

INCORPORATING CLIMATE CHANGE IN TERRITORIAL PLANNING

SECTORIAL TERRITORIAL PLAN FOR COASTAL PROTECTION AND MANAGEMENT OF THE AUTONOMOUS COMMUNITY OF THE BASQUE COUNTRY



INDEX

Introduction

Legal framework

Document origin and drafting process

Compliance with Territorial Planning - Regulations

Description of the scope of the Plan

Objectives

Summary of the content:

ADAPTATION TO CLIMATE CHANGE



TERRITORIAL-URBAN PLANNING.

Different administrations competencies

REGION

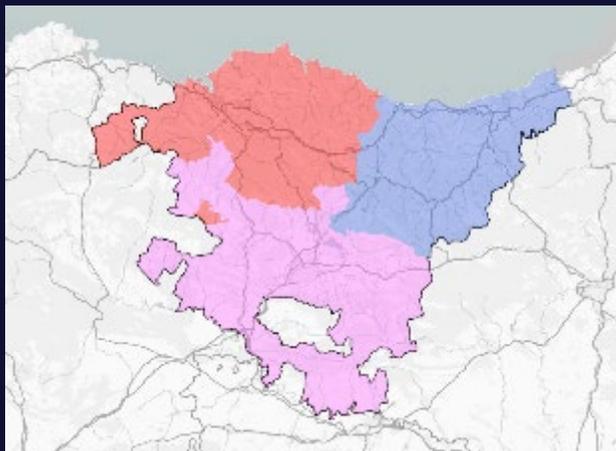
BASQUE GOVERNMENT
Department of Housing
and Urban Agenda



Work scale:
Regional and territorial
planning

Historical Territories

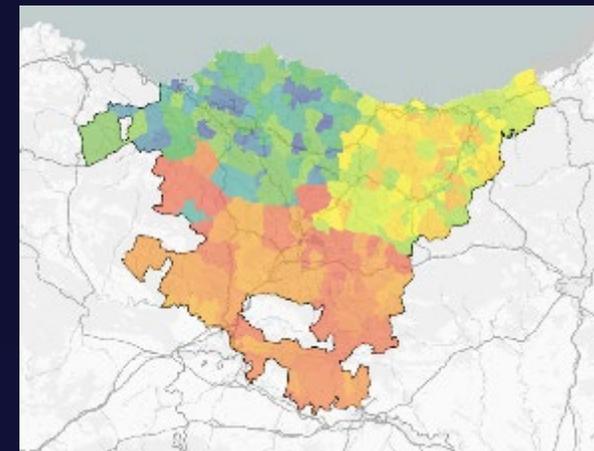
Araba/Álava
Bizkaia
Gipuzkoa



Work scale:
Territorial planning

Municipalities

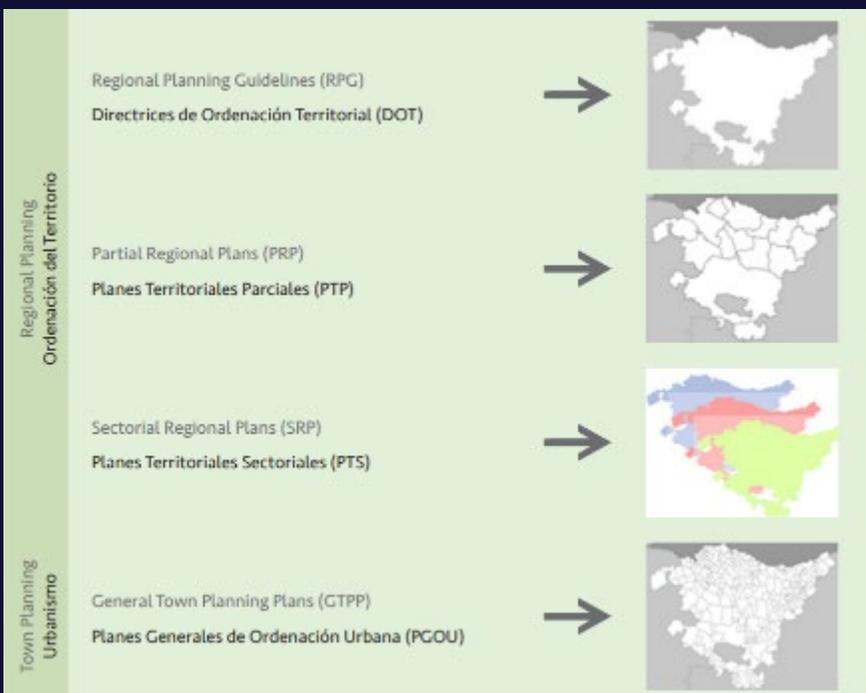
252



Work scale:
Urban planning

TERRITORIAL PLANNING. LEGAL FRAMEWORK

Law 4/1990, of 31 May, on Spatial Planning in the Basque Country.



Regional Planning Guidelines



APPLICABLE REGULATIONS

Planning Categories

- Special Protección
- Environmental improvement
- Forestry
- Agro-Livestock and Countryside
- Mountain Pastures
- Surface Water Protection

Uses in physical environment: **definition and regulation**

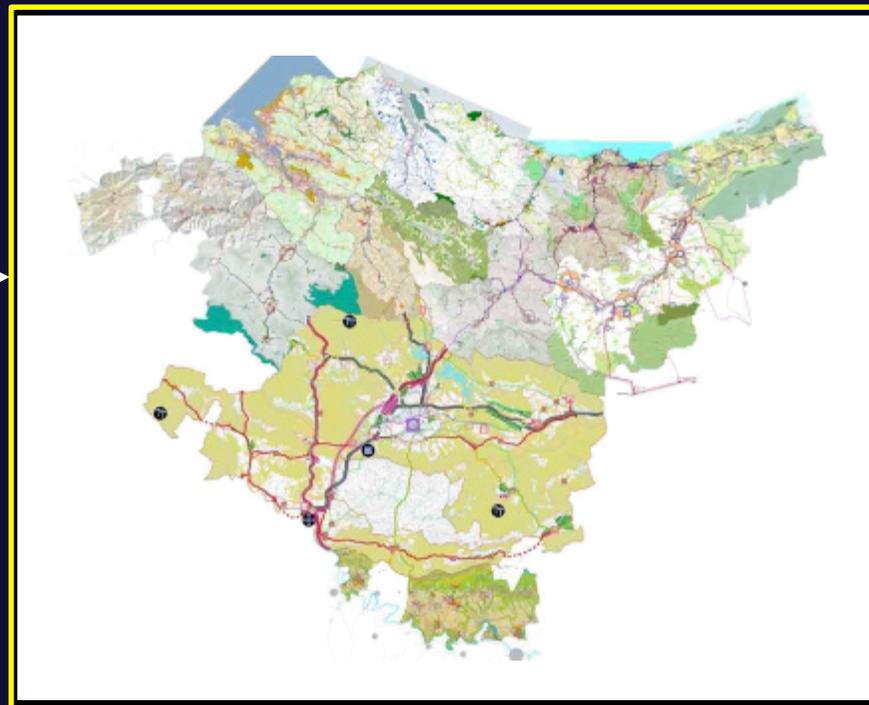
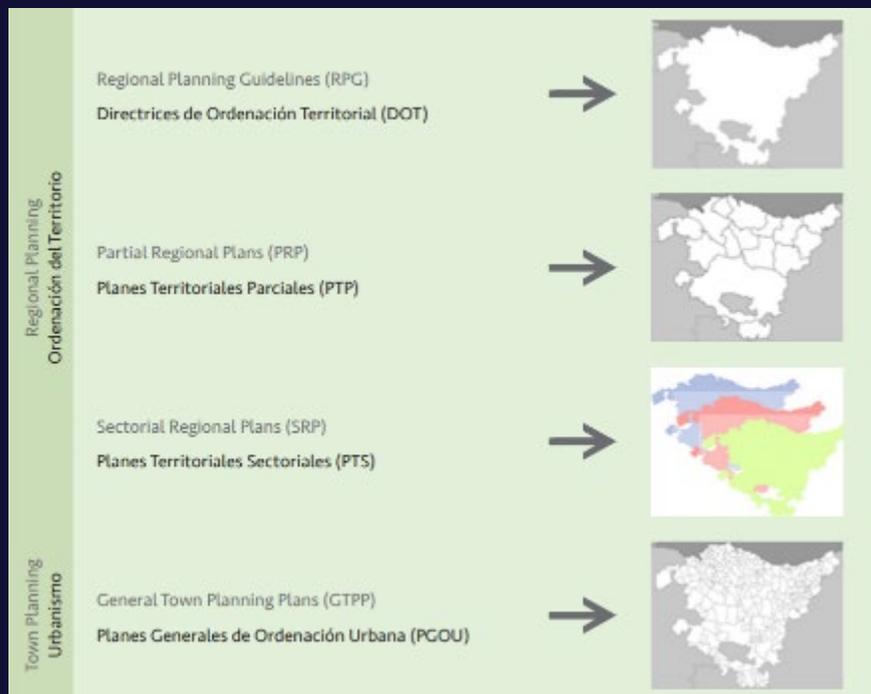
Overlapping conditions

- On natural and climate-change risks:
 - Aquifer vulnerability
 - Geological risks
 - Foodable áreas
 - Risk associated with **Climate Change**
- On green infrastructure:
 - Spaces protected for their environment values
 - Ecological corridors

TERRITORIAL PLANNING. LEGAL FRAMEWORK

Law 4/1990, of 31 May,
on Spatial Planning in the Basque Country.

