptarla a los procesos de cambio de acuerdo a las demandas presentes y futuras de la sociedad.

VISIÓN

La Facultad de Arquitectura y Urbanismo de la Universidad Central del Ecuador, será una institución académica innovadora a la vanguardia de la investigación y producción del pensamiento crítico para el manejo planificado y creativo del hábitat humano, integrando los avances científicos, tecnológicos, estéticos, ambientales con identidad propia, que respondan a las demandas del cambio nacional y global instrumentalizando permanentemente los procesos de calidad y la excelencia académica.



UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO
CARRERA DE ARQUITECTURA

- B. CONSTRUCCION DE PASARELA Y MUELLE-MIRADOR
- C. CONSTRUCCION DE LOS MODULOS FLOTANTES

Dentro de la jurisdicción de la Junta Parroquial de San Rafael de la Laguna, con un valor presupuestado de 13.000 dólares, fondos manejados por el mismo GAD de San Rafael de la Laguna, procedieron a la compra de materiales y contratación de obreros. Con el depósito de los anticipos a los carpinteros se pactó con el personal de carpintería la entrega de la obra en tres semanas. Los materiales fueron comprados por parte del GAD y depositados en el sitio de trabajo. Los carpinteros empezaron a trabajar el día primero de Septiembre 2015.

SEGUNDA: SOLECITUD

Mediante el presente oficio procedemos a solicitar la entrega recepción definitiva de la obra muelle-mirador KAYMANTA, el 19 de septiembre , la comisión encargada de la recepción procede a la inspección previa a la recepción definitiva del contrato, quienes luego de la última constatación física de la misma determinan que no existe observaciones por lo que procede a la recepción definitiva de la obra.

TERCERA: RECEPCION

Con los antecedentes expuestos se procede a recibir definitivamente las obras de contrato:

- A. CONSTRUCCION DE GAVION
- B. CONSTRUCCION DE PASARELA Y MUELLE-MIRADOR
- C. CONSTRUCCION DE LOS MODULOS FLOTANTES

CUARTA: LIQUIDACION DE PLAZOS

De acuerdo a los plazos estipulados para la construcción del muelle-mirador KAYMANTA se ha acordado con las autoridades comunales 3 semanas para la construcción del muelle-mirador y la pasarela de acceso, y 2 semanas para la construcción de los módulos flotantes y el pasamano.

Siendo la obra gestionada y dirigida por la misma comunidad, las fechas se limitan a los tiempos de ejecución de la obra por parte de los obreros contratados.

La Facultad de Arquitectura de la Universidad Central se limita a observar y fiscalizar los trabajos para una buena ejecución de obra

MISIÓN

Formar profesionales en los campos del diseño arquitectónico, urbano, construcción edilicia, conservación y rehabilitación del patrimonio material, inmaterial y natural y el ordenamiento del territorio; con una sólida base científica, técnica, ambiental y humanística; en la teoría y en la práctica, con una estructura instrumental flexible que permita actualizar permanente y dinámicamente el conocimiento arquitectónico y urbano, diversificar la actividad profesional y adaptarla a los procesos de cambio de acuerdo a las demandas presentes y futuras de la sociedad.

VISIÓN

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UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE ARQUITECTURA Y URBANISMO
CARRERA DE ARQUITECTURA

QUINTA: CONCLUSIONES

Por lo expuesto, la Comisión declara su conformidad con la ejecución de las obras objeto de esta recepción, en la que se ha construido las obras enunciadas anteriormente, ubicadas en la parroquia de San Rafael. En consecuencia se dan por recibidas las obras definitivamente.

Para constancia de lo actuado los integrantes de la Comisión Técnica conformada por la Recepción, suscriben la presente Acta de Entrega- Recepción Definitiva, en original y 5 copias de igual tenor y en el lugar y fecha antes indicados.

San Rafael de la Laguna, a 19 Días de mes de septiembre 2015

ESTELA AGUILAR
PRESIDENTA DE LA JUNTA
DE LA UCE
PARROQUIAL DE SAN RAFAEL

ARQ. PATRICIO YASELGA
PROFESOR

RAMON BURGA
VOCAL DE LA JUNTA PARROQUIAL
DE LA UCE
DE SAN RAFAEL

ARQ. MARLOWN CUENCA GONZAGA
PROFESOR

MARTA PETTENI
ESTUDIANTE PRE-PROFESIONAL
PROFESIONAL

CHIARA OGGIONI
ESTUDIANTE PRE-

AGNESE GRIGIS

MISIÓN

Formar profesionales en los campos del diseño arquitectónico, urbano, construcción edilicia, conservación y rehabilitación del patrimonio material, inmaterial y natural y el ordenamiento del territorio; con una sólida base científica, técnica, ambiental y humanística; en la teoría y en la práctica, con una estructura instrumental flexible que permita actualizar permanente y dinámicamente el conocimiento arquitectónico y urbano, diversificar la actividad profesional y adaptarla a los procesos de cambio de acuerdo a las demandas presentes y futuras de la sociedad.

VISIÓN

La Facultad de Arquitectura y Urbanismo de la Universidad Central del Ecuador, será una institución académica innovadora a la vanguardia de la investigación y producción del pensamiento crítico para el manejo planificado y creativo del hábitat humano, integrando los avances científicos, tecnológicos, estéticos, ambientales con identidad propia, que respondan a las demandas del cambio nacional y global instrumentalizando permanentemente los procesos de calidad y la excelencia académica.

Libro de obra:

Day-by-day construction diary where we took note of the people present on site, the weather conditions in the morning and in the afternoon, the working days, the instruments used and the activities done.

It has been signed at the end of each day by us and the President of Cachiviru Community Gregorio Anrango.

LIBRO DE OBRA – Hoja N° ① – INICIO DE OBRA

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlow Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (LUNES) 24/08/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	AUXILIARES
2	0	1	1

EQUIPO:

Herramienta manual Herramienta mayor: RETROESCAVADORA

ACTIVIDAD DIARIA:

- A. 14 LLEGADA DEL AUXILIAR DEL MUNICIPIO DE OTAVALO CON RETROESCAVADORA.
- SE HA QUITADO UNA MALLA DE METAL DE LA ORILLA DE LA LAGUNA PRECEDENTEMENTE UTILIZADA PARA NAVEGAR.
- SE HA LIMPIADO Y NIVELADO EL SUELO CON RETROESCAVADORA Y SE HIZO MOVIMIENTO DE TIERRA (HUELO DE 3x1x1 m) PARA PONER EL GAVION DE PIEDRAJ.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° (2)

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: 25/08/2015 (MARTES)

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	AUTORIDADES
4	2	5	JUNTA PARROQUIAL

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ACTIVIDAD PREVISTA : - LIMPIEZA DE LA TOTORA
- POSICIONAMIENTO DE MALLA DE GAVION
- REPLANTEO EN SITU
- CLAVADO DE CHONTAS
- ACTIVIDAD REALIZADA : - LIMPIEZA DE LA TOTORA
- TRAMITES PARA COMPRA DE MATERIALES EN OTAVALO
- ENCUENTRO ENTRE CARPINTEROS Y AUTORIDADES DE LA JUNTA PARROQUIAL PARA DISCUTIR CUESTIONES ECONOMICAS


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (3)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: 26/08/2015 (MIÉRCOLES)

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	0		

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ACTIVIDAD PREVISTA : " LLEGADA DE LA MADERA
- TRATAMIENTO DE LA MADERA
- ACTIVIDAD REALIZADA : NINGUNA
(LA MADERA NO LLEGO ' EJE DIA)


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° ④

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: 27/08/2015 (JUEVES)

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

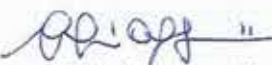
TECNICOS	CARPINTEROS	AYUDANTES	
4	0	12	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 10 TENIAN QUE LLEGAR LOS CARPINTEROS PERO NO VINIERON.
- A. 14 LLEGADA DE LA MADERA EN SITU (TENIA QUE LLEGAR A LAS 10)
- SE POSICIONO LA MADERA DIVIDIDA SEGUN MEDIDAS DIFERENTES EN LA CASITA DE MADERA EN LA ORILLA DEL LAGO (EN SITU)
- TODAS LAS PIETAS ENTREGADAS SON CORRECTAS EXCEPTO POR 40 VIGAS DE COLORADO DE 6 X 13 X 4 m (TENIAN QUE SER DE 6 X 6 X 4 m); SE DECIDIO DE MANTENER 4 VIGAS DE 6 X 13 X 4 m MIENTRAS QUE LAS OTRAS 6 FUERON TRANSPORTADAS EN UN ASERRADERO DE OTAVALO PARA HALLERLAS CORTAR CON MEDIDAS 6 X 6 X 4 m.
- SE REALIZO UNA CARTA DE ENTREGA FIRMADA POR JOSE PEÑA COMO REPRESENTANTE DE LA COMUNIDAD Y LOS TECNICOS.


Encargado de la construcción


Representante de la Comunidad

CARTA DE ENTREGA

27/08/2015 R. 15.30

MADERA ENTREGADA:

COLORADO

- Nº 19 → 6 x 13 x 6 m ✓
- Nº 12 → 6 x 6 x 4 m ✓
- Nº 4 → 6 x 13 x 4 m
- Nº 6 → 6 x 13 x 3 m ✓
- Nº 3 → 5 x 4 x 6 m ✓

SEIKE

- Nº 2 → 23 x 8 x 3 m ✓
- Nº 24 → 10 x 8 x 3 m ✓
- Nº 28 → 20 x 4 x 3 m ✓
- Nº 15 → 20 x 2 x 2,40 m ✓
- Nº 22 → 20 x 2 x 3 m ✓
- Nº 20 → 4 x 10 x 3 m ✓
- Nº 30 → 5 x 2 x 1,20 m ✓
- Nº 28 → 11 x 2 x 3 m ✓
- Nº 527 → 11 x 2 x 2,40 m ✓

MATERIALES EN EL SITIO:

- MADERA
- PIEDRA
- MODULO PROTOTIPO ARMADO
CON 10 TANQUES DE PLASTICO
SS GALONES

JOSÉ PEÑA



CHIARA CEGIONI



MARTA PETTENI



AGNESE GRIGIS





DEPOSITO Y CERRAJERIA SAN FELIPE

VENTA Y PREPARACION DE TODA CLASE DE MADERA

MATRIZ: Av. Ijaló 58 y Río Corrientes

SUCURSAL: Urb. Mirasierra Av. Ijaló s/n • Telf.: 2867235 • Cel.: 0991197956 / QUITO - ECUADOR

CONTRIBUYENTE OBLIGADO A LLEVAR CONTABILIDAD

RUC: 1708133374001
ARRIETA MARQUEZ AMERICA YOLANDA
GUÍA DE REMISIÓN
S 002-001-000 005284
FECHA DE AUTORIZACION: 15 DE ENERO / 2015
FECHA DE CADUCIDAD: 15 DE ENERO / 2016
AUT. SRI. 1116239944

FECHA DE INICIACIÓN DEL TRASLADO: 27-08-2015 COMPROBANTE DE VENTA: 24227

FECHA DE TERMINACIÓN DEL TRASLADO: 27-08-2015 FECHA DE EMISIÓN: 06-08-2015

MOTIVO DE TRASLADO:

- | | | |
|---|--|--------------------------------------|
| <input checked="" type="checkbox"/> VENTA | <input type="checkbox"/> TRASLADO ENTRE ESTABLECIMIENTOS DE UNA MISMA EMPRESA | <input type="checkbox"/> DEVOLUCIÓN |
| <input type="checkbox"/> COMPRA | <input type="checkbox"/> TRASLADO POR EMISOR ITINERANTE DE COMPROBANTES DE VENTA | <input type="checkbox"/> IMPORTACIÓN |
| <input type="checkbox"/> TRANSFORMACIÓN | | <input type="checkbox"/> EXPORTACIÓN |
| <input type="checkbox"/> CONSIGNACIÓN | | <input type="checkbox"/> OTROS |

FECHA DE EMISIÓN: <u>27-08-2015</u>	IDENTIFICACIÓN DE LA PERSONA ENCARGADA DEL TRANSPORTE
PUNTO DE PARTIDA: <u>Urb Mirasierra</u>	NOMBRE O RAZÓN SOCIAL: _____
DESTINATARIO: <u>Parroquia San Rafael de Jajama</u>	NOMBRE O RAZÓN SOCIAL: <u>Esteban Calderón</u>
NOMBRE O RAZÓN SOCIAL: _____	RUC o C.I.: <u>106001600001</u>
RUC / C.I.: _____	RUC o C.I.: <u>106001600001</u>
PUNTO DE LLEGADA: <u>Atacollo</u>	

BIENES TRANSPORTADOS

CANTIDAD	DESCRIPCIÓN	UNIDAD
28	tablonos seyke 20x4x3mt	
22	tabla seyke 20x2x3mt	
20	pilares seyke 10x4x3mt	
30	tablilla seyke 5x2x120mt	
500	tablilla seyke 11x0.8x240mt	
14	pilares seyke 18x8x3mt	
15	tablas seyke 20x2x240mt	
2	doble piedra seyke 23x8x3mt	

