Country / City	Santiago, Chile
University / School	Landscape and Sustainability Observatory, Diego Portales University. OPS UDP
Academic year	2019
Title of the project	Biodiversity management and conservation system Santa Rosa streams
Authors	Josefina Antúnez

TECHNICAL DOSSIER

Title of the project	Biodiversity management and conservation system Santa Rosa streams
Authors	Josefina Antúnez
Title of the course	Graduate project workshop
Academic year	2019
Teaching Staff	Pamela Zuñiga
Department/Section/Program of belonging	Territory and lanscape area
University/School	Landscape and Sustainability Observatory, Diego Portales University. OPS UDP

Written statement, short description of the project in English, no more than 250 words

The Yali Wetland (RAMSAR World Reserve) currently has 2 of its 3 dry lagoons, in the absence of water regime and climate change. Due to these problems, the project seeks to create an efficient management and conservation system for its closest environment (Quebrada Santa Rosa), taking advantage of the conditions to activate and regenerate ecosystems.
In order to reduce and mitigate the causes of degradation, and taking into account the climatic, geological and natural conditions in the area and its immediate surroundings (El Yali Wetland, RAMSAR Area). The proposal consists of the efficient Management of the Water Resource as the main premise, through a park for the protection and conservation of the Biodiversity of the Quebrada. Which houses water collection areas, germination areas, protection areas, native forests, study and analysis area, recycling and compost, insects, among others. In turn, creating a circular system between the community, fertility and land use, research, protection, development and management of vegetative communities (endemic, osmoregulatory, low water consumption, and tolerant to water stress), and maximum use of the waters in all their forms of expression (dew, fog, coastal trough, evapotranspiration and rain) through a water collection system.

In order to create a Biodiversity Production Area and study of the behavior of vegetative and animal species, soils, macro and micro invertebrates, and how these elements can contribute to greater moisture retention, maximum use of water, and training Replicable study and intervention model throughout the country, according to the specific conditions of each area.

For further information
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CLIMATE CHANGE AGAIN

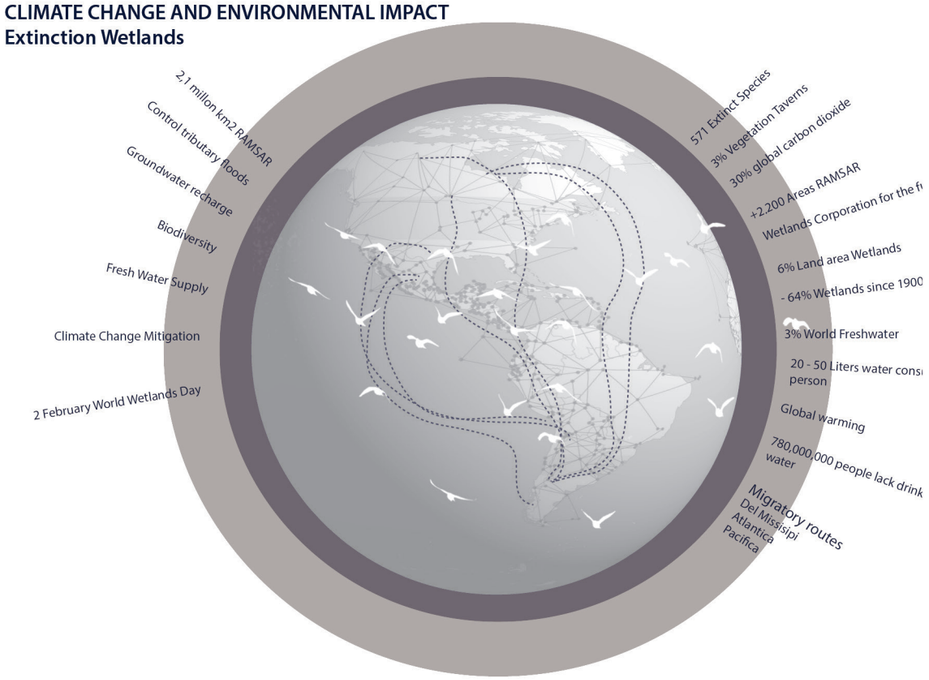
11th International Biennial Landscape Barcelona