Partial Territorial Plans. 15 functional areas

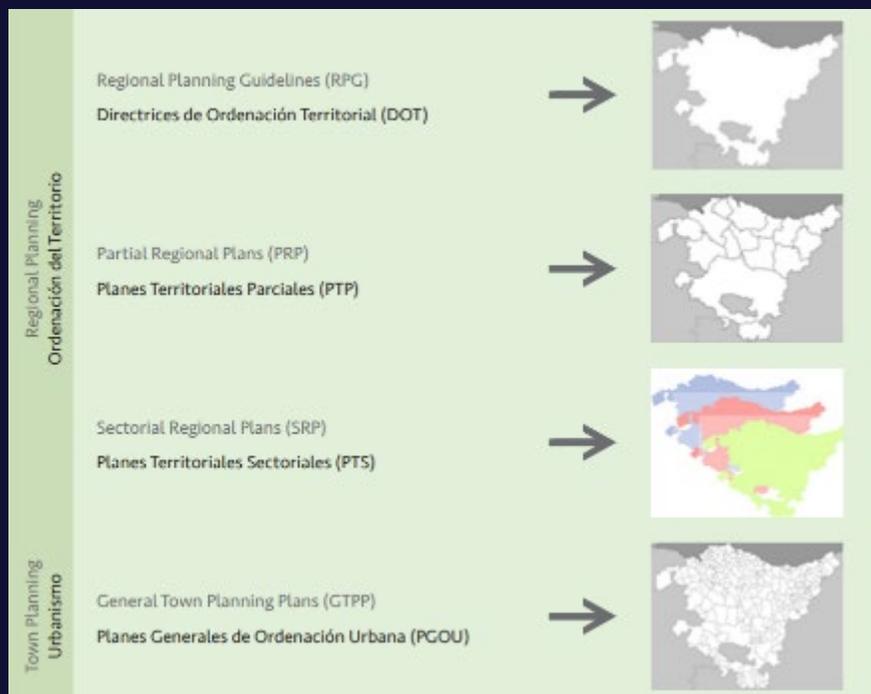


Mosaic of territorial model maps

TERRITORIAL PLANNING. LEGAL FRAMEWORK

Law 4/1990, of 31 May,
on Spatial Planning in the Basque Country.

Sectorial Territorial Plans. 10



Rivers



Agroforestry



Economic activities



Railway



Subjects developed:

- Agroforestry
- River and stream management
- Wetlands
- Coastal protection and management
- Creation of land for economic activities
- Wind energy
- Railway network
- Roads
- Bike lanes
- Waste

Drafting process of the Sectorial Territorial Plan review– Coastal STP (PTS Litoral)-

2007 Final Approval of the **Sectorial Territorial Plan** for the **Protection and Management of the Coastline** of the Basque Country



2019 Drafting of the **Preliminary Studies** for the review of the Coastal STP



2021 Process of de participation and dissemination of **Preview Document**



2025 **Initial approval** of the document



Compliance with new Territorial Planning-Regulations

Regional Planning Guidelines (RPG 2019)

Partial Territorial Plans (PTP)

- Mungialdea
- Busturialdea- Artibai
- Bajo Deba
- Urola Costa
- Donostialdea

Sectorial Territorial Plans (STP)

- Agroforestry (2014)
- Management of rivers and streams (2013)
- General road plan of the Basque Country (2020)
- Bike lanes (Gipuzkoa 2013; Bizkaia 2023)
- Renewable energies (provisional approval)



Environmental planning

- **Natura 2000 network:** new special conservation areas SCA
- New protection figures:
 - Special Protection Plan for the Coastal Section Deba-Zumaia (2009)
 - Master Plan for the use and management of the Urdaibai Biosphere Reserve-2016



Legislation and strategies on climate change:

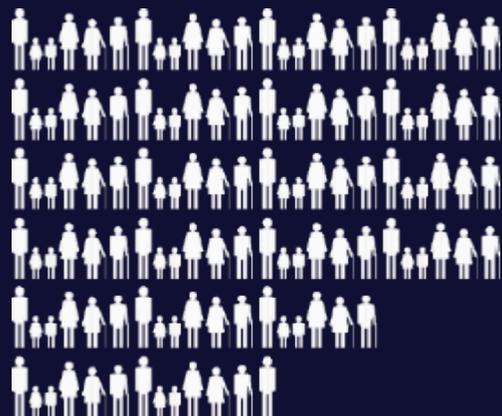
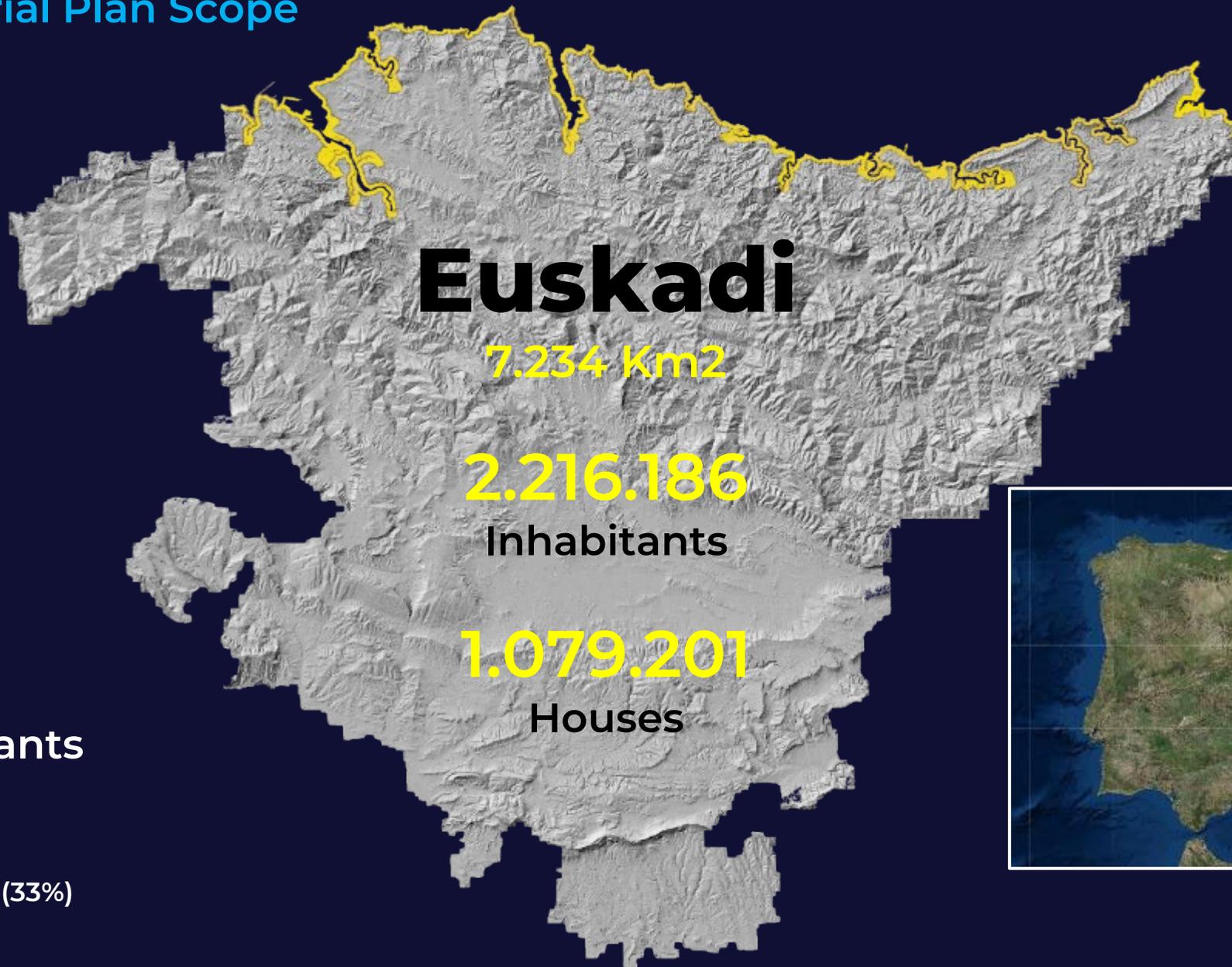
- Sustainable development goals of the 2030 Agenda (goal 13 Climate Action)
- Law 7/2021 on Climate Change and Energy Transition (State)
- Law 1/2024 on Energy Transition and Climate Change (Euskadi)
- National Plan for Climate Change Adaptation 2021-2030
- Basque Country Climate Change Strategy 2050