ARBOLEDA JARA ALVARO LEONEL - A&G IMPRESORES - R.U.C. 1712093267001 - Aut.SRI. 3909 - Del 005001 al 005600
ORIGINAL: ADQUIRENTE / COPIA CELESTE: EMISOR / COPIA AMARILLA: S.R.I. Documento Categorizado: NO

EMISOR

TRANSPORTISTA

Esteban Calderón
DESTINATARIO



SAN FELIPE

VENA Y PREPARACION DE TODA CLASE DE MADERA

MATRIZ: Av. Ijaló 58 y Río Corrientes

SUCURSAL: Urb. Mirasierra Av. Ijaló s/n • Telf.: 2867235 • Cel.: 0991197956 / QUITO - ECUADOR

CONTRIBUYENTE OBLIGADO A LLEVAR CONTABILIDAD

GUÍA DE REMISIÓN	
S 002-001-000	005285
FECHA DE AUTORIZACION: 15 DE ENERO / 2015	
FECHA DE CADUCIDAD: 15 DE ENERO / 2016	
AUT. SRI. 1116239944	

FECHA DE INICIACIÓN DEL TRASLADO: 27-08-2015 COMPROBANTE DE VENTA: 24428

FECHA DE TERMINACIÓN DEL TRASLADO: 23-08-2015 FECHA DE EMISION: 27-08-2015

MOTIVO DE TRASLADO:

- | | | |
|---|--|--------------------------------------|
| <input checked="" type="checkbox"/> VENTA | <input type="checkbox"/> TRASLADO ENTRE ESTABLECIMIENTOS | <input type="checkbox"/> DEVOLUCIÓN |
| <input type="checkbox"/> COMPRA | <input type="checkbox"/> DE UNA MISMA EMPRESA | <input type="checkbox"/> IMPORTACIÓN |
| <input type="checkbox"/> TRANSFORMACIÓN | <input type="checkbox"/> TRASLADO POR EMISOR ITINERANTE | <input type="checkbox"/> EXPORTACIÓN |
| <input type="checkbox"/> CONSIGNACIÓN | <input type="checkbox"/> DE COMPROBANTES DE VENTA | <input type="checkbox"/> OTROS |

FECHA DE EMISIÓN: 27-08-2015
 PUNTO DE PARTIDA: Urb. Mirasierra
 DESTINATARIO: Financiera San Rafael de Lagunas
 NOMBRE O RAZÓN SOCIAL:
 RUC / C.I.: 1060019600001
 PUNTO DE LLEGADA: Otavalo

IDENTIFICACIÓN DE LA PERSONA ENCARGADA DEL TRANSPORTE

NOMBRE O RAZÓN SOCIAL: Gustavo Calderón
 RUC o C.I.: 1704467503

BIENES TRANSPORTADOS

CANTIDAD	DESCRIPCIÓN	UNIDAD
6	Vigas colorado 6x13x3 mt	
9	Vigas colorado 6x13x6 mt	
10	Vigas colorado 10x8x3 mt	
3	Vigas colorado 5x4x6 mt	
10	Vigas colorado 6x6x4 mt	
28	tablillas scyke 11x2x3 mt	
10	Vigas colorado 6 mt	

0987205326

ARBOLEDA JARA ALVARO LEONEL - A&G IMPRESORES - R.U.C. 1712093267001 - Aut.SRI. 3909 - Del 005001 al 005600
ORIGINAL - ADHERENTE / COPIA CELESTE : EMISOR / COPIA AMARILLA : S.R.I. Documento Categorizado: NO

EMISOR

TRANSPORTISTA

DESTINATARIO

LIBRO DE OBRA -- Hoja N° 5

NOMBRE DE LA OBRA: Kaymanta -- muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Mariown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: 28/08/2015 (VIERNES)

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

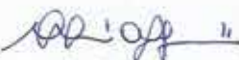
TECNICOS	CARPINTEROS	AYUDANTES	
4 + 1	0	15	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- REPLANTEO EN SITU
- POSICIONAMIENTO DE MALLA DE FAYÓN CON PIEDRAS
- SE HIZO EL DEPOSITO BANCARIO DEL DINERO DE LOS CARPINTEROS
- TENÍAN QUE LLEGAR LOS CARPINTEROS PERO NO VINIERON (MOTIVACIÓN: ENFERMEDAD)


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 6

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (LUNES) 31/08/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	0	0	

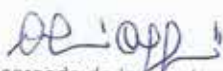
EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ACTIVIDAD PREVISTA: - LLEGADA DE LOS CARPINTEROS
- POSICIONAMIENTO DE LAS CHONTAS
- VERNICIAMIENTO DE LA MADERA
- P. 10 REUNION CON LOS MUNICIPALES

- ACTIVIDAD REALIZADA: - NINGUN TRABAJO EN SITU PORQUE LOS CARPINTEROS NO LLEGARON
- NINGUNA REUNION CON LOS MUNICIPALES PORQUE NO LLEGARON
- ENTREGA DEL VETTERO PUBLICITARIO DEL PROYECTO A LA PRESIDENCIA


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 7

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Martown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 01/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde	X		

PERSONAL:

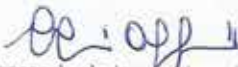
TECNICOS	CARPINTEROS	AYUDANTES	
2	4	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- REPLANTEO EN SITU
- CORTE DE LAS CHONTAJ
- POSICIONAMIENTO DE 6 CHONTAJ SOBRE 17 (4 EN LA TIERRA Y 2 EN EL AGUA)


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 2

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: 02/09/2015 (MIÉRCOLES)

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	3	24	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- LIMPIEZA DE LA TOTORA
- POSICIONAMIENTO MODULO FLUJANTE EN EL AGUA PARA CLAVAR LAS 4 GONTAS
- BARNIZATURA (MADEROL) A 2/3 DE LA MADERA
- POSICIONAMIENTO VIGAS 6 X 13 X 600 Y 6 X 13 X 300
- VUELTA A QUITO PARA SACAR LOS PERNOJ
- P. 18 RETIRO DE LOS PERNOJ EN QUITO
- COMPRA DE BROJAJ Y DISCO POR METAL DE 9 PULGADAS EN LIMI

Op. app.
Encargado de la construcción

Gregorio Arango
Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 9

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (JUEVES) 03/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

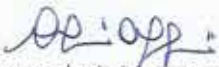
TECNICOS	CARPINTEROS	AYUDANTES	
2	3	2	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8 LLEGADA DE LOS PRIMEROS PERNOS PARA LAS CHONTAS
- IMPERNADO DE 8 CHONTAS CON VIGAS DE 6X13X600
- CORTE DE ANGULOS METALICOS Y PLATINAS METALICAS
- INICIO POSICIONAMIENTO Y IMPERNADO DE ANGULOS Y PLATINAS
- TRATAMIENTO DE MENOS 1/3 DE LA MADERA CON MADEROL
- A. 14 LLEGADA DE LOS OTROS PERNOS (120 CON MEDIDA ERRADA)
- UELTA A IBARRA Y COMPRA DE 25 PERNOS Y 35 TIRAFUNDOS
- CORTE DE VIGAS DE MADERA


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 10

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (VIERNES) 04/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde			X

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	3	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- IMPERNADO 3° - 4° MODULOS : CHONTA Y VIGAS (6x13x300) Y VIGAS (6x13x300) - VIGAS (6x13x300) + CORTE VIGAS Y ANGULOS METALICOS
- LLEGADA PREVISTA EN LA MAÑANA DEL 4° CARPINTERO : NO LLEGÓ.
- LLEGADA PREVISTA EN LA MAÑANA DE LA COMUNIDAD PARA ACABAR LA PRIMERA MANO DE MADERA A LA MADERA Y AYUDAR EN EL POSICIONAMIENTO DE LAS CHONTAS : NADIE LLEGÓ.
- COMPRA DE 15 PERNOJ A IBARRA Y LLEGADA EN EL SITIO
- FALTA DE PERNOJ, VUELTA A IBARRA Y COMPRA DE 70 PERNOJ
- COMPRA DE 20 TIRAFONDOS EN OTAVALO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (11)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (SABADO) 05/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	4	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- IMPERNADO DE VIGAS CON VIGAS
- CORTE DE OTRAS 3 CHONTAS SIN SU FINAL Y CORRECTO POSICIONAMIENTO
- CLAVADO DE CHONTAS EN EL AGUA
- LLEGADA PREVISTA DE LA COMUNIDAD: NO LLEGO,
- TARDE NO DISFRUTADA


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 12

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Pelteni

FECHA: (LUNES) 7/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	4	10	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- CLAVADO DE 6 CHONTAS EN EL AGUA
- CORTE DE 3 CHONTAS
- POSICIONAMIENTO DE VIGAS (6 X 13 X 600) Y (6 X 13 X 300)
- CORTE Y IMPERNADO ANGULOS METALICOS Y PLATINAS (VIGAS - CHONTAS)
- ~~IMPERNADO~~ ^{ENTABLADO} DE 1/3 DEL PISO DEL PRIMERO MODULO NON-FLOTANTE Y CORTINAS
- MEDIDA DE TABLITAS DEL PISO DIVIDIENDO LAS PIEZAS DE 2,40 m y DE 60 cm (PARA ENTABLADO PISO)
- BARNIZAMIENTO DE LA RESTANTE MASERA (PRIMERA MANO) NO ACABADO CAUSA ACABADO DEL MADEROL
- ACTIVIDAD PREVISTA: COMPRA DEL MADEROL Y SEGUNDA MANO EN LA MADERA → NO REALIZADA POR FALTA DE DISPONIBILIDAD DE DINERO
- COMPRA DE ANTICORROSIVO PARA METAL, BROCHA PEQUEÑA PARA PINTAR EL METAL, COLA BLANCA PARA MADERA EN STAVALO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 13

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Mariown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 8/09/2013

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

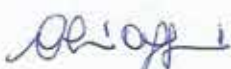
TECNICOS	CARPINTEROS	AYUDANTES	
3	4	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- CLAVADO ULTIMAS CHONTAS
- INICIO ARMADO MODULOS DEL MIRADOR
- INICIO ARMADO ESCALERA / GRADA
- PINTURA ANGULOS / PLATINAS METALICAS CON ANTICORROSIIVO
- ENTABLADO DE 2/3 PISO MODULO NON-FLOTANTE
- DIVISION Y CLASIFICACION DE LAS VIGAS PARA LOS MODULOS FLOTANTES
- INICIO DE DIBUJO DE DESTAQUES EN LAS VIGAS PARA LOS MODULOS FLOTANTES
- PEDIDO DE COMPRA DE OTRAS 12 CHONTAS (PARA MIRADOR Y FLOTANTES)
- COMPRA DE DOS MARGADORES NEGROS, PINCEL PARA PINTAR EL METAL Y COLA BLANCA EN OTAVALO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (14)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (MIÉRCOLES) 9/09/2015

CLIMA: BUENO REGULAR MALO

Mañana			X
Tarde			X

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	4	2	

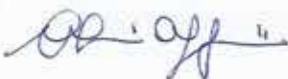
EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ~~ENTABLADO DEL PRIMERO MODULO NON-FLOTANTE ULTIMADO~~
- ~~DIBUJO DE DESTAQUES EN TODAS LAS VIGAS DE LOS MODULOS FLOTANTES ULTIMADO.~~
- ~~CORTE DE LOS DESTAQUES EN LAS VIGAS DE UN MODULO FLOTANTE (4 VIGAS DE 20x4x300, 4 VIGAS DE 10x4x300, 2 VIGAS DE 10x4x300)~~
- ~~INICIO ARMADO PARTE ESTRUCTURAL DEL MIRADOR.~~
- ~~CALCULO MATERIAL QUE FALTA: 2050 TORNILLOS NEGROS 2x3, 100 RODILLAS PARA PERNO DE 6, 100 PERNO CON TIERCA + RODILLAS DE 2 1/2, 100 TORNILLOS NEGROS AUTOPERFORANTES DE 3 1/2 x 3, 1 ANGULO METALICO DE 4x3.~~
- ~~CALCULO PRESUPUESTO PARA MATERIAL QUE FALTA EN LA FORRETERIA EN QUITO (EXCLUSO ANGULO METALICO DE 4x3) -> 191 DOLARES Y REQUERIR DEPOSITO DINERO POR PARTE DE LA JUNTA PARROQUIAL.~~
- ~~LEGADA DE PERIODISTA DE REFE 24 PARA ENTREVISTA A LA PRESIDENTA DE LA JUNTA PARROQUIAL, A LA COMUNIDAD Y A NOSOTRAS SOBRE EL PROYECTO.~~