Barcelona September 2020

SCHOOL PRIZE

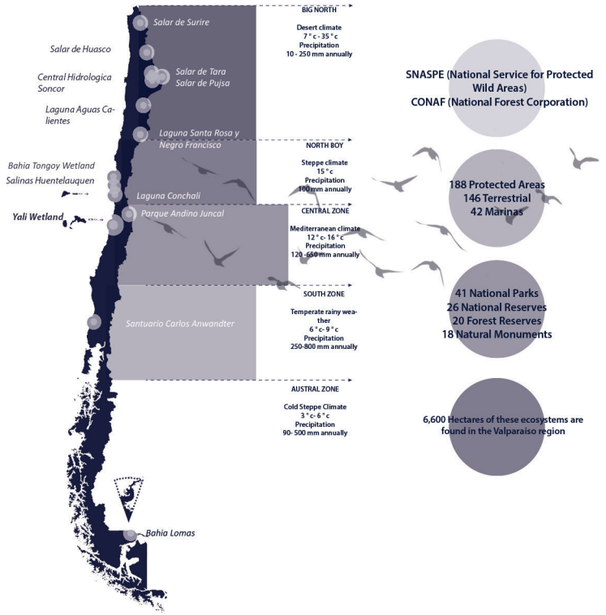
PARQUE DE PROTECCIÓN Y CONSERVACIÓN DE LA BIODIVERSIDAD / *BIODIVERSITY MANAGEMENT AND CONSERVATION PARK*

CLIMATE CHANGE AND ENVIRONMENTAL IMPACT
Extinction Wetlands



CHILE

18 thousand wetlands
2% PROTECTED
14 RAMSAR AREAS



SNASPE (National Service for Protected Wild Areas)
CONAF (National Forest Corporation)

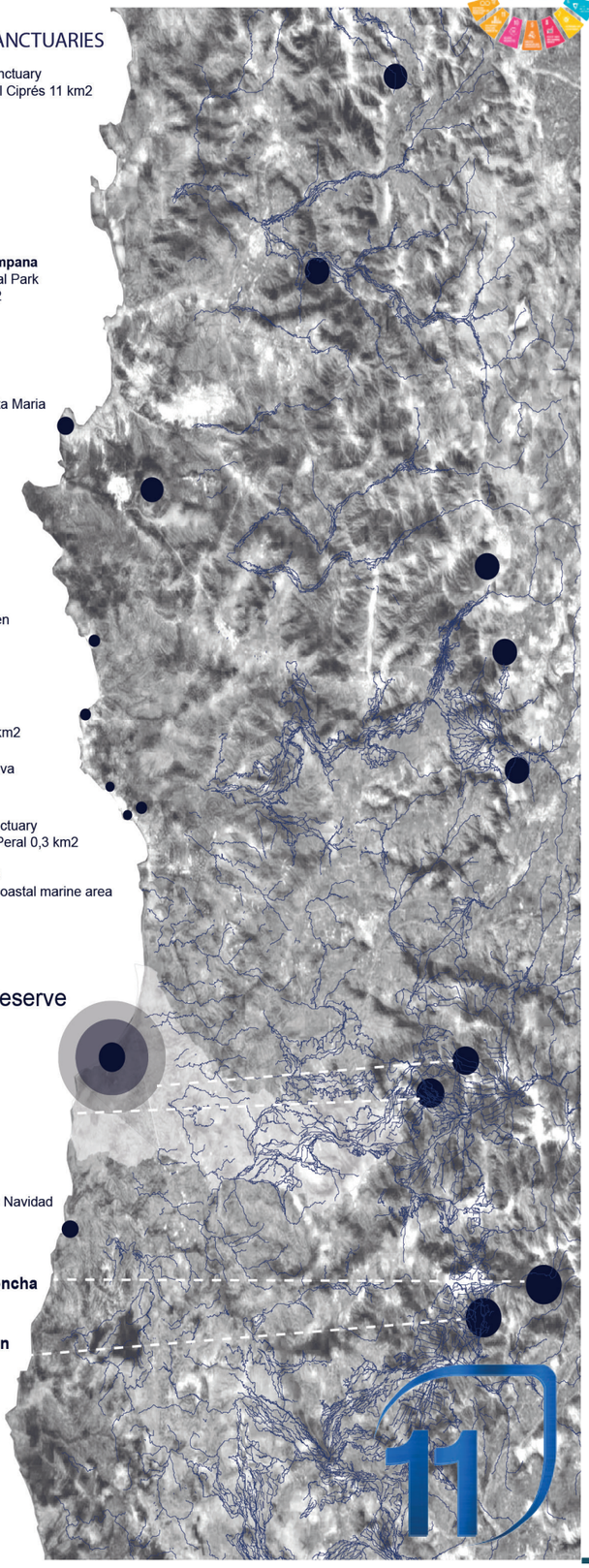
188 Protected Areas
146 Terrestrial
42 Marinas