Other sectoral regulations

- Law 22/1998 on Coasts.
- Law 2/2013 on the Protection and Sustainable Use of the Coastline.
- Hydrological Plan (Third cycle 2022-2027) – RD 449/2023
- Flood risk management plans
- Maritime Spatial Planning of the North Atlantic Marine District
- Law 2/2018 on Port and Maritime Transport law of the Basque Country.
- Law 38/2015 on railway sector
- Legislation and highway master plans.
- Airport master plans



Sectorial Territorial Plan Scope



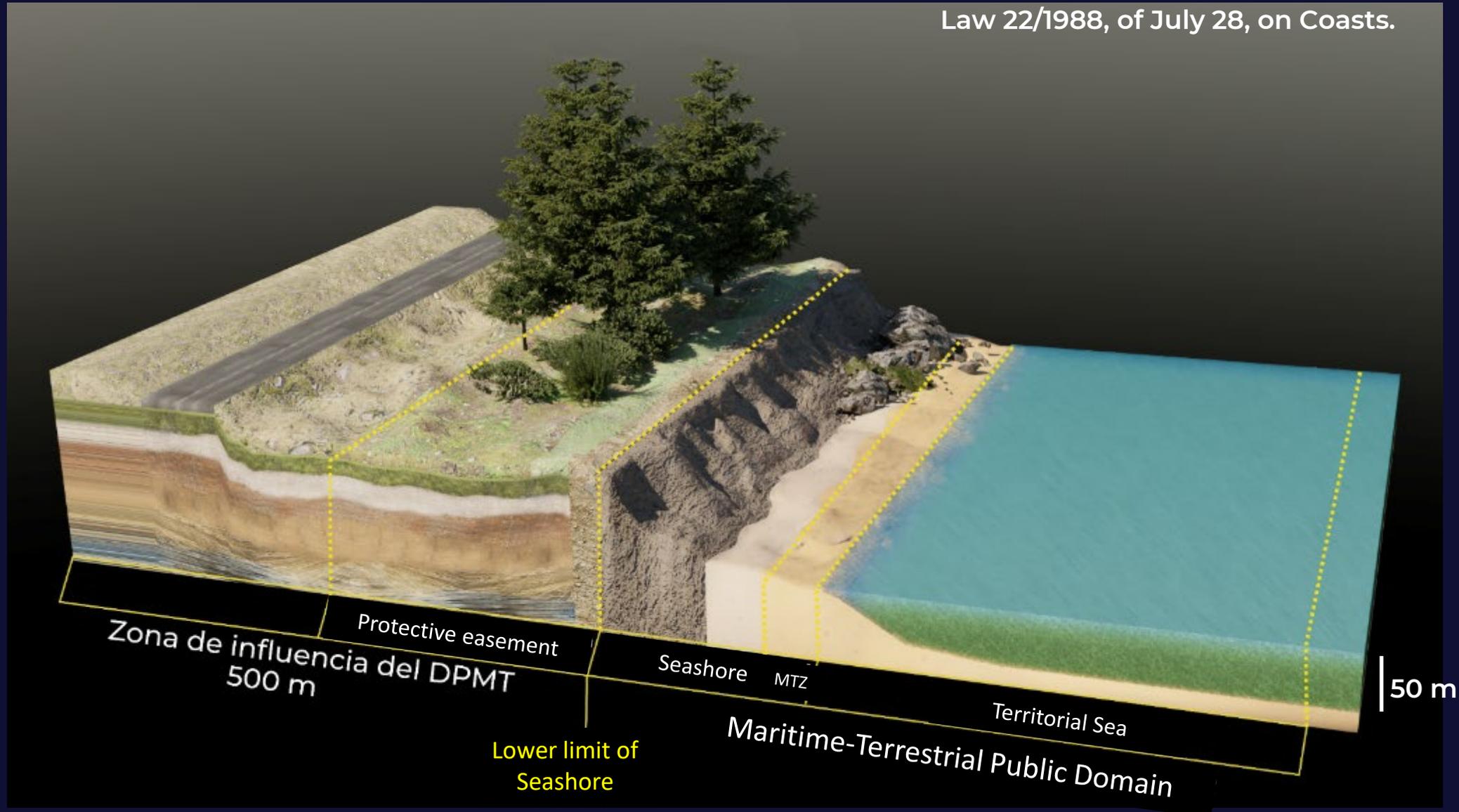
STP scope
229 Km² (3% Euskadi)

Population:
707.635 inhabitants
(32%)

359.684 homes (33%)

Sectorial Territorial Plan Scope

Law 22/1988, of July 28, on Coasts.



Characteristics of STP scope



120 km from East to West



275 linear km of coastline



Singularities of the scope of the Plan

Tidal river or estuary



Urban centers



Tidal rivers or estuaries (14)



1. Barbadun	4,4 km
2. Ibaizabal	15 km
3. Butron	8 km
4. Estepona	0,8 km
5. Oka	12,5 km
6. Lea	2 km
7. Artibai	3,5 km
8. Deba	5,5 km
9. Urola	5,7 km
10. Iñurritza	2,4 km
11. Oria	11 km
12. Urumea	9,7 km
13. Oiartzun	4,1 km
14. Bidasoa	11 km

Singularities of the scope of the Plan

Beaches (41)

-  Open Spaces General System in Maritime-terrestrial Public Domain
-  Special Protection

- Beaches**
- Dunes**
- Marshes**
- Infrastructures**



Singularities of the scope of the Plan



Dunes (12)



1. Barbadun: La Arena (3)
2. Butroi: Gorliz
3. Urdaibai: Axpe- San Bartolome
San Cristobal; Kanala / Kanalape
4. Playa de Laga
5. Urola (2)
6. Iñurritza (2)

Main effects of climate change in Dunes:

- Erosion and loss of surface
- Damage to the associated vegetation

Beaches
Dunes
Marshes
Infrastructures

Singularities of the scope of the Plan



Marshes (29)

Beaches
Dunes
Marshes
Infrastructures



1. Barbadun: Pobeña

2. Butron: Txipios, Gasteluondo, Ikuskitza, Junkera, Palados, El Abanico, San Juarena, Txakurzulo

3. Urdaibai

4. Lea: Islotes de Loibekua, playa de fangos

5. Artibai: Arrabeta-Goitiz

6. Deba: Lasao, Casacampo

7. Urola: islotes, fangos y marismas tramo medio, Bedua, Santiago

8. Iñurritza

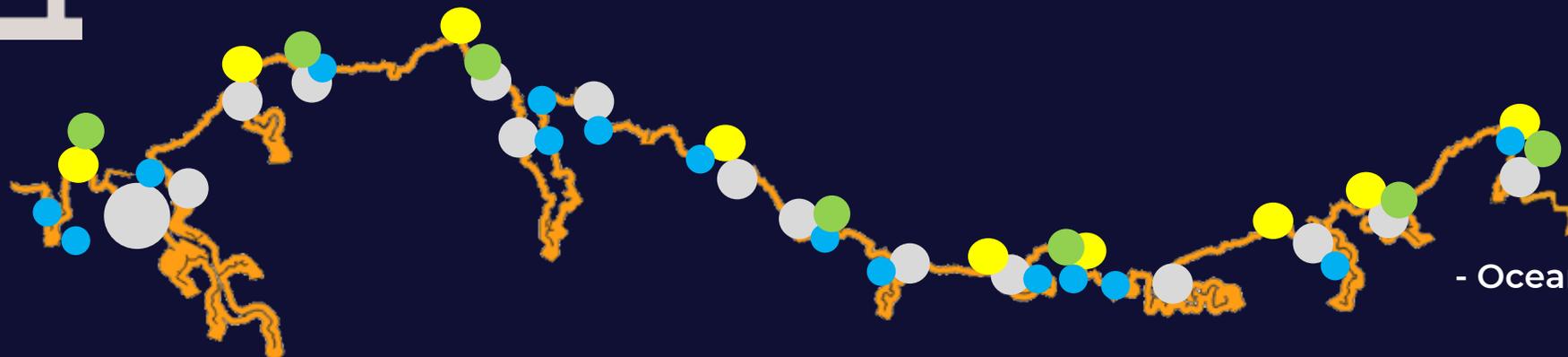
9. Oria: Santiago, Motondo, Olaberrieta, Itzao, Tramo anterior, Saria, Altxerri