Encargado de la construcción




Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (15)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (JUEVES) 10/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	4	1	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ENTABLADO DEL SEGUNDO MODULO NON-FLOJANTE ULTIMO.
- CONTINUACION ARMADO PARTE ESTRUCTURAL DEL MIRADOR (ENTABLADO GRADAS DE ARRIBA + INICIO ARMADO ESCALERAS QUE SUBEN)
- DEPOSITO DINERO PARA MATERIAL QUE FALTA (191 DOLARES) Y REUESTA ENVIO MATERIAL DESDE QUITO HACIA OTAVALO
- COMPRA DE TIRAFONDOS, COLA BLANCA Y ANGULO METALICO 4x3 EN OTAVALO
- PINTURA CON ANTICORROSION DEL ANGULO METALICO
- CORTE DE VIGAS PARA ENTABLADO (2,40 Y 0,60)

ae-agg
Encargado de la construcción

Cooperativa
Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 16

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (VIERNES) 11/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	4	2	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ENTABLADO DE LOS MODULOS NON-FLOTANTES ULTIMADO
- CONTINUACION ARMADO PARTE ESTRUCTURAL DEL MIRADOR (CONCLUSION ARMADO ESCALERA DERECHA, INICIO ARMADO ESCALERA IZQUIERDA)
- ENTREGA MATERIAL ORDENADO EN PUNTO
- CORTE DESTAQUES VIGAS DE UN MODULO FLOTANTE (Nº MODULOS FLOTANTES CORTADOS : 2)
- CORTE DE VIGAS PARA ENTABLADO (2,40 Y 0,60)
- CONFIRMA DE LLEGADA CHONTAS PREVISTA PARA EL MARTES / MIERCOLES
- PINTURA PARTE DE ANGULOS METALICOS YA IMPORNADOS BAJO LOS MODULOS NON-FLOTANTES
- PENALO DE CARRIZO AL PRESIDENTE DE LA COMUNIDAD
- MEDIDA VIGAS 2,40 Y 0,60 (NO ACABADA)


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 17

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (SABADO) 12/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	4	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- 8.00 LLEGADA DE LOS TECNICOS
- 8.20 LLEGADA DE LOS CARPINTEROS
- DISCUSION SOBRE EL TRABAJO HECHO (EN PARTICULAR LA ESCALERA) CON INSULTOS HACIA LOS TECNICOS (FALTA GENERAL DE RESPETO)
- LOS CARPINTEROS DEJAN EL SITIO DE LA OBRA PARA DISCUTIR Y DECIDIR SI Y COMO SEGUIR TRABAJANDO CON CONSECUENTE PARADA DE LA OBRA
- FALTA DE MADERA Y DEFINICION DE UN NUEVO PRESUPUESTO PARA ENTREGAR A LA JUNTA PARROQUIAL
- ACUERDO CON LOS CARPINTEROS DE DEFINIRSE EL SIGUIENTE LUNES

[Signature]
Encargado de la construcción

[Signature]
Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 18

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (LUNES) 14/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	4	9	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- R. 14 LLEGADA DE LOS TECNICOS EN EL SITIO DE OBRA
- R. 8 LLEGADA DE LOS CARPINTEROS QUE YA HABIAN EMPEZADO EL TRABAJO DESARMANDO LAS ESCALERAS Y ARMANDOLAS DE NUEVO CON DIMENSIONES DE HUELLA Y CONTRAHUELLA CORRECTAS (UTILIZANDO LA MADERA QUE YA TENIAMOS)
- R. 9 VISITA DEL ING. TORRES EN LA OBRA Y SUGERENCIAS SOBRE LA ESTABILIZACION DE LA ESTRUCTURA DEL MIRADOR Y EL UTILIZO DE HORMIGON PARA LA FUNDACION DEL MUELLE
- ANULAMIENTO DEL PEDIDO DE CHONTAS DESPUES DE LAS SUGERENCIAS DEL ING. TORRES
- LOS TECNICOS HAVEN CORTAR EN UN ASERRADERO EN OTAVALO LAS BOJ VIGAS DE 23x8x300 OBTENIENDO 4 TABLAS DE 23x3x300
- ENCUENTRO CON LA PRESIDENTA EN LA JUNTA PARROQUIAL Y PEDIDO DE UN NUEVO PRESUPUESTO PARA LA MADERA DEL PASAMANO (REVESTIDO POR LA COMUNIDAD PARA PONER EN LOS 12 m DE MUELLE INICIAL) Y EL HORMIGON DE FUNDACION
- CORTE DE CARBITO PARA PONER EN EL PASAMANO Y EN EL MIRADOR


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 19

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 15/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	4	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- ARMADO DE PAJAMANOS EN EL MIRADOR Y EN LAS ESCALERAS QUE JUBEN ACABADO
- ARMADO DE LAS DOS COLUMNAS FRONTALES AL LAGO EN EL MIRADOR ACABADO
- ARMADO GENERAL DEL MIRADOR ACABADO
- CORTE DEL ENTABLAO DE LOS PRIMEROS 12 m Y DEL MIRADOR ACABADO
- VISITA DE 4 TECNICOS DE LA PREFECTURA DE IBARRA A LA OBRA
- LOS CARPINTEROS UTILIZARON (SIN ANTES PREGUNTAR) UNA VIGA DE 20X2X300 DESTINADA A LOS MOVULOS FLUJANTES PARA ARMAR UNA DE LAS ESCALERAS Y TAMBIEN TRES VIGAS DE 10X4X300 TAMBIEN DESTINADAS A LOS MOVULOS FLUJANTES
- A.13 LOS CARPINTEROS DEJAN EL SITIO PARA IR A ALMOZAR Y LOS TECNICOS REGRESAN A QUITO
- A.17 LLAMADA DE LOS CARPINTEROS PARA COMUNICAR QUE HABIAN ACABADO EL TRABAJO; LOS TECNICOS COMUNICAN QUE EL JUEVES 17/09 VAN A REVISAR EL TRABAJO.

Encargado de la construcción

Peri Off

Agnese Grigis
Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 20

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MIÉRCOLES) 16/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
0	0	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

NINGUNA ACTIVIDAD REALIZADA; LOS TECNICOS ESTÁN EN QUITO Y VAN A IR AL SITIO DE OBRA EL DIA SIGUIENTE PARA REVISAR EL TRABAJO DE LOS CARPINTEROS ACABADO EN FECHA 15/09/2015


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° (21)

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlowen Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (JUEVES) 17/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	AUTORIDADES
4 + 1	3	0	JUNTA PARROQUIAL

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

R. 12,15 LLEGADA DE LOS TECNICOS EN LA JUNTA PARROQUIAL PARA UNA REUNION CON LA PRESIDENTA ESTELA AGUILAR Y LAS AUTORIDADES DE LA JUNTA PARROQUIAL Y LOS ESTUDIANTES DE FIN DE CARRERA DE LA UNIVERSIDAD CENTRAL PARA HABLAR DE LOS PROYECTOS QUE SE VAN A DESARROLLAR EN CACHIVIRU EN EL FUTURO (LAGAÑAS FLOTANTES) Y EN OTRAS COMUNIDADES DE SAN RAFAEL.

R. 13. -14 RECORRIDO DE LAS COMUNIDADES DONDE SE VAN A DESARROLLAR PROYECTOS EN EL FUTURO.

R. 14 LLEGADA DE LOS TECNICOS Y DE LA JUNTA PARROQUIAL EN CACHIVIRU Y REVISION DEL TRABAJO HECHO POR LOS CARPINTEROS

R. 14,30 LLEGADA DE LOS CARPINTEROS Y COMENTARIOS SOBRE LAS FALLAS DEL TRABAJO PARA DEFINIR LO QUE DEBEN AJUSTAR/ CAMBIAR [OBSERVACIONES INCLUIDAS EN EL ACTA DE ENTREGA]

R. 18 REVISION DEL TRABAJO POR PARTE DE LOS TECNICOS Y RESPONDA DE LOS CARPINTEROS

R. 18,30 REGRESO DE LOS TECNICOS A QUITO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 22

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (VIERNES) 18/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
0	0	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

NINGUNA ACTIVIDAD REALIZADA EN SITU.
LOS TECNICOS ELABORAN EN QUITO UN ACTA DE ENTREGA DE LA OBRA REALIZADA POR LOS CARPINTEROS Y UN INFORME DE LO QUE SE REALIZO DESDE LA APROBACION DE LOS PLANOS EN EL MUNICIPIO HASTA LA FECHA.
- LLEGADA DE LOS TANQUES PLASTICOS DESDE QUITO A LAS P. 14 RECIBIDAS POR EL PRESIDENTE DE CACHIVIA GREGORIO ANORANGO (JUNTAS CON UN CHEQUE DE 240 \$ PARA EL ARQ. PATRICIO YAJELGA) Y POSICIONADOS EN EL ESTADIO G. PAREJA.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (23)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (SABADO) 19/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	0	0	

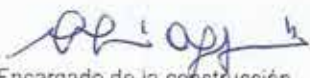
EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

ACTIVIDAD PREVISTA :-CORTE DE LOS DESTAQUES EN LAS VIGAS DE LOS MODULOS ~~DE~~ FLOTANTES
 - MEDIDA Y CORTE DE LAS RESTANTES VIGAS DE 2,40 m y 0,60 m
 - REUNION CON LA PRESIDENTA

ACTIVIDAD REALIZADA :- NINGUNA ACTIVIDAD REALIZADA EN SITU POR FALTA DE ELECTRICIDAD (EL CABLE FUE TRAILO EN OTRO SITIO PARA REALIZAR OTRO TRABAJO)
 - NINGUNA REUNION CON LA PRESIDENTA REALIZADA PORQUE ELLA SE ENCONTRO' EN OTAVALO.


 Encargado de la construcción


 Representante de la Comunidad

LIBRO DE OBRA – Hoja N° (24)

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlow Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (DOMINGO) 20/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	0	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- CORTE DE TODOS LOS RESTAQUES EN LAS RESTANTES VIGAS DE LOS MODULOS FLOTANTES
- (CALCULO MODULOS FLOTANTES : 4 COMPUERTOS + EL PROTOTIPO YA REALIZADO → NECESIDAD DE CAMBIAR EL ENTABLAO SI VA A SER UTILIZADO)
- MEDIDA Y CORTE DE TODAS LAS VIGAS DE 2,40 y 0,60 m PARA EL ENTABLAO DE LOS MODULOS FLOTANTES
- CALCULO DEL MATERIAL RESTANTE QUE SE PUEDE UTILIZAR PARA EL PASAMANO DE LOS PRIMEROS 12 m Y DE LOS MODULOS ~~DE~~ FLOTANTES (VIGAS DE 4x5x1,10) → NECESIDAD DE HACER CORTEAR 3 VIGAS DE 20x4x3,00 Y DE 10x4x3,00 + 2 COLUMNAS DE 10x4x3,00
- CONVOCACION DE LA COMUNIDAD PARA EL DIA 20/09/2015 PARA LIMPIAR/BARNIZAR LA MADERA, PONER SILICON EN LAS JUNTAS DE LOS TANQUES, COCTAR/LIMPIAR EL CERRILLO, ARMAR LOS MODULOS FLOTANTES


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (25)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteri

FECHA: (LUNES) 21/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	0	3	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- D. 9 LLEGADA DE LOS TECNICOS EN LA OBRA.
- ARMADO DE 4 MODULOS NO FLOTANTES (EXCEPTO EL ENTABLAO): EMPERNADO DE TODOS LOS DESTAPES DEL PERIMETRO CON ANILLOS METALICOS Y POSICIONAMIENTO DE LAS 4 VIGAS DE 10x4x300 + 2 VIGAS DE 20x2x300 SIN ATORNILLARLAS.
- LLEGADA DE LA COMUNIDAD PREVISTA A LAS 8.9 → NADIE LLEGO (NUEVA CONVOCACION PARA EL DIA MIERCOLES 23/09)
- ACTIVIDAD PREVISTA PARA LA COMUNIDAD: LIMPIEZA/ PARNIZADO MIENTO DE LA MADERA, SILICON EN LOS TANQUES, CORTE Y LIMPIEZA DEL CARRIZO (NINGUNA ACTIVIDAD REALIZADA)
- D. 17 LLEGADA DE TRES MEMBROS DE LA COMUNIDAD (AYUDA CON EL ARMADO DE LOS MODULOS FLOTANTES)
- CORTE DE 2 VIGAS DE 20x4x300, DE 1 VIGA DE 10x4x300 Y DE DOS VIGAS DE 10x8x300 PARA OBTENER TIRAS PARA EL PASAMANO DE 4x5x100 Y 4x5x110.
- COMPRAS DE RONDELAS EN IBARRA.
- N° TANQUES EN EL ESTADIO: 48
- N° TANQUES EN LA BODEGA: 2 (1 ESTA ROTO, LA COMUNIDAD COMUNICA QUE LLEGO YA ROTO).