41 National Parks
26 National Reserves
20 Forest Reserves
18 Natural Monuments

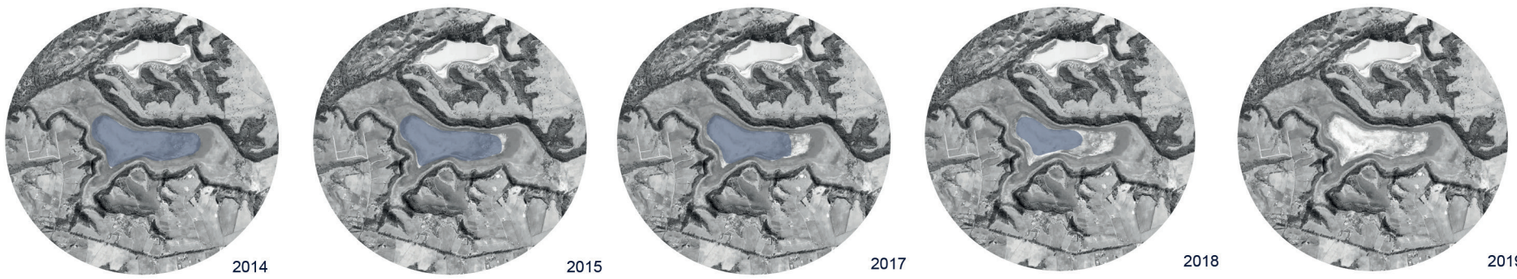
6,600 hectares of these ecosystems are found in the Valparaiso region