10. Txingudi

Singularities of the scope of the Plan



Infrastructures



- Beaches
- Dunes
- Marshes
- Infrastructures**
 - Ports
 - Lighthouses
 - Treatment plants
 - Oceanographic platforms

Ports (20):

- | | |
|----------|-----------------|
| Bilbao | Mutriku |
| Getxo | Deba |
| Plentzia | Zumaia |
| Armintza | Getaria |
| Bermeo | Orio (2) |
| Mundaka | Donostia |
| Ea | Pasaia |
| Lekeitio | Hondarribia (2) |
| Ondarroa | |

Lighthouses (11):

- Punta Galea
- Gorliz
- Matxitxako
- Lekeitio
- Zumaia
- Getaria
- Igeldo
- Santa Clara
- De la Plata
- Senokozulua
- Higer

Treatment plants (23):

- Barbadun: Kobaron, Muskiz
- Nerbioi-Ibarzabal: Galindo, Zierbena
- Butroi: Gorliz, Armintza
- Estepona: Bakio
- Oka: Lamiaran, Elantxobe, Ibarangerlu, Laga, Laida
- Lea: Ea, Ispaster, Lekeitio
- Artibai: Ondarroa
- Mutriku, Deba-Itziar
- Urola: Zumaia, Getaria
- Oria: Zarautz
- Urumea: Loiola
- Bidasoa: Txingudi

Oceanographic platforms (7):

- Bilbao
- Armintza
- Bermeo
- Ondarroa
- Getaria
- Pasaia
- Hondarribia

STP review document description



Content of the document prior its initial approval

 Report

 Regulations

 Financial economic study

 Impacts on general urban planning

 Information and planning maps

 Strategic Environmental Study

REGULATIONS

I

PROVISIONS OF GENERAL NATURE

Objectives.
Definitions.
Planning Scope.
 Physical environment.
 Urban environment.
Planning Categories. Land uses
Overlapping conditions

II

SPHERE OF GENERAL DETERMINATIONS

Regulation of admissible **uses and activities**.

III

SPHERE OF DETERMINATIONS FOR THE ADAPTACION OF THE COASTLINE TO THE RISKS ASSOCIATED TO CLIMATE CHANGE

Scenarios
Threats
Vulnerable areas
Adaptative measures

IV

PROVISIONS RELATING TO THE MARINE ENVIRONMENT

GENERAL PROVISIONS

Objectives of the review

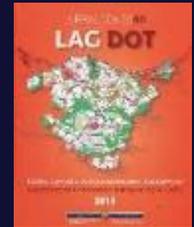
SDG

Achieve the goals defined in the 2030 Agenda for **Sustainable Development Goals**



RPG

Develop the **Regional Planning Guidelines (RPG)** in the Coastal strip: Physical Environment and Green Infrastructure



NHP

Protect the **natural heritage** of the coastline by reducing the impacts generated by activities and uses



CC

Incorporate, as an **overlapping condition**, adaptation to the impacts of **climate change**. With the goal of not increasing the vulnerability of the coastline



CG

Provide criteria and guidelines for planning aimed and **reducing the territory's vulnerability** to the effects of climate change.



GENERAL PROVISIONS

Planning scope

A. Marine area

- Marine environment

B. Transition zone

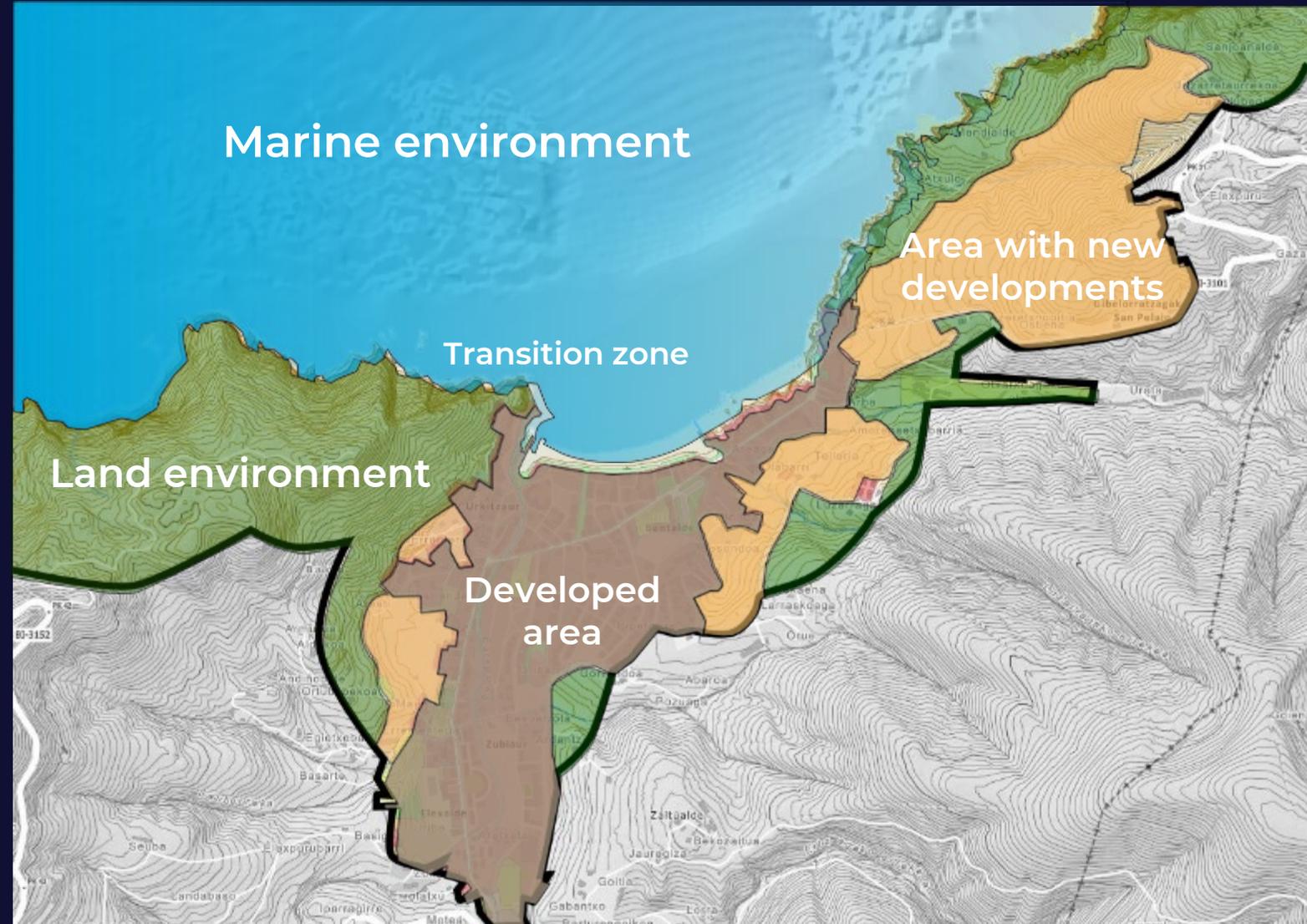
- Seashore / Low tide
- Tidal river / marches
- Beaches

C. Land area

1. Land environment

2. Urban environment

- Developed area
- Area with potential for new developments
- Infrastructures
- Facilities and open spaces



Planning of Marine environment

- **Directive 2014/89/UE** of the European Parliament and of the Council, of 23 July 2014, on the planning of maritime space.
- **Maritime Spatial Planning** for the Noratlantic Marine District (Directorate General for the Coast and the Sea of the Ministry of Ecological Transition and the demographic Challenge) approved by Royal Decree 150/2023, of February 28.