[Signature]
Encargado de la construcción

[Signature]
Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 26

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlowyn Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 22/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
4	0	0	

EQUIPO:

Herramienta manual: Herramienta mayor:

ACTIVIDAD DIARIA:

- R. 7.30 LLEGADA DE LOS TECNICOS EN LA OBRA.
- ARMAAO COMPLETO DE 4 MODULOS FLUOTANTES: ATORNILLAN DE TODAS LAS VIGAS.
- CORTE DE TODAS LAS VIGAS DEL ENTABLADO DE 5 MODULOS FLUOTANTES (2,40 Y 0,60 m).
- SE DEJA LA HERRAMIENTA DE MARLOWYN CUENCA JUNTA A LA RESIANTO EN LA CASA DE HORMIGON JUNTA A LA CASA COMUNAL.
- R. 11.30 LOS TECNICOS REGRESAN A QUITO PARA CALCULAR LOS PRESUPUESTOS DEL MATERIAL FALTANTE (PERNOJ PARA EL PISAJAMANO, MADERA PARA LOS MUEBLES, CUERDAS PARA EL PISAJAMANO).


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 27

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MIÉRCOLES) 23/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde	X		

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	15	

EQUIPO:

Herramienta manual Herramienta mayor.

ACTIVIDAD DIARIA:

- A. 10 LLEGADA DE LOS TECNICOS EN LA OBRA
- ACTIVIDAD PREVISTA: REUNIÓN CON LA PRESIDENTA PARA ENSEÑARLE EL PRESUPUESTO PARA EL PASAMANO PERO NO SE HIZO DEBIDO A QUE LA PRESIDENTA NO SE ENCONTRABA EN LA JUNTA PARROQUIAL (REUNIÓN PREVISTA PARA EL DIA 24/09/2015)
- A. 11.30 LLEGADA DE LA COMUNIDAD
- ACTIVIDAD REALIZADA: ENBLADO DE 2 MODULOS FLUJANTES, KALPEGA PUESTA EN LOS TAPAS DE LOS TANQUES Y TANQUES TRANSPORTADOS CERCA DE LA ORILLA DEL LAGO, LIMPIETA Y BARNIZADO DEL MUELLE - MIRADOR.
- NOTAS: FALTA PONER EL KALPEGA EN LOS 20 TANQUES DEL MODULO - PROTOTIPO.
- COMUNIDAD CONVOCADA TAMBIÉN PARA EL DIA 24/09/2015 A LAS 8.30 A.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 28

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (JUEVES) 24/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde			X

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	6	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A las 8.30 LLEGADA DE LOS TECNICOS EN LA OBRA
- REUNION CON LA PRESIDENTA PARA DISCUTIR EL PRESUPUESTO PARA EL PAJAMANO: DESPUES DE UNA REUNION ENTRE LOS VOCALES SE DECIDIO NO COMPRAR EL MATERIAL NECESARIO PORQUE LA COMUNIDAD LO HARA MAS ADELANTE CON MINGA Y MATERIAL A DISPOSICION
- VISITA DE LOS VOCALES A LA OBRA CON UN TECNICO DE POLIURETANO PARA HABLAR DE LA POSIBILIDAD DE PONER UNA CUBIERTA SOBRE EL MUELLE-MIRADOR (IDEA SUGERIDA POR EL ING. DE OBRAS PUBLICAS GUALIQUI A LA PRESIDENTA)
- SE PREGUNTA AYUDA A LOS TECNICOS PARA EL DISEÑO DE LA CUBIERTA PERO SE DECIDIO NO HACERLO PORQUE NO ESTABA EN EL PROYECTO ORIGINAL Y NO SE CONDIVIDE LA IDEA.
- ACTIVIDAD REALIZADA EN OBRA: ENTABLADO DE UN OTRO MODULO FLOTANTE, BARNITADO DEL MUELLE-MIRADOR (SEGUNDA MANO), SE SAJO EL PROTOTIPO DEL AGUA Y SE SACARON TANQUES (DONDE SE PUSE KAUPABA EN LAS TAPAS) Y ENTABLADO.
- COMUNIDAD CONVOCADA TAMBIEN PARA EL DIA 25/09/2015 A LAS 8.30


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° (29)

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (VIERNES) 25/09/2015

CLIMA: BUENO REGULAR MALO

Mañana			X
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3/4	0	10	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- 8.30 LLEGADA DE LOS TECNICOS EN LA OBRA
- LA COMUNIDAD SACA LA CASCARA DE TODO EL CARRIZO DA UTILIZAR PARA EL MUELLE-MIRADOR Y EL PAJAMANO DE LOS MODULOS FLOTANTES.
- ENTABLADO DE LOS ULTIMOS DOS MODULOS FLOTANTES (SE HAN PUESTO TAMBIEN LOS ANGULO METALICOS EN EL MODULO-PROTOTIPO PERO HAY QUE APRETAR LOS PERNO.)
- BARNITADO DE LOS CINCO MODULOS FLOTANTES (PRIMERA MANO) DESPUES DE SU TRANSPORTE A LA ORILLA DEL LAGO.
- 9.14 LLEGADA DEL CUARTO TECNICO
- CORTE DE 30 TABLAS DE 2x10x2,40 Y DE UNA DE 2x20x2,40 + UN TABLÓN DE 4x20x2,40 EN UN ASERRADERO PARA OBTENER TIRAS DEL PAJAMANO Y PARA PONER EL CARRIZO.
- COMPRA DE TIRAFONOS, RODERAS Y DOS LLAVES DE 14 EN OTAVALO
- NOTAS: SE GUARDA LA HERRAMIENTA EN LA CASA DE HORMIGÓN CERCA DE LA CASA COMUNAL Y TANQUES + MADERA EN LA CASA DE MADERA EN SITU.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 30

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Mariown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (SABADO) 26/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

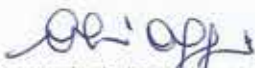
TECNICOS	CARPINTEROS	AYUDANTES	
4	0	0	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 9 COMPRA DE 50 PERROS DE 3/8 X 10 EN IBARRA
- A. 10 LLEGADA AL SITIO DE OBRA DE LOS TECNICOS
- SELECCIÓN DE LAS TIRAS DE 100 X 4 X 5 PARA EL PASAMANO Y SE HICIERON LOS HUECOS EN LOS MODULOS FLOTANTES EN CORRESPONDENCIA DE LOS PASAMANOS Y DE LA CUERDA DE ALGODON PARA AMARRARLOS ENTRE ELLOS
- ACTIVIDAD PREVISTA: POSICIONAMIENTO CORRECTO Y ATORNILLADO DE LAS TIRAS PARA EL CARRIZO EN EL MUELLE - MIRADOR (NO REALIZADA PORQUE EL CABLE DE LA ELECTRIFICADA NO LLEGABA HASTA EL MIRADOR).
- > NOTAS: CONVOCACIÓN DE LA COMUNIDAD PARA EL DIA LUNES 28/09/2015 PARA ARMAR LOS PASAMANOS, PONER LOS TANQUES, PONER EL CARRIZO, BAÑIZAR (SEGUNDA MANO) LOS MODULOS FLOTANTES.
- A. 13 REGRESO DE LOS TECNICOS A QUITO.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 31

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Mariown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (LUNES) 28/09/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	0	10	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 10.30 LLEGADA DE LOS TECNICOS EN EL SITIO de OBRA
- VUELTA A LOS 5 MODULOS FLOTANTES y POSICIONAMIENTO DE TANQUES (12 CADA MODULO) y CUERDA DE ACERO PARA AMARRARLOS
- FALTA DE CUERDA DE ACERO PARA AMARRAR UN MODULO
- A. 15 COMPRA DE 40 m DE CUERDA DE ACERO EN OTAVALO
- A. 17 LA COMUNIDAD SE VA

→ NOTAS : FALTA DE ELECTRICIDAD; NO SE PUDO UTILIZAR NINGUNA HERRAMIENTA ELECTRICA,


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 32

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 29/09/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2	0	11	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8.30 LLEGADA DEL PRIMERO TECNICO EN EL SITIO de OBRA
- A. 9.30 COMPRA DE 4 m DE CUERDA DE ACERO EN OTAVALO -> LLEGADA DEL SEGUNDO TECNICO A LAS 8.10
- A. 9 LLEGADA DE LA PREFECTURA DE IMBABURA Y DE LA PRESIDENCIA DE LA JUNTA PARROQUIAL PARA REVISAR EL PROYECTO
- VUELTA DE LOS 5 MODULOS FLOTANTES EN POSICION CORRECTA
- ACTIVIDAD PREVISTA: ARMADO DE PASAMANO EN LOS FLOTANTES
- ACTIVIDAD REALIZADA: SE HA TENIDO QUE HACER OTROS HUELOS PARA LOS BORNOS DEL PASAMANO PORQUE LOS EXISTENTES ESTABAN DEMASIADO CERCA DE LOS TANQUES; LOS TECNICOS Y LA COMUNIDAD DECIDEN NO HACER EL PASAMANO POR RAZONES DE ESTETICA; SE DECIDIO ARMAR DOS MUEBLES PARA SERVIRSE EN DOS DE LOS MODULOS FLOTANTES CON LA MADERA QUE QUEDABA,
- BARNITADO (SEGUNDA MANO) DE TODOS LOS MODULOS FLOTANTES


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 33

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (MIÉRCOLES) 30/09/2013

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	8	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8,30 LLEGADA DE LOS TECNICOS EN EL SITIO DE OBRA
- DESPLAZAMIENTO DE LOS 5 MODULOS FLOTANTES EN EL AGUA → SE HAN AMARRADO ENTRE ELLOS Y POSICIONADO EN ORDEN CORRECTO
- NOTAS: PARA EL AMARRADO DE LOS MODULOS SE HA USADO UNA CUERDA DE COTON PERO SE HA CONVENIDO SER MEJOR EL USO DE UNA CADENA DE METAL (DEBIDO A QUE DOS MODULOS SE DESAMARRARON Y UNA CUERDA SE ROMPIÓ)
- SE HA CONVENIDO TAMBIÉN SER UTIL EL POSICIONAMIENTO DE TACOS DE LLANTA ENTRE LOS MODULOS PARA EVITAR EL DEGRADAMIENTO DE LA MADERA DEBIDO AL MOVIMIENTO DE LOS MISMOS, SE COMPRARON DOS PUNTAS NUEVAS PARA EL TALADRO.
- POSICIONAMIENTO DE TRES LLANTAS COLGADAS EN LAS TRES BANDAS EXTERNAS AL MIRADOR.
- SE POSICIONARON 3/4 DE LAS TIRAS DE MADERA PARA EL PASAMANO / PAREDES DE CARILLO.
- UN TAMPÓN DE UN MODULO SE SACO 'PORQUE SE SACO' LA CUERDA DE A CERO (FUE RECUPERADO)
- NOTAS: SE NECESITA PONER ALGO PARA AMARRAR MEJOR LOS TAMPONES ENTRE ELLOS.

Encargado de la construcción

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Representante de la Comunidad

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LIBRO DE OBRA – Hoja N° 34

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlow Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (JUEVES) 1/10/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3 + 1	0	4	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8, 30 LLEGADA DE DOS TECNICOS; A. 10, 30 LLEGADA DEL TERCERO TECNICO; A. 12, 30 LLEGADA DEL CUARTO TECNICO.
- A. 10, 30 LLEGADA DE UN TECNICO DE LA PREFECTURA DE IMBABURA Y DE UN LOCAL DE LA JUNTA PARROQUIAL.
- SE CORTAN TRES LAMAS EN 8 PEDAÇOS CADA UNA (UNA EN 4 PEDAÇOS + 2 DE DOBLE LARGO) PARA PONERLOS ENTRE LOS MOALLOS FUOTANTES.
- SE PONGO EL CARRO AMARRANDO A UNA PARTE DEL MUELLE - MIRADOR Y SE ACABA DE PONER TODAS LAS TIRAS PARA LAS PAREDES DE CARRO.
- SE COMPRAN EN OTAVALO: 16 m DE CADENA DE METAL GALVANIZADO (CORTADA EN PEDAÇOS DE 2 m), 8 ENGANCHES PARA LA CADENA, UN ROLLO DE CABLE DE ALACRIL DE 75 m CON 60 GALLETES, CEMENTO DE CONTACTO Y UNA PUNA MAJ GRANDE (1") PARA EL TALADRO.