NATIONAL RESERVES / SANCTUARIES

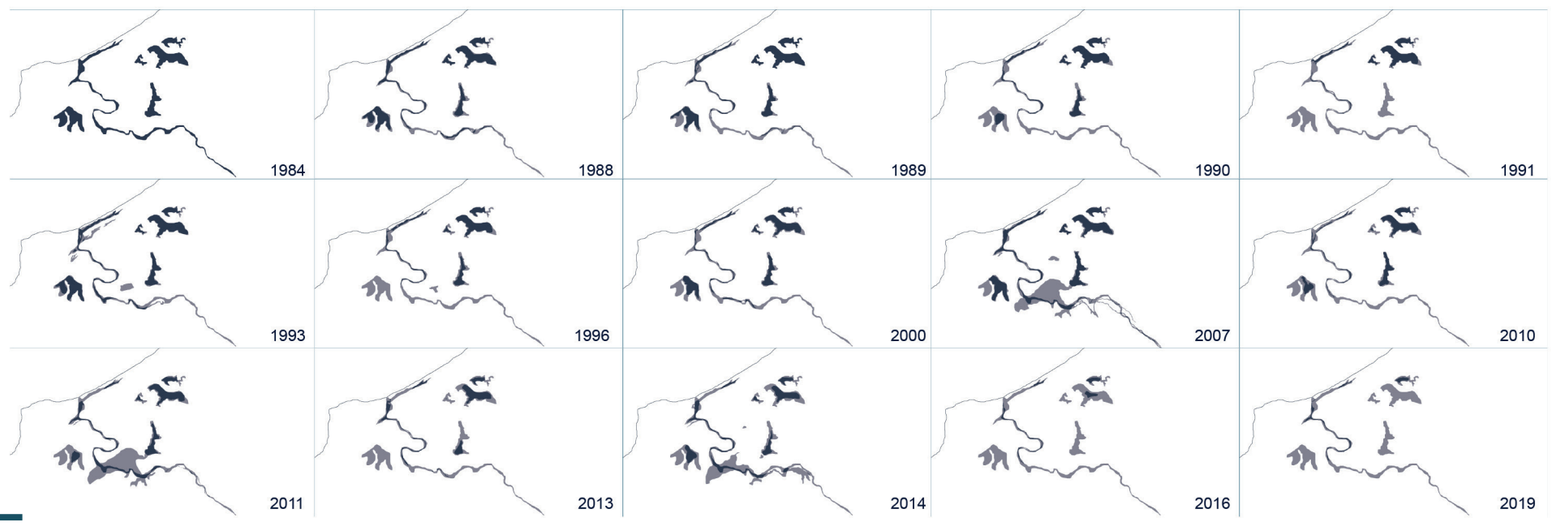
Scale 250.000



Transition last years Laguna Matanza (128 hectares)



Annual transition El Yali water reserve



PARQUE DE PROTECCIÓN Y CONSERVACIÓN DE LA BIODIVERSIDAD / *BIODIVERSITY MANAGEMENT AND CONSERVATION PARK*

TERRITORIAL BREAKDOWN RESERVE EL YALI

Escala 1/ 20.000

AVES MIGRATORIAS HUMEDAL EL YALI

Blanquillo Podiceps occipitalis
Pimpollo Rollandia rolland
Picurío Podilymbus podiceps
Huala Podiceps major
Pelícao Pelecanus thagus
Cormorán Yeco Phalacrocorax brasilianus
Garza cuca Ardea cocoi
Garza boyera Bubulcus ibis
Huairavo Nycticorax nycticorax
Bandurria Theristicus melanopis
Cuervo del pantano Plegadis chihi
Flamenco chileno Phoenicopterus chilensis
Jote de cabeza colorada Cathartes aura
Jote de cabeza negra Coragyps atratus
Cisne de cuello negro Cygnus melancoryphus
Cisne Coscoroba Coscoroba coscoroba
Pato jergón grande Anas georgica
Pato real Anas sibilatrix
Pato colorado Anas cyanoptera
Pato gargantillo Anas bahamensis
Pato rinconero Heterone?a atricapilla
Pato rana de pico ancho Oxyura jamaicensis
Aguila pescadora Pandion haliaetus
Bailarín Elanus leucurus
Aguila Geranoaetus melanoleucus
Peuco Parabuteo unicinctus
Aguilucho Buteo polyosoma
Vari Circus cinereus
Traro Caracara plancus
Tuque Milvago chimango
Cernícalo Falco sparverius
Halcón perdiguero Falco femoralis
Pidencito Laterallus jamaicensis
Tagua chica Fulica leucoptera
Tagua de frente roja Fulica rufifrons
Tagüita Gallinula melanops
Becacina pintada Nycticryphes semicollaris
Queltehue Vanellus chilensis
Chorlo chileno Charadrius modestus
Chorlo de doble collar Charadrius falklan-