SP

Special Protection

EI

Environmental
improvement

F

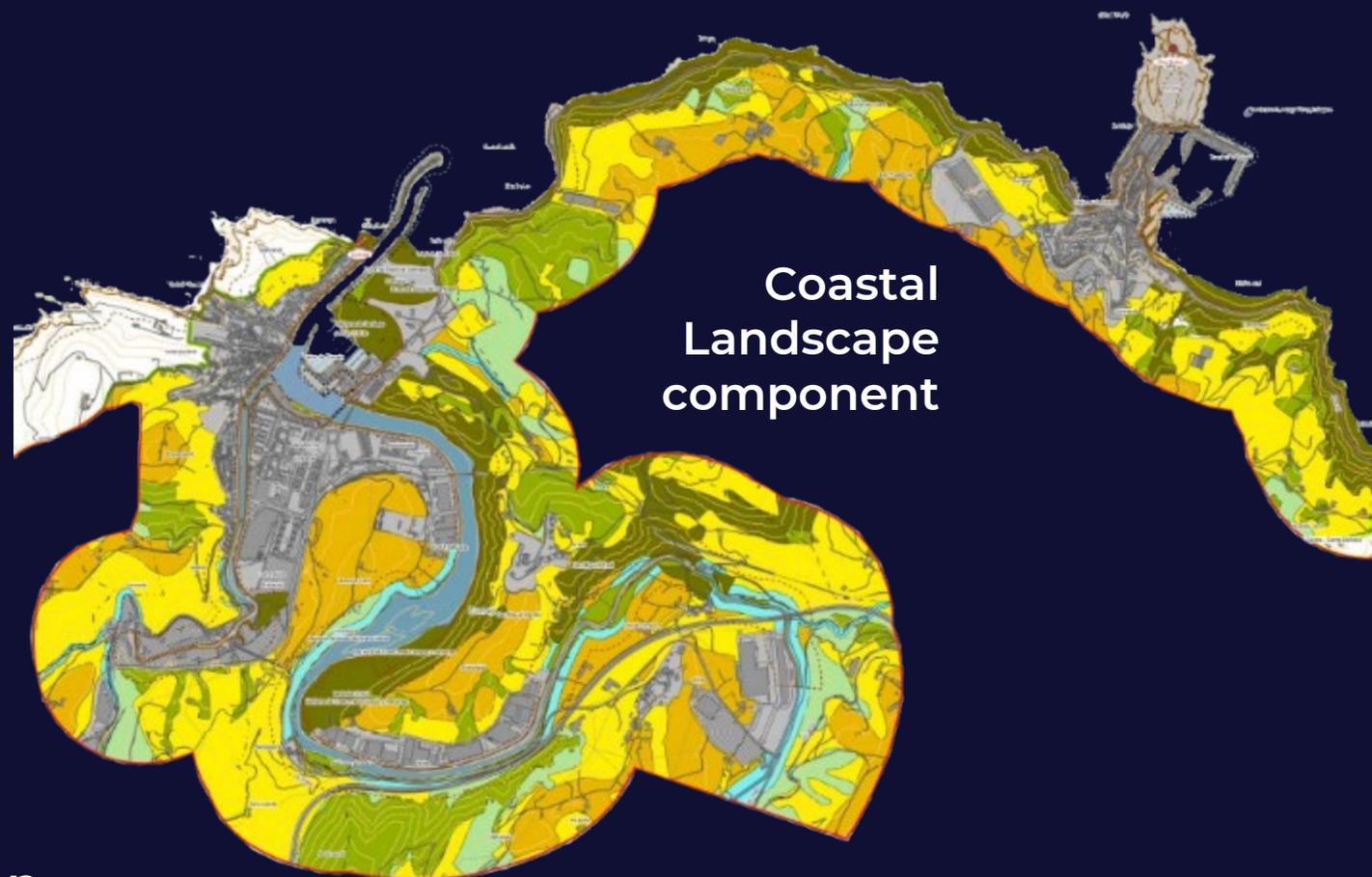
Forestry

AC

Agro-Livestock and
Countryside

SW

Surface Water Protection



1. Related to **natural risks**

Aquifer vulnerability

Geological risks

Floodable areas

Risks **associated with Climate Change**

2. On **green infrastructure**

Protected spaces

Ecological corridors

3. **Other** overlapping conditions

Public utility forests



SPHERE OF GENERAL DETERMINATIONS

Regulation of uses and activities

-  1. Encouraged use
-  2. Admissible use
-  3. Prohibited use

	PLANNING CATEGORIES				OVERLAPPING CONDITIONS		
	Special protection	Environmental improvement	Forestry	Agricultural	Natural risks	Climate change	Green Infracst,
Environmental protection							
Leisure and recreation							
Primary resource exploitation		 	  	 	 	 	
Infrastructures		 	 	 	 	 	 
Construction uses			 	 		 	 

Illustrative and simplified example of the type regulation established



SPHERE OF DETERMINATIONS for the ADAPTATION to the RISK associated to CLIMATE CHANGE

General Provisions

Considered temporal and emission **scenarios**

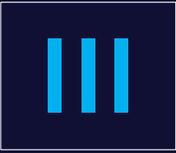
Threats arising from risks associated to climate change

Regulatory framework for adaptation measures

Vulnerable areas.

Adaptation measures.



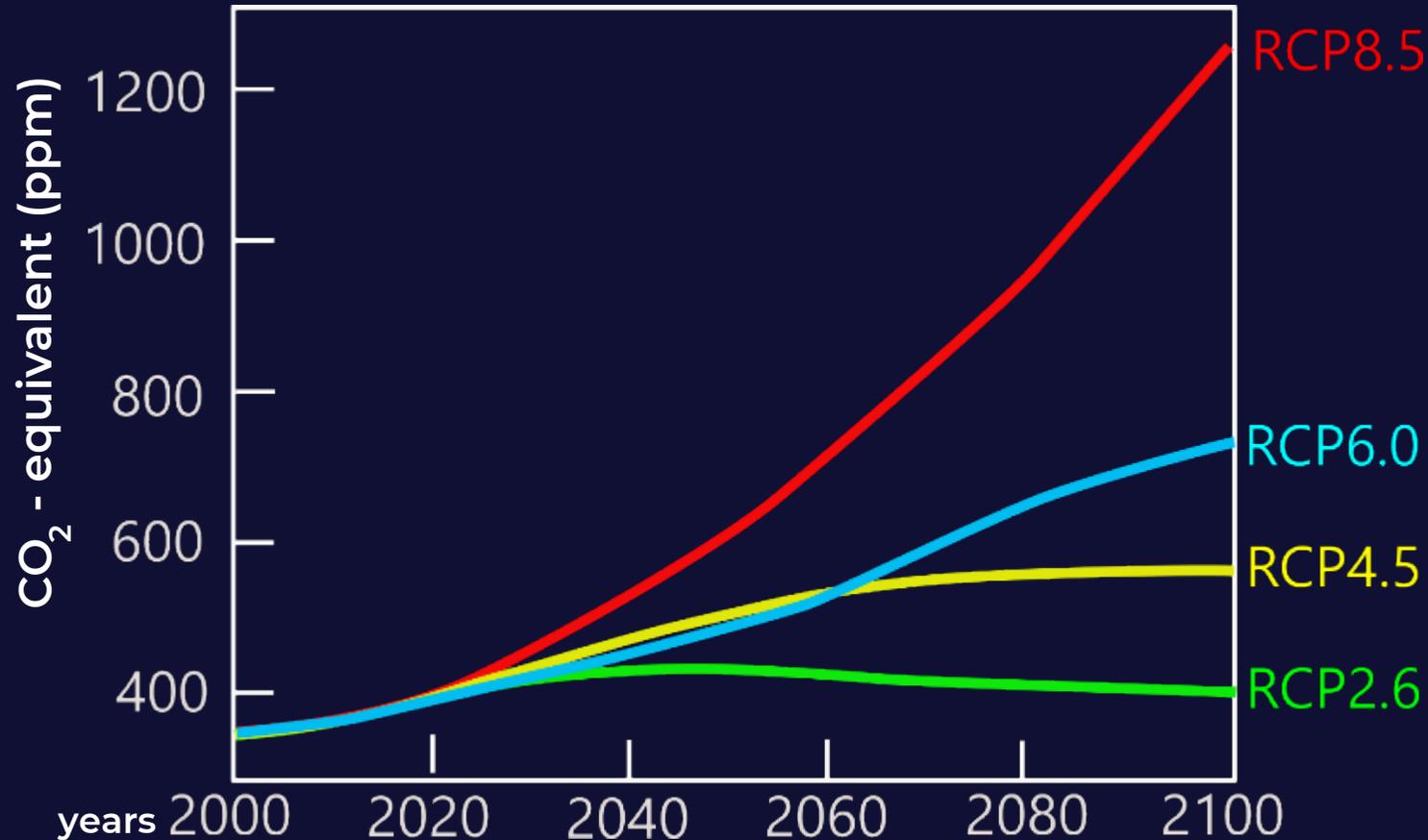


ADAPTATION to the RISK associated to CLIMATE CHANGE

Considered scenarios: emissions

RCP

Representative concentration Pathway
(according to the projections made by the IPCC)