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 35

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Mariown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (VIERNES) 2 / 10 / 2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	4	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A LAS 8:30 LLEGADA DE LOS TECNICOS EN LA OBRA
- SE DESAMARRAN TODOS LOS MODULOS FLOTANTES Y SE LOS ACERCA A LA ORILLA DEL LAGO
- SE AGRANDAN LOS HUECOS CON LA PUNTA DEL TALADRO DE 1" PARA QUE PUEDA PASAR LA CADENA PARA AMARRARLOS. SE PONE LA CADENA, SE PEGAN (CON CEMENTO DE CONTACTO) Y SE ATORNILLAN LOS CAUCHOS CORTADOS DE LAS LUNAS EN LAS ESQUINAS DE LOS MODULOS.
- SE PONE MAS CUERDA DE ACERO EN LOS DOS MODULOS CON MUEBLES PARA AMARRAR MEJOR LOS TAPLES.
- SE AMARRAN OTRA VEZ TODOS LOS MODULOS FLOTANTES ENTRE ELLOS.
- AMARRADO DE CARRIZO EN LAS DOS PAREDES PERPENDICULARES FRONTERALES DEL MIRADOR.
- COMUNIDAD CONVOCADA PARA EL DIA LUNES 5/10/2015 PARA CORTAR MAS CARRIZO Y ACABAR DE AMARRARLO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 36

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petti

FECHA: (LUNES) 5/10/2015

CLIMA: BUENO REGULAR MALO

Mañana			X
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	50	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- 9.9 LLEGADA DE LOS TECNICOS EN LA OBRA
- MINGA GENERAL PARA AMARRAR OTRA VEZ LOS TANQUES A LOS MODULOS FLOTANTES (NOTA -> SE SALIERON EN EL FIN DE SEMANA); SE SACARON TODOS LOS MODULOS FLOTANTES Y LES DEMOS LA UERTA.
- SE PENSO PONER UNA MALLA DE BASTILLO TEJIDA CON CUERDA DE ACERO PERO AL FINAL SE LOGRO HACER UN AMARRE DIFERENTE DE LOS TANQUES CON EL MISMO CABLE DE ACERO EN UNO DE LOS MODULOS.
- LA COMUNIDAD HIZO OTRAS ACTIVIDADES COMO UNPISTA DE LA TOTORA Y DEL CARRIZO EN LA ORILLA DEL LAGO y LENTE
- AMARRADO DE CARRIZO EN EL MIRADOR TODAVIA NO A CABADO
- SE COMPARON 130 m DE CABLE DE ACERO Y KALPESA EN QUITO
- > NOTAS: NECESIDAD DE COJAR MAS CARRIZO PARA EL MIRADOR, NECESIDAD DE COMPRAR MAS CABLE DE ACERO PARA AMARRAR LOS TANQUES.

Encargado de la construcción

Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 37

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MARTES) 6/10/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	7	

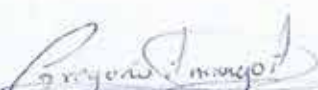
EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. P. 30 LLEGADA DE LOS TECNICOS EN LA OBRA
- SE AMARRARON LOS CABLES DE ANCHO DE LOS TRES PRIMEROS MODULOS FLOTANTES DANDO LA VUELTA A LOS TANQUES CON TAPA HACIA EL EXTERIOR Y HACIENDO NUEVOS HUECOS EN LAS VIGAS PARA EL AMARRE
- SE LALO' DEL AGUA UN TANQUE QUE SE HABIA LLEVADO
- SE PUSO HALIPEGA EN LAS TAPAS DE LOS TANQUES QUE DARCIAN MAS PELIGROSO PARA EL ENTRADA DEL AGUA
- SE CORTO' UN POCO MAS DE CARRETO Y SE SACO' LA CASERA
- COMPRA DE 14 GRILLETES PARA AMARRAR LOS CABLES EN OTAVALO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 38

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (MIÉRCOLES) 7/10/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	AUXILARES
3	0	4	3

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8.30 LLEGADA DE LOS TECNICOS EN LA OBRA
- SE AMARRARON BIEN LOS CABLES DE ACERO DE 3/5 DE LOS MODULOS FLOTANTES
- DEBIDO A LA PREJENCA DE 3 AUXILARES DEL MUNICIPIO DE OTAVALO (PREJENTES EN LA OBRA PARA LIMPIAR LAS CERCANAS PLANTAS DE TRATAMIENTO) SE PROCEDIO A AMARRAR Y PONER EN EL LAGO UNO DE LOS MODULOS CON LA MAQUINARIA DEL MUNICIPIO.
- SE AMARRO EL CARRITO AL PASAMANO FRONTAL DEL MIRADOR

→ NOTAS: EL TRABAJO EN OBRA NO AVANZO MUCHO DEBIDO A LA FALTA DE AYUDANTES DE LA COMUNIDAD

Encargado de la construcción

Representante de la Comunidad

LIBRO DE OBRA – Hoja N° 39

NOMBRE DE LA OBRA: Kaymanta – muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (JUEVES) 8/10/2015

CLIMA: BUENO REGULAR MALO

Mañana		X	
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
2 + 1	0	1	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- A. 8.30 LLEGADA DE LOS TECNICOS EN LA OBRA
- SE AMARRARON BIEN LOS CABLES DE ACERO DE TODOS LOS MODULOS FLOTANTES
- ACTIVIDAD PREVISTA : TERMINES DE LA OBRA
- ACTIVIDAD REALIZADA : NINGUNA POR FALTA DE AYUDANTES DE LA COMUNIDAD
- A. 12 LOS TECNICOS REGRESAN A QUITO


Encargado de la construcción


Representante de la Comunidad

LIBRO DE OBRA - Hoja N° 40 - TERMINES DE OBRA

NOMBRE DE LA OBRA: Kaymanta - muelle mirador

PROPIETARIO DE LA OBRA: GAD Parroquial de San Rafael de la Laguna

RESPONSABLES DE LA OBRA: Marlown Cuenca, Agnese Grigis, Chiara Oggioni, Marta Petteni

FECHA: (LUNES) 12/10/2015

CLIMA: BUENO REGULAR MALO

Mañana	X		
Tarde		X	

PERSONAL:

TECNICOS	CARPINTEROS	AYUDANTES	
3	0	8	

EQUIPO:

Herramienta manual Herramienta mayor:

ACTIVIDAD DIARIA:

- P. 10.30 LLEGADA DE LOS TECNICOS EN LA OBRA
- CORTE DE CARIZO Y DE JACO' LA CASERA
- AMARRE FINAL DEL CARIZO A LAS PAREDES Y PASAMANOS DEL MIRADOR.
- LIMPIEZA DEL SITIO DE OBRA
- PREPARACION A LA INAUGURACION DEL DIA MARTES 13/10/2015.
- REGRESO DE LOS TECNICOS A QUITO A LAS P. 17.00


Encargado de la construcción


Representante de la Comunidad

A1 panels:

Collection of the 25 panels of the thesis discussion originally in A1 format .

Latinoamérica

Soy, soy lo que dejaron, Soy las sobras de lo que te robaron,
Un pueblo escondido en la cima, Mi piel es de cuero por eso aguata cualquier clima,
Soy una fábrica de humo, Mano de obra campesina para tu consumo,
En el medio del verano, El amor en los tiempos del cólera,
Mi hermano!

Soy el que nace y el día que muere, Con los mejores atardeceres,
Soy el desarrollo en carne viva, Un discurso sin saliva,
Las caras más bonitas que he conocido, Soy la fotografía de un desaparecido,
La sangre dentro de tus venas, Soy un pedazo de tierra que vale la pena,
Una canasta con frijoles.

Soy Maradona contra Inglaterra Anotándole dos goles,
Soy lo que sostiene mi bandera, La espina dorsal de mi planeta, en mi cordillera,
Soy lo que me enseñó mi padre, El que no quiere a su patria no quiere a su madre,
Soy América Latina un pueblo sin piernas pero que camina.

Tú no puedes comprar al viento,
Tú no puedes comprar al sol
Tú no puedes comprar la lluvia,
Tú no puedes comprar al calor,
Tú no puedes comprar las nubes,
Tú no puedes comprar mi alegría,
Tú no puedes comprar mis dolores.

Tengo los lagos, tengo los ríos, Tengo mis dientes pa cuando me sonrío,
La nieve que maquilla mis montañas, Tengo el sol que me seca y la lluvia que me baña,
Un desierto embriagado con pellotes, Un trago de pulque para cantar con los coyotes,
Todo lo que necesito!

Tengo a mis pulmones respirando azul clarito,
La altura que sofoca, Soy las muelas de mi boca mascando coca,
El otoño con sus hojas desmayadas, Los versos escritos bajo las noches estrelladas,
Una viña repleta de uvas, Un cañaveral bajo el sol en cuba,
Soy el mar Caribe que vigila las casitas, Haciendo rituales de agua bendita,
El viento que peina mi cabello, Soy todos los santos que cuelgan de mi cuello,
El jugo de mi lucha no es artificial porque el abono de mi tierra es natural,
Vamos caminando, vamos dibujando el camino!

Trabajo bruto pero con orgullo, Aquí se comparte lo mío es tuyo,
Este pueblo no se ahoga con marullos, Y sí se derrumba yo lo reconstruyo,
Tampoco pestaño cuando te miro, Para que te recuerdes de mi apellido,
La operación cóndor invadiendo mi nido, Perdono pero nunca olvido, oye!

Vamos caminado, aquí se respira lucha,
Vamos caminando, yo canto porque se escucha,
Vamos caminando, aquí estamos de pie,
Que viva Latinoamérica,
No puedes comprar mi vida!

Crossing the Ocean

ITALY & POLITECNICO

What we brought with us is limited to our personal belongings, and to the classical architecture of the cities of Milan, and used as a certain point of view on an architecture and culture that are not only of "modern Italy", but also of the great urban and architectural heritage that we brought with us. The architecture we brought with us is not only of "modern Italy", but also of the great urban and architectural heritage that we brought with us.

29th OF MARCH 2015

INTERNATIONAL MOBILITY: ECUADOR

The opportunity of the coming street mobility led us to Ecuador, to a completely different environment and society with respect to Italy, where we had the chance of facing an other culture surrounding to a "hot ground".

INTERNSHIP: ALBORDE

In Alborde we had the chance of working in a remote place, and to have a personal experience, where we had a completely different environment, surrounding with nature, mountains, and rivers. We had the chance of facing an other culture surrounding to a "hot ground".

FAU OPPORTUNITIES

The FAU of the international center of Ecuador, with the purpose of "facilitating the mobility", they are the center of design and research in a relation with a community, they are working in three areas where we have the chance of facing an other culture surrounding to a "hot ground".

12th OF APRIL 2015

THE CHOICE: LAGO S. PABLO

We thought about Lago S. Pablo in the region of Cotacachi, province of Cotacachi, 200 km north of Quito, where we had the chance of surrounding with a different culture, surrounding with a traditional environment, surrounding with a traditional environment, surrounding with a traditional environment.



Alborde, San Pablo



Alborde, Ecuador



San Pablo, Lago



University



Personal interests



Internship



Lago San Pablo



Project



Strategy



Changing scales



Service user



Team work



Participatory design



Listening others



Technical skills



Auto construction



Sustainability

NETWORKING HUBS FOR COMMUNITIES

Listening to Genius Loci

WHAT WE PERCEIVE?

We think that the genius loci has already started from our perception and flow of elements. It is not a natural element, but a human one. It is a human one that we perceive and interpret. It is a human one that we perceive and interpret. It is a human one that we perceive and interpret.



LISTENING TO OTHERS

We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci. We are listening to the genius loci.



OBJECTIVE ANALYSIS

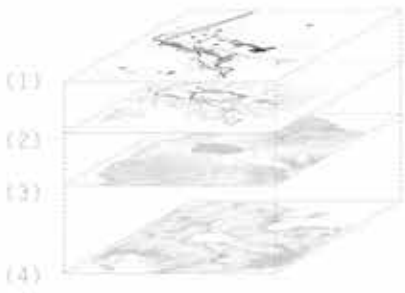
Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci. Objective analysis of the genius loci.

- 1. Objective analysis
- 2. Objective analysis
- 3. Objective analysis
- 4. Objective analysis
- 5. Objective analysis
- 6. Objective analysis
- 7. Objective analysis
- 8. Objective analysis
- 9. Objective analysis
- 10. Objective analysis

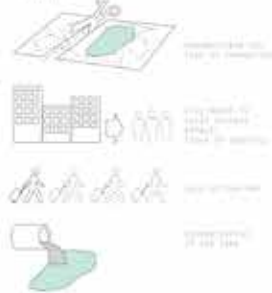


FINAL SYNTHESIS: PROBLEMS & POTENTIALITIES

Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci. Final synthesis of the genius loci.



PROBLEMS



POTENTIALITIES



VALORIZACION DE LO QUE HAY CON LO QUE HAY



Tradition VS Modernity

VS

TRADITIONAL HOUSE

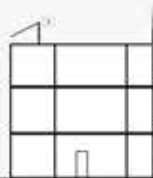
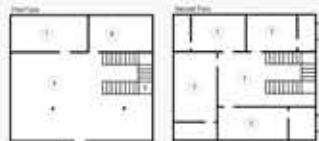
The original houses in San Rafael were built with traditional materials and specific features. The structural skeleton was realized with masonry walls, while the walls were realized thanks to the technique of tapal and tapari. Then the roof was made of stone or terracotta tiles. The organization of the house was developed on one single floor and included two main spaces: one integrated as a kitchen-livingroom and a small space for girls' families; the other one as a room to sleep and area dedicated to weaving tutors. These two spaces were divided by a wall of tapal or a single carpet of tapari. It was also possible to find back to the front of the house a patio which included a vegetable patch and a space for pet animals, such as chickens and pigs.