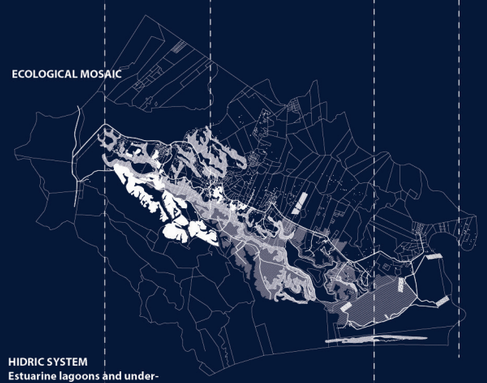
INTRODUCED VEGETATION

NATIVE VEGETATION

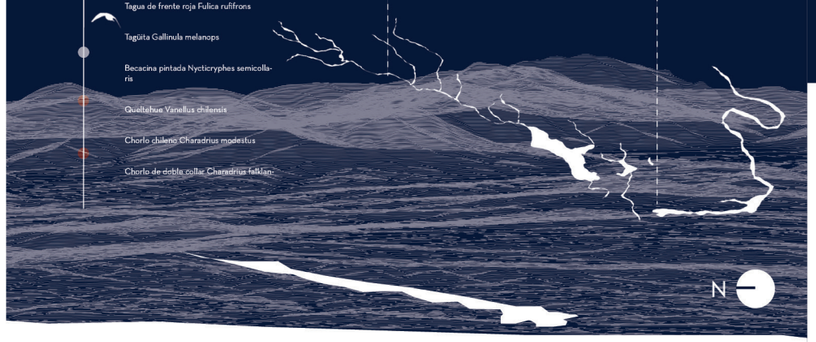
AGRICULTURAL CROPS

AGRICULTURAL PLANTATIONS

ROADS OF CIRCULATION



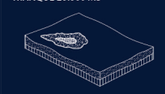
ECOLOGICAL MOSAIC



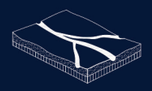
HIDRIC SYSTEM
Estuarine lagoons and underground currents

N

Annual transition El Yali water reserve



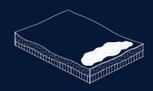
TRANQUE 20.000 M3
IRRIGATION POND



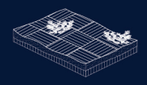
SURFACE LINES
IRRIGATE PERIMETRALLY

IRRIGATION MATRIX
MATRIX - SUBMATRIX - DRIP LINES

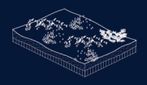
WET CORES
COLLECTION OF MULTIPLE FORMS OF WATER



FITODEPURATION WETLAND
CLEAN AND IRRIGATE



ROTACULTIVES
NUTRITION THE SOIL

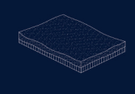


LOW SCALE VEGETATION
VEGETATION WITH ORMOREGULATION.

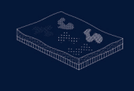
MEDIUM SCALE FRUIT TREES
LOW WATER CONSUMPTION FRUIT NATIVE TREES

NEW NATIVE TREES
REFORESTATION OF NATIVE TREES

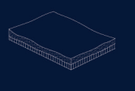
NATIVE FOREST
ECOLOGICAL CORRIDOR



MICROBES
FERTILIDAD

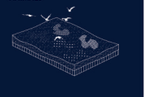


MACROINVERTEBRATES
ACCELERATE THE NUTRIENT CYCLE, MIX SEDIMENTS, AERATE DEEPER LAYERS

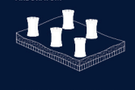


INVERTEBRATES
GIVE LIFE TO THE ECOSYSTEM

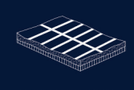
ROEDORS AND BIRDS
CREATE COMPLEX ECOSYSTEMS



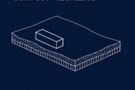
ANIMALS
ACCELERATE NATURAL PROCESS OF SPECIES.



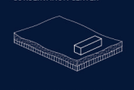
WET CORES-ARBORATUM
CONDENSATION AND IRRIGATION



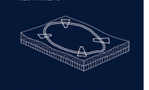
CROP WORK PATHWAYS
AUTHORIZED PERSONAL PRIVATE CIRCULATION



STORAGE AREA - COMPOST - RECYCLING
TOWN RECYCLING EL CONVENTO



BIODIVERSITY STUDY AND CONSERVATION CENTER
PENCIL, INSECTARY, GREENHOUSE, WAREHOUSES, SEEDLINGS, STUDY AND RESEARCH ROOMS, LABORATORIES AND AVIARY