SEA LEVEL RISE year 2100

RCP 4.5 : 50 cm

RCP 8.5 : 80 cm

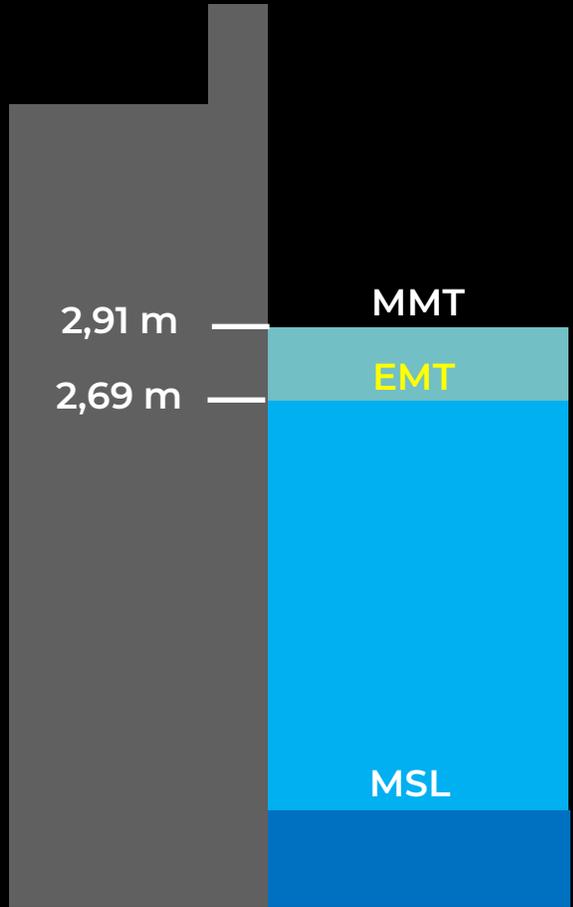
Source:

-Intergovernmental Panel on Climate Change (IPCC)-
AR6 Synthesis Report: Climate Change 2023

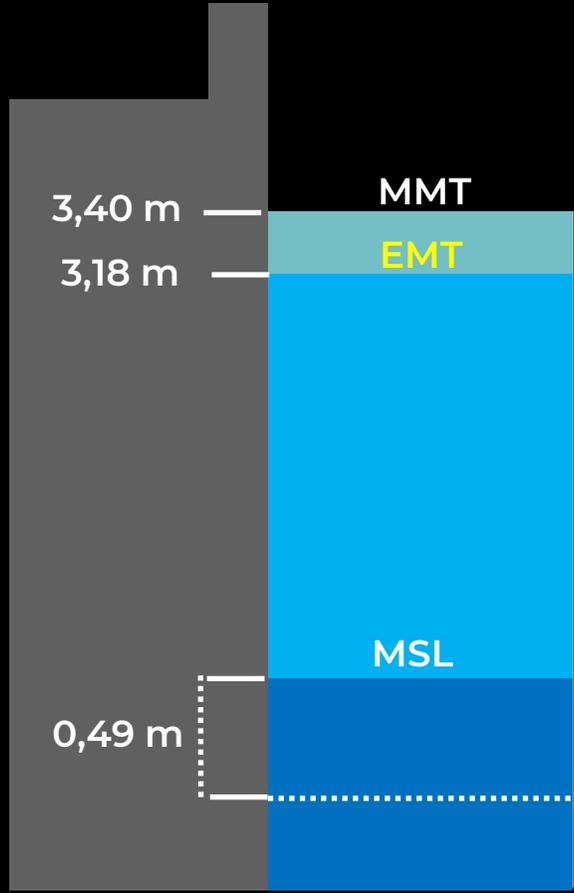


ADAPTATION to the RISK associated to CLIMATE CHANGE

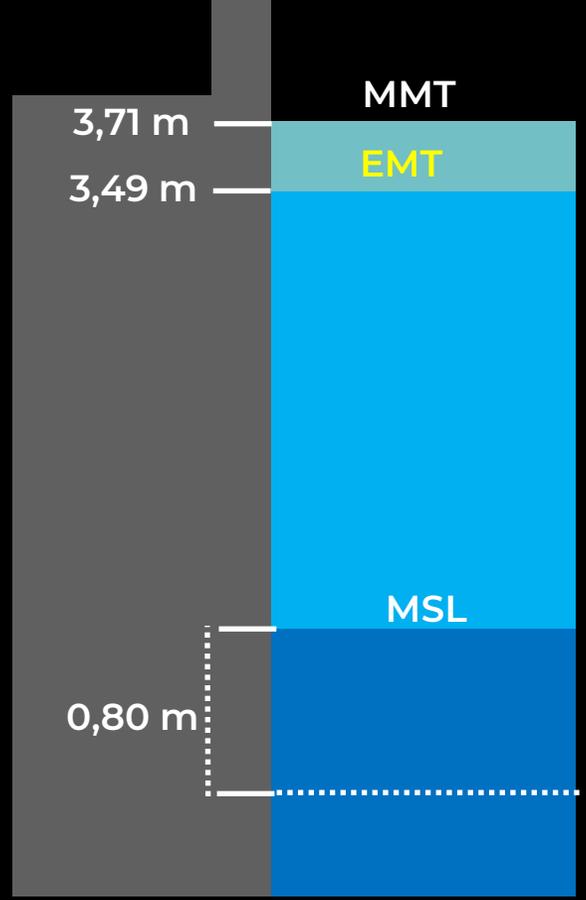
Considered scenarios: sea level rise



Actual situation



RCP 4.5 year 2100



RCP 8.5 year 2100

MSL: Mean Sea Level
EMT: Equinoccial Maximum high tide
MMT: Meteorological Maximum high tide



ADAPTATION to the RISK associated to CLIMATE CHANGE THREATS arising from risks associated with CC

1. Linked to the SEA LEVEL RISE –SLR–

- a) Due to the effect of astronomical tide.
- b) Due to the effect of the meteorological tide.
- c) Due to the increased impact of the waves.
- d) Due to increase in river flood risk.
- e) Due to the rise in the water table and the decrease in the capacity of the sewage system.

2. Linked to the increase in TORRENTIAL INTENSITY.

3. Linked to the extreme increase in TEMPERATURE.

- a) Due to the increase in evapotranspiration.
- b) Due to the increase in heat islands.
- c) Due to the increase in fire risk.