- 1 Wall: Arco / Wall: Tapari
- 2 Straw roof
- 3 Skeleton: Wood of Eucalypto
- 4 Rock Basement
- 5 Kitchen + Livingroom
- 6 Girls' Family
- 7 Dining area
- 8 Bedroom
- 9 Patio

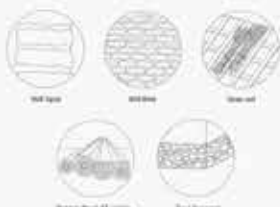


ORGANIZATION



- 1 Wall: Cement Blocks
- 2 Roof: Terracotta Tiles
- 3 Reinforcement: Steel Bars
- 4 Big Central Atrium
- 5 Bedroom + Bathroom
- 6 Big Livingroom
- 7 Kitchen
- 8 Bathroom
- 9 Staircase

MATERIALS



CONSTRUCTION

Tapari blocks realized the rough the construction of wooden frames.



Prefabricated Cement blocks later put together through the use of mortar.



AESTHETIC FEATURES



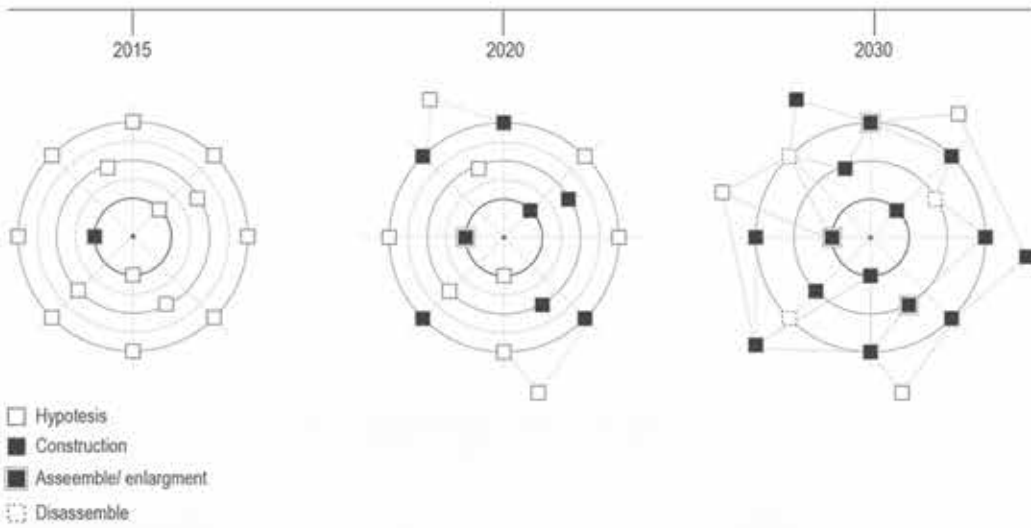
MODERN HOUSE

Maybe there are not less that preserve the territory and control the process of construction. Everybody can build whatever they want in the way that they like most. Therefore the landscape around the lake is divided with new houses that are totally out of context. These new houses are made of cement blocks and reach even three floors. They are adorned with balconies, columns and capitals, finally painted with bright colours. The native population are used to practice "mitas" in order to build up their new house without properly take into consideration the money available. Due to that most of these buildings are left unfinished. Moreover these big houses are not strictly necessary many times remained unused and empty. All the inhabitants of San Rafael are adopting this trend that is detouring their traditional and natural scenario. This is due to several reasons. Firstly the effect of immigration that leads to have houses composed by a mix of styles picked out of Ecuador and grouped together in a eclectic way. Secondly the inhabitants are used by a sense of pride and self-satisfaction for which seems important to have a house as "big and beautiful" as the one of their neighbor even if unnecessary. In this way the population has the illusion to escape to their original condition of poverty and to get in line with modernity and globalization.





From conceptual to physical strategy



URBAN STRATEGY: NETWORKING HUBS

Our conceptual strategy is focused on 2030, for this year we conceived a general masterplan related to the indigenous Kichwa community of the urban network elements population of world and based on a spiritual non-central "hub", "truly del hub", "truly in the center", "truly del hub", that from the lake level rise up till the mountains. Each "truly" meets in its path different way, using key places related to his specific theme water, earth, sun, and then runs towards its next point or to another "truly". All the masterplan is not closed in time and space, it's thought as a network, open and free system and that's the reason why it looks beyond 2030. The general idea for the future is to expand the concentric path into an open one, able to reformat the connection, around the lake and at the same time to connect the lake to new spaces and actions.

In some of these selected places some light architectural devices are necessary and could help in valorizing the landscape and the social cultural aspects of the place. Becoming hubs where the global meets the local, we set some guidelines for composition regarding the most important aspects to take into consideration designing these devices.

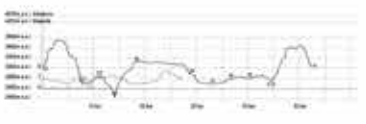
NETWORKING HUBS STRATEGY: GUIDELINES FOR COMPOSITION

- RESPECTING THE SURROUNDING 
- PARTICIPATORY DESIGN PROCESS 
- MAX HEIGHT: 10m 
- MAX SURFACE: 50M² 
- PRIMARY USE OF IDEAL MATERIALS 
- PARTICIPATORY CONSTRUCTION PROCESS & TRADITIONAL TECHNIQUES 
- ASSEMBLY/DISASSEMBLY SYSTEM 
- LOW COST 
- LONG TERM COMMUNITY RESPONSIBILITY FOR THE PROJECT 



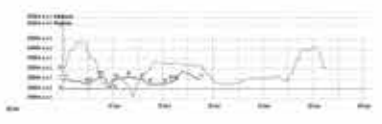
RUTA DEL SOL

5 [27.7km] 3h 30min 2h 45min 2h 15min



RUTA DE LA TIERRA

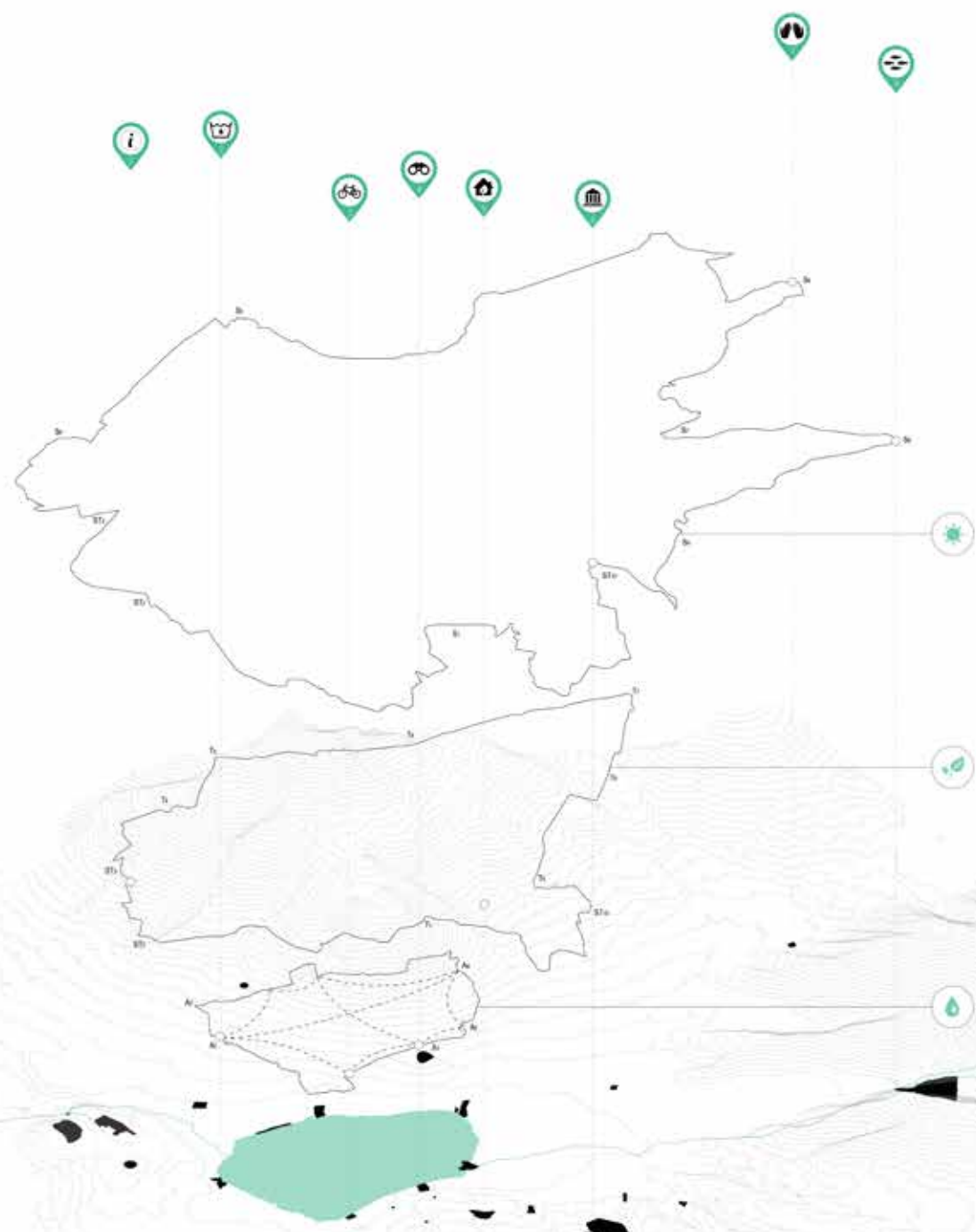
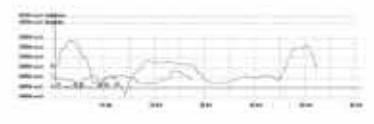
7 [27.3km] 4h 30min 1h 20min 2h 10min



RUTA DEL AGUA

A [12.1km] 2h 30min

B [14.5km] 1h 15min



- 1. LAGOPOINT
- 2. LAGOPOND
- 3. LAGOPOND
- 4. LAGOPOND
- 5. LAGOPOND
- 6. LAGOPOND
- 7. LAGOPOND
- 8. LAGOPOND

Urban strategy



Developing an integrated strategy is the starting point to provide the best quality of life for the population of the state, considering the high diversity of reality and demands. The strategy has been developed for a period of 10 years, from 2010 to 2020, and is based on the concept of "Sustainable Development", which is the only way to ensure the well-being of the population and the environment.



Changing scale

1st half of May 2019



MEETING WITH THE PRESIDENTS

On 1st and 2nd of May 2019, the team met with the presidents of the community and the local government to discuss the project and the role of the community in the project.



MEETING WITH TOTORA SISA

On 1st of May 2019, the team met with Totora Sisa to discuss the project and the role of the community in the project.



MEETING WITH SAN RAFAEL

On 1st of May 2019, the team met with San Rafael to discuss the project and the role of the community in the project.



AGREEMENT WITH SAN RAFAEL

On 1st of May 2019, the team met with San Rafael to discuss the project and the role of the community in the project.



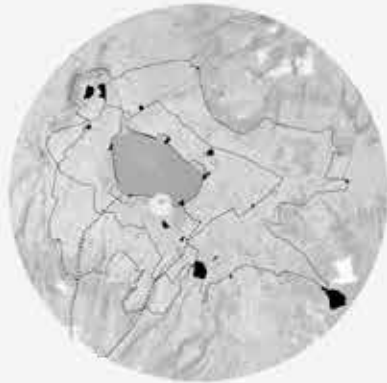
VISITING CACHIVIRO

On 1st of May 2019, the team visited Cachiviro to discuss the project and the role of the community in the project.



SURVEY ON SITE

On 1st of May 2019, the team conducted a survey on site to discuss the project and the role of the community in the project.



MASTERPLAN LAGO S. PABLO, OTAIVALO

On 1st of May 2019, the team conducted a survey on site to discuss the project and the role of the community in the project.



THE OCCASION SAN RAFAEL de la LAGUNA

On 1st of May 2019, the team conducted a survey on site to discuss the project and the role of the community in the project.



PROJECT AREA - CACHIVIRO COMMUNITY

On 1st of May 2019, the team conducted a survey on site to discuss the project and the role of the community in the project.



Design process

17th of May 2015



1º REUNION WITH THE COMMUNITY

The first reunion with the community was held in the community hall. The purpose was to inform the community about the project and to listen to their needs and expectations. The reunion was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.

30th of June 2015



1º PARTICIPATORY WORKSHOP

The first participatory workshop was held in the community hall. The purpose was to discuss the project with the community and to listen to their needs and expectations. The workshop was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.



MEETING PREFECTURE OF IBARRA

The meeting with the prefecture of Ibarra was held in the prefecture building. The purpose was to discuss the project with the prefecture and to listen to their needs and expectations. The meeting was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.

17th-20th of June 2015



2º PARTICIPATORY WORKSHOP

The second participatory workshop was held in the community hall. The purpose was to discuss the project with the community and to listen to their needs and expectations. The workshop was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.