PERIMETER CIRCULATION AND REST AREAS
WALK, WATCH, LEARN, AND CONTEMPLATE

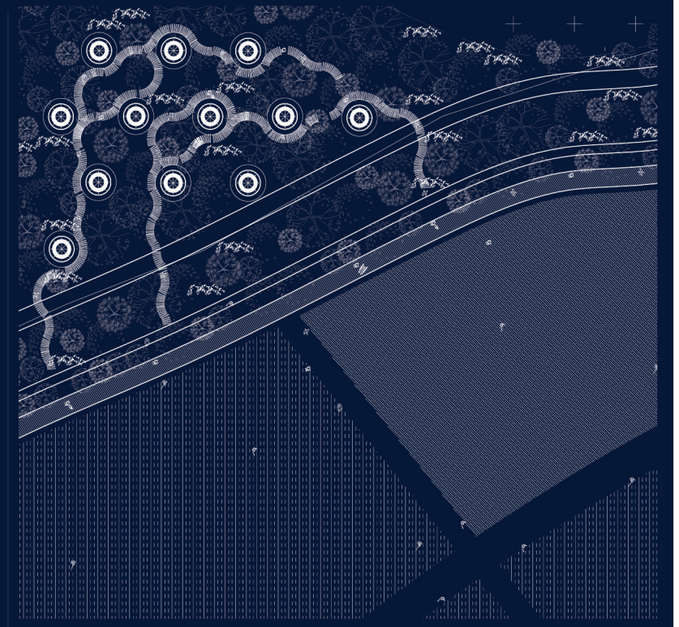
CUTTING WATER COLLECTION SYSTEM

Scale 1.100

MATERIA ORGÁNICA MANTILLO
CAPA DE LAVADO ARENA ARCILLA
CAPA ACUMULACION - CAPA INTERMEDIA
ROCA MADRE
LECHO ROCOSO

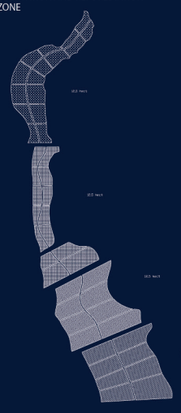
AGUA SE IRRIGA A TRAVES DE LA CAPAS DE SUELO, PERMITIENDO DAR VIDA A NUEVOS ECOSISTEMAS.

WATER COLLECTION AREA / *Scale 1.250*

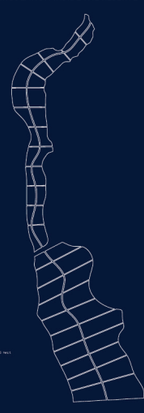


PROJECTUAL MORPHOLOGY / *Scale 1. 2500*

CULTIVATION AND REFORESTATION ZONE

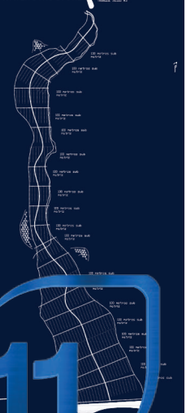


CIRCULATION INSIDE THE RESERVE



WATER MATRIX LAYOUT

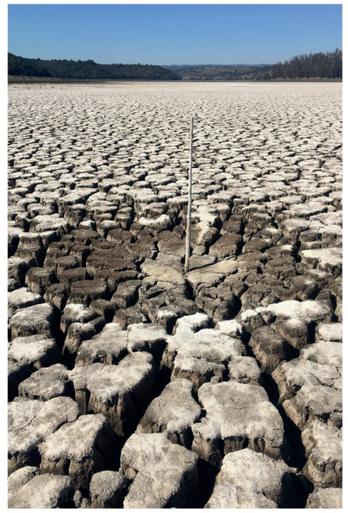
WATER STRUCTURE



PARQUE DE PROTECCIÓN Y CONSERVACIÓN DE LA BIODIVERSIDAD / *BIODIVERSITY MANAGEMENT AND CONSERVATION PARK*

Crop System

Core of Blodiversity



Soil status YALI Wetland

Water condition YALI Wetland

Lagoon Matanza YALI wetland

Quebrada Santa Rosa

Lagoon Matanza YALI wetland

Native forest Quebrada Santa Rosa

YALI wetland