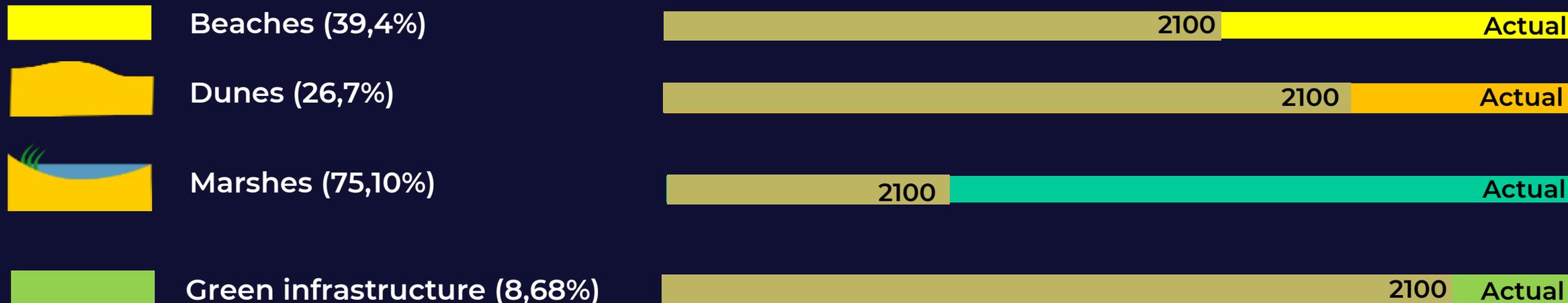
ADAPTATION to the RISK associated to CLIMATE CHANGE

Effects associated with SEA LEVEL RISE-SLR-

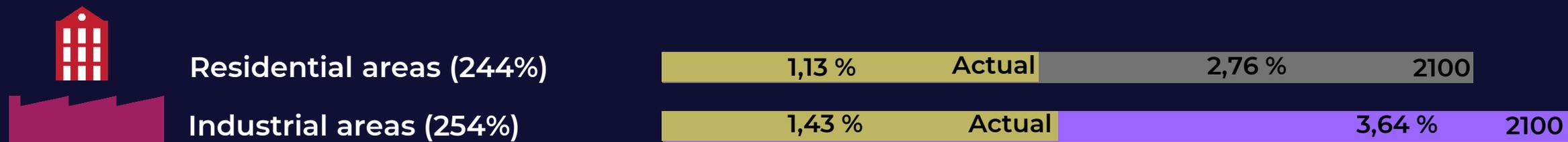
(RCP 8,5 scenario - year 2100)



Anticipated Surface reductions :



Increase of vulnerable areas to flood risk in urban zones:



Exposure to wave action





ADAPTATION to the RISK associated to CLIMATE CHANGE REGULATORY FRAMEWORK. Vulnerable areas identification

Especially vulnerable zones.

1. ZSLR

Due to the effect of the SLR on the tide or the waves

2. ZIRF

Due to increase in river flood risk

3. ZWTR

Due to water table rise.

4. ZITI

Due to the increase of torrential intensity

5. ZETI

Due to extreme temperature increase.



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

1. ZSLR

In areas especially vulnerable due to the sea level rise and wave activity

1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI

A. In physical environment

Actions to promote:

Marshes: Creation and recovery.

Natural environment: reforestation, riverbed naturalization, natural values recovery.

Building: removal of abandoned, non-compliant or deteriorating structures.

Prohibited actions:

Building: construction of new buildings

Urbanization: construction of embankments, building of new transportation routes or parking lots.



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

1. ZSLR

In areas especially vulnerable due to the sea level rise and wave activity

1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI

B. Developed areas

Actions to promote :

Building: removal of abandoned, non-compliant or deteriorating structures

Infrastructures: Oriented towards adapting to existing risks, minimizing their vulnerability

Ribervbed naturalization, soil decontamination, protection of cultural heritage...

Criteria for actions planned in ZSLR:

- Situation of new buildings and urban developments above flood level (**RCP 8.5 year 2100**)
- Consideration of the risks arising from wave action.

Mitigation and adaptacion studies: Assessment of the issues within the field and definition of action strategies.



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

1. ZSLR

In areas especially vulnerable due to the sea level rise and wave activity

B. Areas with potential for new developments

Objectives:

Maintain the morphological conditions of the area.
Minimize risks and do not increase vulnerability.

Actions to promote:

Building: removal of abandoned, non-compliant or deteriorating structures

Infrastructures: Oriented towards adapting to existing risks, minimizing their vulnerability

Riberbed naturalization, soil decontamination, protection of cultural heritage...

Prohibited actions:

Building: construction of new buildings that do not comply with the conditions for adaptation to the CC regarding development planning

Urbanization: landfills, construction of new transportation routes not included in territorial planning instruments.

1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

2. ZIRF

In areas especially vulnerable due to the increase in river flood risk

Actions to promote:

- Improvement of subsoil permeability and overall drainage conditions.
- Removal of obstacles that may hinder drainage.
- Improvement of the existing sewage network.
Execution of cleaning and clearing tasks on roads paths, or drainage channels.
- Waterways naturalization.

Mitigation and adaptacion studies:

Assessment of the issues within the field and definition of action strategies

1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change



ETXEBIZITZA ETA
HIRI AGENDA SAILA
DEPARTAMENTO DE VIVIENDA Y
AGENDA URBANA

3. ZWTR

In áreas especially vulnerable due to the **water table rise** and the **decrease in sanitation capacity**

Developed areas:

Mitigation and adaptacion studies: Assessment of the issues within the field and definition of action strategies.

Areas with potential of new development:

Urban planning must include adaptation measures.

Measures:

- **Sustainable drainages**, increasing soil permeability.
- Increase **landscaped surfaces** and use of green roofs
- **Recover** open-air channels from covered ones.
- **Justification in urban planning** of chosen measures.

1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

3. ZWTR

In areas especially vulnerable due to the decrease in sanitation capacity
Effects in developed areas

- 1. ZSLR
- 2. ZIRF
- 3. ZWTR
- 4. ZITI
- 5. ZETI

during high tide.

rise as a consequence
change.

of rainfall during high

work due to the limited
capacity of the sewerage



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

4. ZITI

In áreas especially vulnerable due to the increase in torrential intensity

Actions to promote:

- Improvement of subsurface **permeability**.
- Improvement of **drainage** conditions.
- **Removal of obstacles** that may hinder water drainage.
- Improvement of the existing **sewage** network.
- Execution of cleaning and clearing work on roads, paths, or drainage channels.
- Consideration of maximum **stormwater flow**:
 - Urban environment: 25-year return period
 - Natural environment: as established by the Hydraulic administration.



ADAPTATION to the RISK associated to CLIMATE CHANGE

ADAPTATION MEASURES to the natural risks associated with climate change

5. ZETI

In áreas especially vulnerable due extreme temperature increase

Objetivo:

- Not to increase the actual vulnerability the territory currently presents.

Actions to promote:

- Increase surface of **landscaped zones**.
- Increase of **woodland**.
- Increase the area of public spaces protected from **solar radiation**.
- Use **permeable pavements**.
- Recover **open-air channels**.
- Mitigate the risk of fire.



1. ZSLR
2. ZIRF
3. ZWTR
4. ZITI
5. ZETI

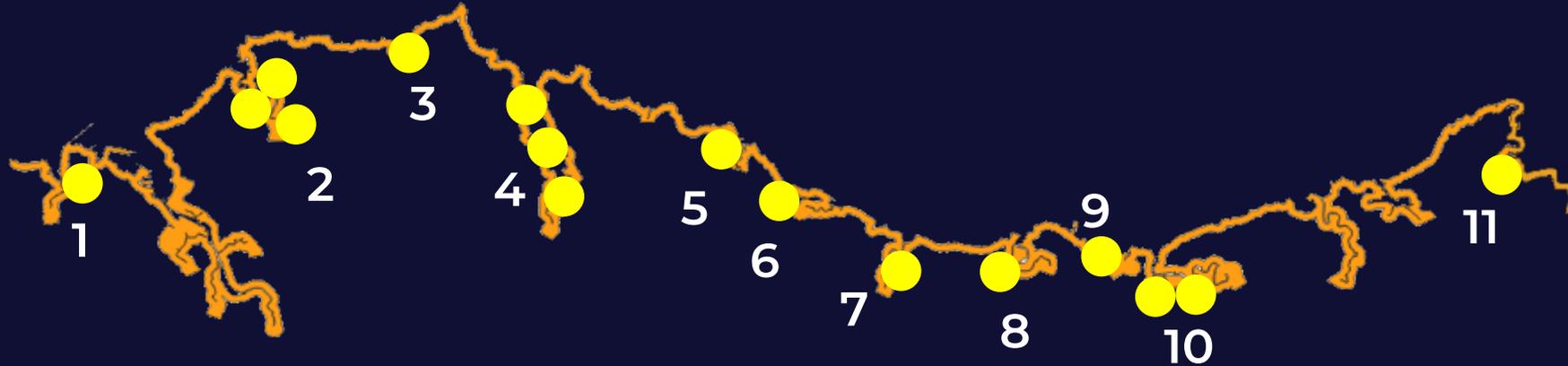


ADAPTATION to the RISK associated to CLIMATE CHANGE

OTHER ADAPTATION MEASURES

Areas of posible new Marshes proposed in the STP

Objective: Recover at least the expected loss in the RCO 4.5-2100 (155 Ha)