MEETING WITH THE MUNICIPALITY

The meeting with the municipality was held in the municipality building. The purpose was to discuss the project with the municipality and to listen to their needs and expectations. The meeting was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.



MEETING WITH THE MAYOR

The meeting with the mayor was held in the mayor's office. The purpose was to discuss the project with the mayor and to listen to his needs and expectations. The meeting was held in a large room with many people present. The atmosphere was very positive and everyone was very interested in the project.

¡TRABAJAMOS JUNTOS

¿QUE PASA? Reunión de la comunidad para discutir el proyecto de vivienda comunitaria.



¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

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¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

1º TALLER: IDENTIDAD CULTURAL

¿QUE PASA? Primer taller de construcción de vivienda comunitaria.



¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

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¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

2º TALLER: MATERIALES

¿QUE PASA? Segundo taller de construcción de vivienda comunitaria.



¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

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¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

¿QUÉ PASA? Taller de construcción de vivienda comunitaria.

PARA VALORIZAR EL LAGO

El primer taller de construcción de vivienda comunitaria.

• KNOW BETTER EACH OTHER
• GET WITH THEM A COMMON-SENSE OF COMMITMENT
• LEARNED MORE ABOUT THEIR PAST AND HISTORY
• ORGANIZED THE FOLLOWING WORKSHOPS

¿QUIENES SOMOS?

El segundo taller de construcción de vivienda comunitaria.

• CONTINUATION
• LACK OF TOURISM
• LACK OF COLLECTIVE CARE TO TAKE CARE OF THE LAKE
• LACK OF VALORIZATION OF INDIGENOUS CULTURE

¿COMO SABEMOS CONSTRUIR?

El tercer taller de construcción de vivienda comunitaria.

• LITTLE RISK
• RISKY-BANKING SPACE
• SAFE ACCESS TO THE LAKE
• VISUAL WORKSHOP SPACE



Project approved!

20th of July 2018



3° TALLER: PROPUESTA

¿QUE PASA?
Tercera Sesión de Participación para el desarrollo de acciones comunitarias en el sector 3. Phase

¿DÓNDE?
Junta Participativa de San Rafael

¿CUÁNDO?
15 Julio 2018
10:00

¿QUÉ?
Taller de participación



¿QUE OPINAN?

¿CÓMO SE DEBE DESARROLLAR EL PROYECTO?

WE DIVIDE THE PROJECT IN TEMPORAL PHASES

THEY APPROVED AND SIGNED THE FIRST PHASE: MUELLE-PIERRO



27th of July 2018



GET CERTIFICATES:

THEY GET CERTIFICATES FOR THE PARTICIPATION IN THE PROJECT AND FOR THE APPROVAL OF THE PROJECT. THE CERTIFICATES ARE SIGNED BY THE MUNICIPALITY OF SAN RAFAEL.

MUNICIPALITY APPROVAL

THEY GET THE APPROVAL OF THE MUNICIPALITY OF SAN RAFAEL FOR THE PROJECT AND FOR THE PARTICIPATION IN THE PROJECT.



PROTOTYPE

THEY GET THE PROTOTYPE OF THE PROJECT AND FOR THE PARTICIPATION IN THE PROJECT.

3° PARTICIPATORY WORKSHOP: COMMUNITY APPROVAL

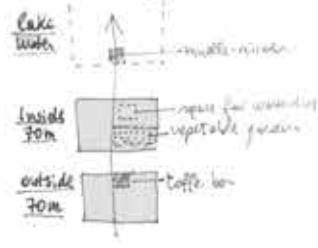
THEY APPROVED AND SIGNED THE FIRST PHASE: MUELLE-PIERRO



Modelling the idea

EXPERIENCING ARCHITECTURE

The architectural space can create different atmospheres and experiences like the way of a person. The idea was conceptualized as a "surface wall" of concrete that is 17m to 20 years old and has a 10m wide. The project was implemented after a long time due to the lack of a budget. The idea was to create a space that is different from the others. The idea was to create a space that is different from the others. The idea was to create a space that is different from the others.

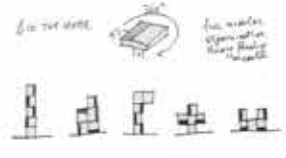
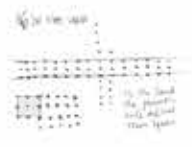


MODULARITY & ASSEMBLING

All our projects are based on a simple grid. They are based on the grid of the building. The idea was to create a space that is different from the others. The idea was to create a space that is different from the others. The idea was to create a space that is different from the others.



3/4 floor
concrete walls
dark ceilings
flat roof
rainy empty
main rooms



Masterplan



Masterplan 1:100

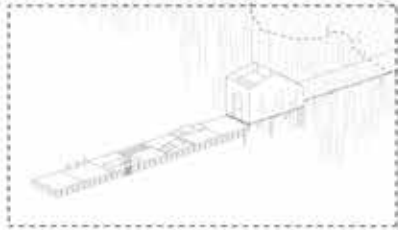
PROJECT CONCEPT: IDENTITY & GENIUS LOCUS

Location of conceptual Masterplan for the site of the project. The site is located in the center of the city of Los Angeles, CA. The site is a large, open area that is currently undeveloped. The project is a masterplan for the site that will include a mix of residential, commercial, and public spaces. The project will be a multi-phased development that will be completed over a period of 10 years. The project will be a landmark development that will define the city's identity and genius locus.



NORMATIVE & PHASES

The project has been designed to comply with the existing normative on land use and urban planning, as well as the existing Municipal Urban Planning Instrument, in order to ensure the project's compliance with the existing normative on land use and urban planning. The project has been designed to comply with the existing normative on land use and urban planning, as well as the existing Municipal Urban Planning Instrument, in order to ensure the project's compliance with the existing normative on land use and urban planning.



1. **PERCIPLE WALKWAY**: composed by 12 m x 12 m tiles in asphalt with the same greenness levels and permeability.



2. **EXISTING WOOD STRUCTURE**: 12 m x 12 m structure in wood for workshops and storage.



3. **LEISURE SPACES**: urban recreational facility consisting of a table for coffee and leisure.



4. **EVENT SPACE**: circular space used as meeting point during festivals and events.



5. **COMMUNITARIAN VEGETABLE GARDEN**: urban vegetable garden consisting of 12 m x 12 m plots.



6. **COFFEE BAR**: 12 m x 12 m structure used as meeting point and storage.



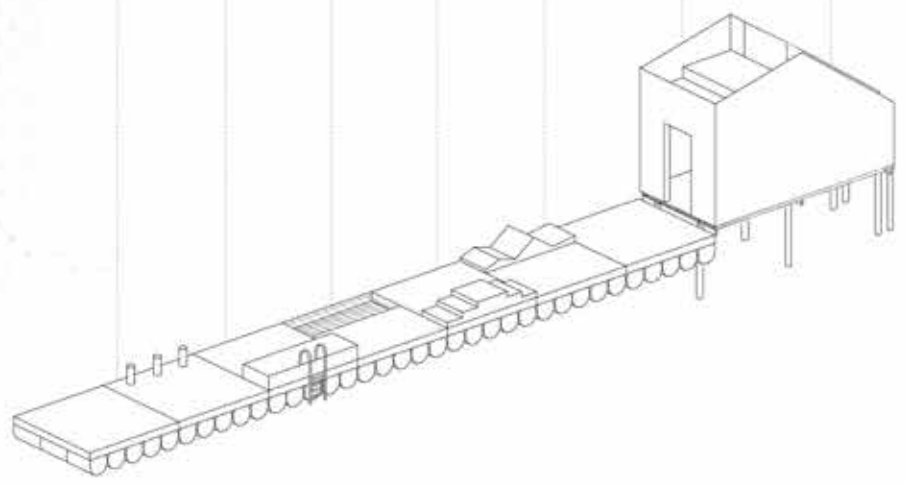
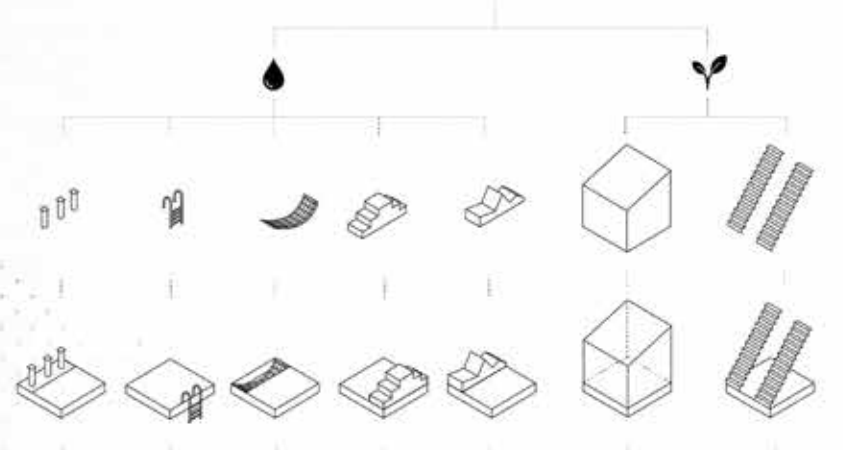
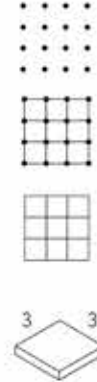
7. **REPLANTATION OF NATIVE PLANTS**: to enhance the natural landscape and the urban vegetation.



Kaymanta muelle-mirador

MODULAR ORGANISATION

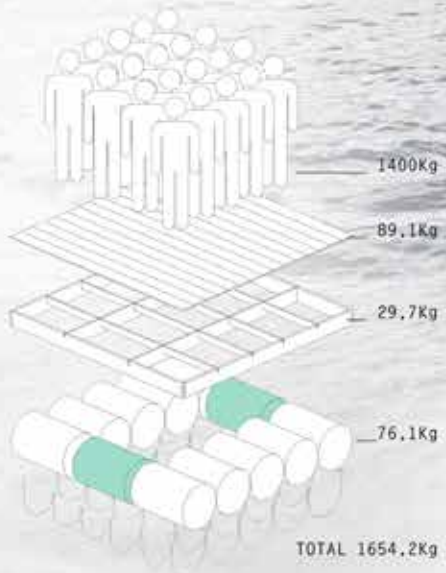
The Kaymanta Muelle is composed by 13 modules of two different sizes of floating, low profile, boxes in a horizontal grid of 10m x 10m (33ft x 33ft) with a 2m x 2m (6ft x 6ft) central platform. The 4 non-floating modules of the walking path are connected to a single structure, leading to the other 7 floating platforms, which are placed on floats and the modular water desalination units are supported by steel structures. The steel structure is supported by the other 7 floating platforms, which are placed on floats and the modular water desalination units are supported by steel structures. The Kaymanta Muelle is composed by 13 modules of two different sizes of floating, low profile, boxes in a horizontal grid of 10m x 10m (33ft x 33ft) with a 2m x 2m (6ft x 6ft) central platform. The 4 non-floating modules of the walking path are connected to a single structure, leading to the other 7 floating platforms, which are placed on floats and the modular water desalination units are supported by steel structures.



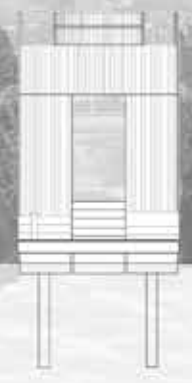
10b

PROTOTYPE

Before the prototype, the project was a concept. The idea was to create a floating structure that could be used for various purposes, such as a platform for people to stand on, a small boat, or a structure for water treatment. The prototype was built using a combination of materials, including wood, metal, and plastic. The structure was tested in a lake, and the results were promising. The prototype was able to support the weight of four people and a small boat. The structure was also able to float on the water. The prototype was a success, and it showed that the concept was feasible. The next step was to build a larger structure that could be used for a larger number of people. The larger structure was built using a combination of materials, including wood, metal, and plastic. The larger structure was tested in a lake, and the results were promising. The larger structure was able to support the weight of ten people and a small boat. The larger structure was also able to float on the water. The larger structure was a success, and it showed that the concept was feasible for a larger number of people.



1654.2:208= 9.65= 10
(number of necessary
floats for each 3x3m
floating wood module)



100c

STRUCTURE AND MATERIALS

The main structure is based on a steel and wooden structure, with the steel structure supporting the wooden structure. The steel structure is made of galvanized steel pipes, which are connected by bolts. The wooden structure is made of treated wood, which is supported by the steel structure. The steel structure is also supported by concrete columns. The wooden structure is also supported by concrete columns. The steel structure is also supported by concrete columns. The wooden structure is also supported by concrete columns.

FLOORING MODEL

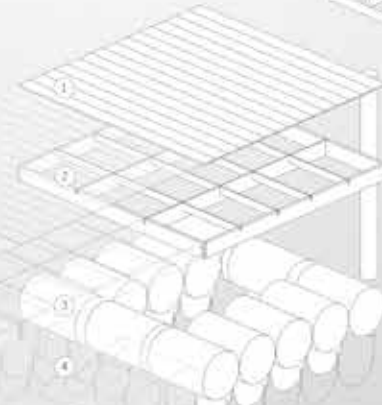
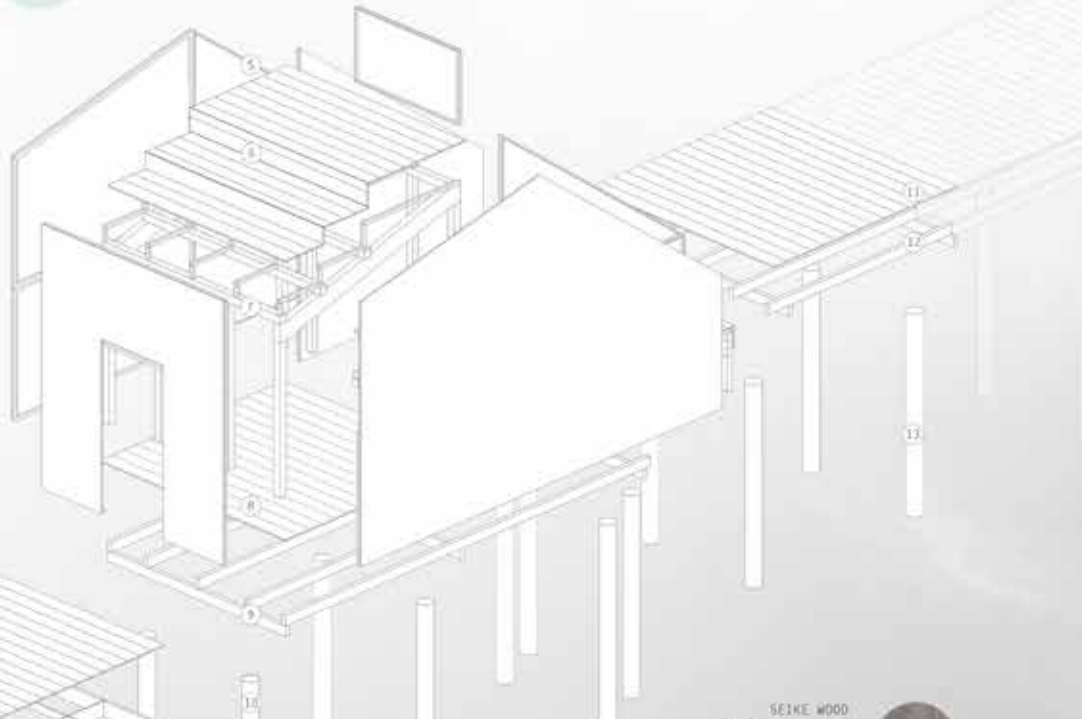
- (1) 100x100x100 mm
- (2) 100x100x100 mm
- (3) 100x100x100 mm
- (4) 100x100x100 mm
- (5) 100x100x100 mm
- (6) 100x100x100 mm

ROOFING

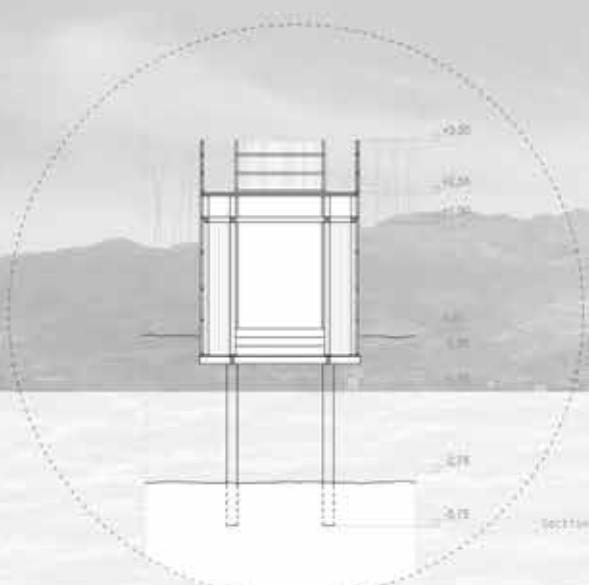
- (1) 100x100x100 mm
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- (10) 100x100x100 mm
- (11) 100x100x100 mm
- (12) 100x100x100 mm
- (13) 100x100x100 mm

WALKING PATH

- (1) 100x100x100 mm
- (2) 100x100x100 mm
- (3) 100x100x100 mm
- (4) 100x100x100 mm
- (5) 100x100x100 mm
- (6) 100x100x100 mm
- (7) 100x100x100 mm
- (8) 100x100x100 mm
- (9) 100x100x100 mm
- (10) 100x100x100 mm
- (11) 100x100x100 mm
- (12) 100x100x100 mm
- (13) 100x100x100 mm



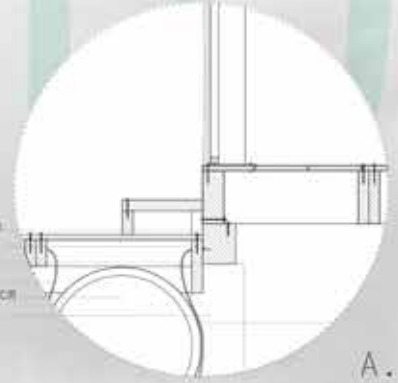
- SEIKE WOOD**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- COLORADO WOOD**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- CARRIZO**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- PALM SHOOTS**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- PLASTIC TANKS**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- GABION + STONES**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm
- METALLIC ELEMENTS**
100x100x100 mm
100x100x100 mm
100x100x100 mm
100x100x100 mm



Section B-B 1:50

TECHNICAL DETAILS:
BUILD UP

SEIKE wood 15x15x300cm
Nail
SEIKE wood 20x4x300cm
Galvanized steel rope
Plastic tank 55gal d:90cm
Palm shoot d:20cm



SEIKE wood 15x15x300cm
Nail
SEIKE wood 20x4x300cm
Galvanized steel rope
Plastic tank 55gal d:90cm
Palm shoot d:20cm

A.



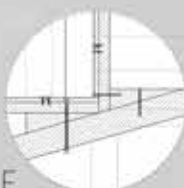
Carriage covering
SEIKE wood 20x1.8cm
SEIKE wood 10x4x4cm
L Steel profile 3x3cm
SEIKE wood 10x10cm
SEIKE wood 4x4cm

D.



Carriage covering
SEIKE wood 20x1.8cm
SEIKE wood 4x4cm
SEIKE wood 10x4x4cm
SEIKE wood 10x10cm

E.



SEIKE wood 10x4x4cm
SEIKE wood 20x1.8cm
SEIKE wood 10x4x4cm
SEIKE wood 10x10cm

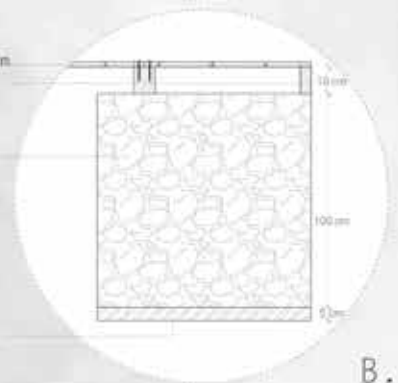
F.

DETAIL 1/10

SEIKE wood 1.8x10x240cm
SEIKE wood 4x10x300cm

Gabion with stones

Soil enhancement

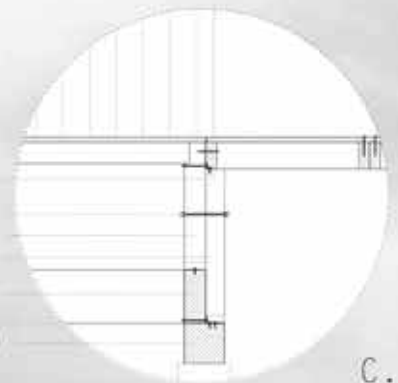


B.

L Steel profile 3x3cm

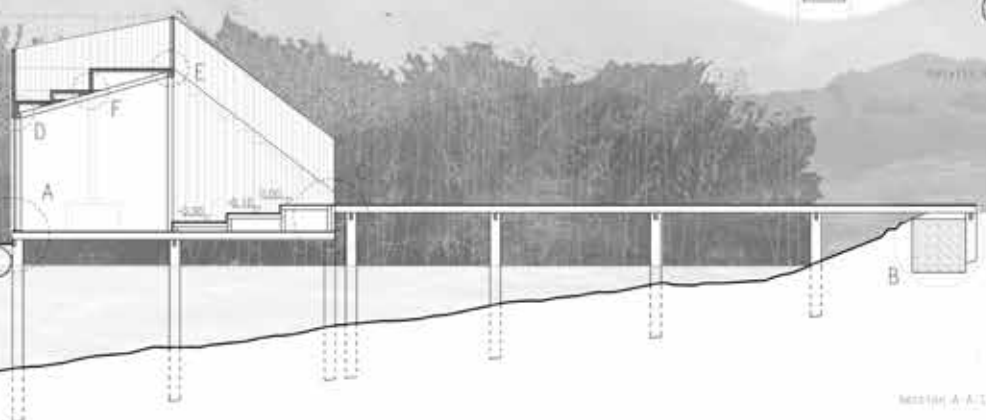
Bolt
SEIKE wood 48x8x8cm
SEIKE wood 58x8x7cm

SEIKE wood 20x8x300cm
L Steel profile 3x3cm
SEIKE wood 15x15x300cm



C.

+0.20
-0.20
-0.55
-1.10
-1.80



Burocratic process

30 JULY 2015



DEALING MONEY

Once that the project was approved by the municipality and before starting the process of construction one of the first important step was the dealing of the money. For that reason we met the Junta parroquial in order to know how to formalize the purchase of materials and the first phase of construction that had been brought us by a little group of carpenters.



PRO FORMAS

Since we operated with a quality and all the matters regarding money should have been supported through a legal instrument system accepted to which we should provide 3 pro formas for each material in order to reflect the amount and that was the most affordable.



CARPENTERS

We participated also to a meeting between the Junta parroquial and the carpenters intended to build the stable part of the project of 'Minga' in order to decide about the money for their compensation and the time period to the construction of the first part.



TRANSFER OF MONEY

Once decided the winning pro formas the Junta parroquial gave the start to the online process. The next step would have been the arrivals in site of materials.

30 JULY 2015



ARRIVALS OF MATERIALS ON SITE

That day different materials needed for the construction arrived on site and with the help of community we started to verify if all's material is ordered arrived in the correct quantity and in a good condition.



Construction: 1°phase

24 AUGUST 2015



STARTING OF CONSTRUCTION 1°WEEK

The main activities done during the first week of construction have been leveling the soil through the use of a bulldozer, positioning of stone pillars, cleaning of lotosa. It has been a very slow process.



2°WEEK

The main activities done during this week have been completion of the work related to the stepping of lotosa scattered before, positioning of AOS of stones, fixing AOS of the boxes, testing wind through the application of appropriate resin. This work has been quite slow also because the first day the carpenters didn't appear; moreover it has been necessary to buy extra materials.



3°WEEK

The activities done during this week have been positioning the remaining stones, fixing AOS of the structure, creation of the walking path, realization of the AOS of Mirador. Also during this week it has been necessary to buy extra materials. As for the previous weeks that one has been characterized by a slow process due also to some little problems related to the bad work of carpenters.



4°WEEK

During this week carpenters have finished their tasks walking path and Mirador while the community has started leaving it drying under the sun. The prefecture of Imbabura came to visit us.





Construction: 2° phase

If the first phase of construction has been brought in delay by the group of carpenters with the help of us and of the community, in the second phase the professionals have done up with the community. This second phase has been thought to build the seven floating modules but due to a lack of materials for the fact that some have been lost or broken some have been used during the construction process we decided to build just 5 of the 7 modules designed. The tanks remaining can be used for the construction of a further module in the future or in the case that some used tanks would remain.



5th WEEK

The main activities done during this week have been cleaning and varnishing of the Multi-Minor, realization of the 5 floating modules and varnishing of them. Moreover we have given practically the tanks and prepared the carrier. During this week we have had a problem of absenteeism in the community and for that reason the process has been a bit slow.



6th WEEK

The activities done during this week have been positioning of the tanks in each module, realization of site on top of the floating module and positioning of them in the water, fixing part of the exterior. Also during this week we have bought extra materials.



7th WEEK

The main activities done in this last week of work have been: border finishing between the floating modules, fixing of 100% of exterior, cleaning of the site in order to be ready for the inauguration. At the 7th week, with normal delays, the entire project has been finished.





Inauguration

13 OCTOBER 2016



INAUGURATION

The 13th of October we celebrated the end of the project with an inauguration activity organized by the community of Zacheviro. It was a very touching and beautiful day, the community delivering a certificate to each of the girls, which is made up of the girls' names in the project. Moreover, they organized an indigenous ceremony, through which each woman of the community gave us a gift full of love. Later on, it was a very big lunch to give back their sense of community and gratitude.





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