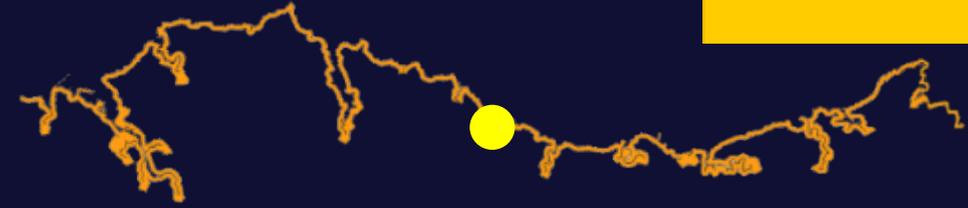
- | | |
|-------------|----------------------|
| 1. Barbadun | 7. Deba |
| 2. Butroi | 8. Urola |
| 3. Estepona | 9. Iñurritza |
| 4. Urdaibai | 10. Oria |
| 5. Lea | 11. Bidasoa-Jaizubia |
| 6. Artibai | |



ADAPTATION to the RISK associated to CLIMATE CHANGE

OTHER ADAPTATION MEASURES

Areas of posible new Marshes proposed in the STP



Tidal river Artibai



Ondarroa



ADAPTATION to the RISK associated to CLIMATE CHANGE

OTHER ADAPTATION MEASURES

Inclusion in the category Special Protection for Cantabrian Oak forest stands (308 Ha):

Muskiz, Barrika, Gorniz, Ispaster, Lekeitio, Mutriku, Deba, Mendaro, Zumaia, Getaria y Zarautz

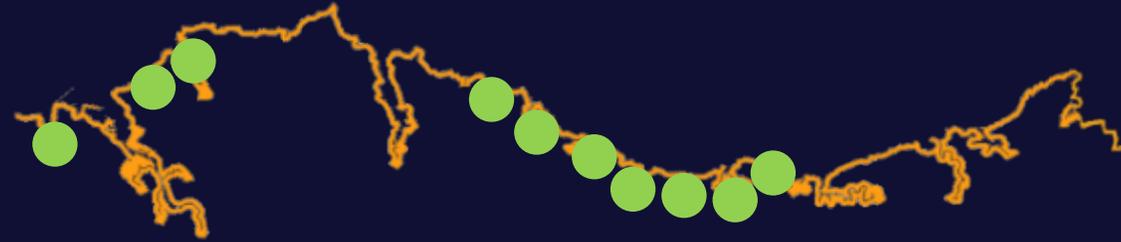
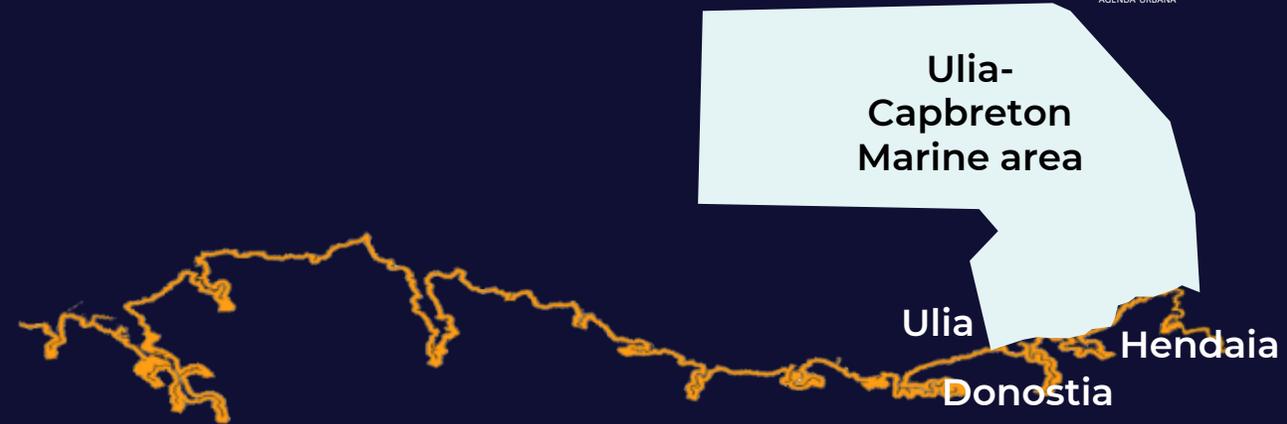


Figura nº2.- En color coral, detalle del encinar a proteger, sito en los T.M de Getaria y Zarautz. Escala base 1/25.000.

Expansion of the Natura 2000 network:
 Ulia- Jaizkibel marine area (13.000 Ha)
 (Proposal for the creation of a marine ecological corridor)



Order TED/1416/2023, of December 26, approving the proposal for the inclusion of six marine protected areas in the list of Sites of Community Importance (SCI) of the Natura 2000 Network. (BOE 313, 30.12.2023)

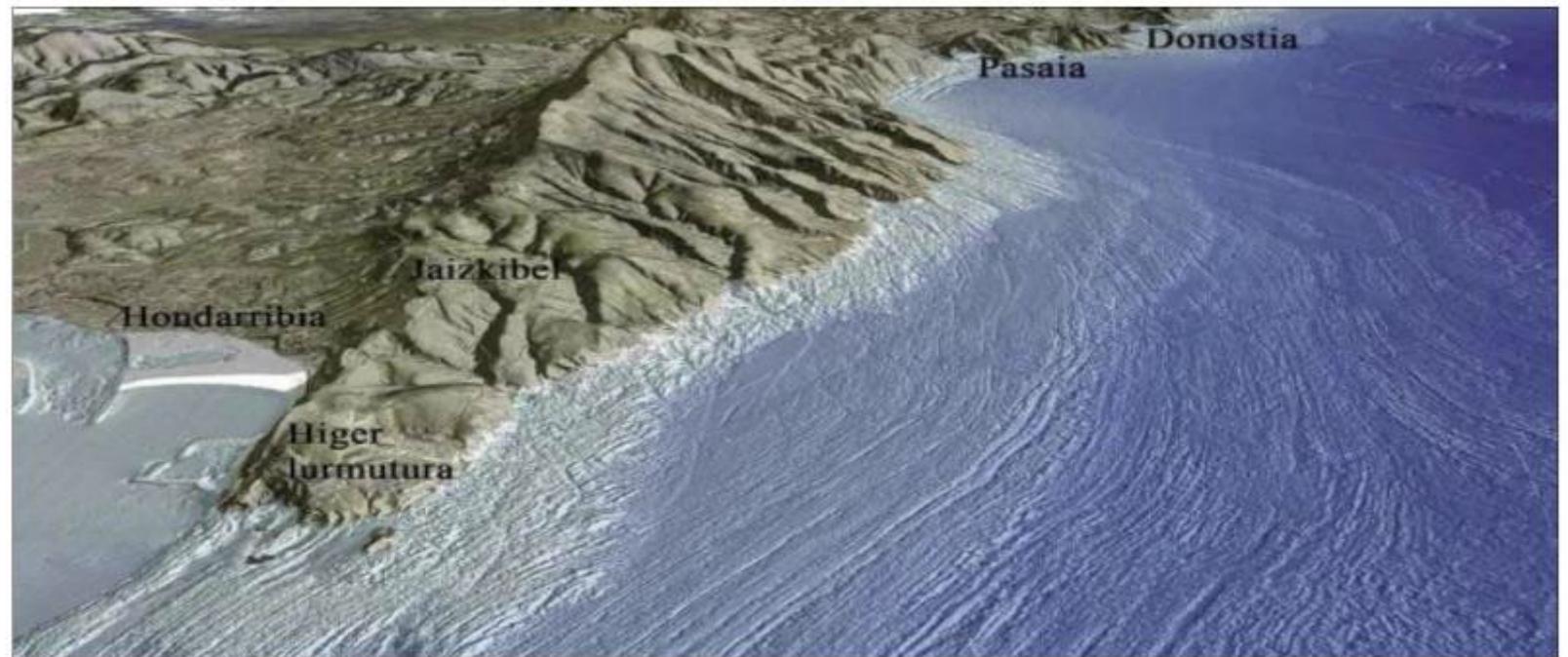
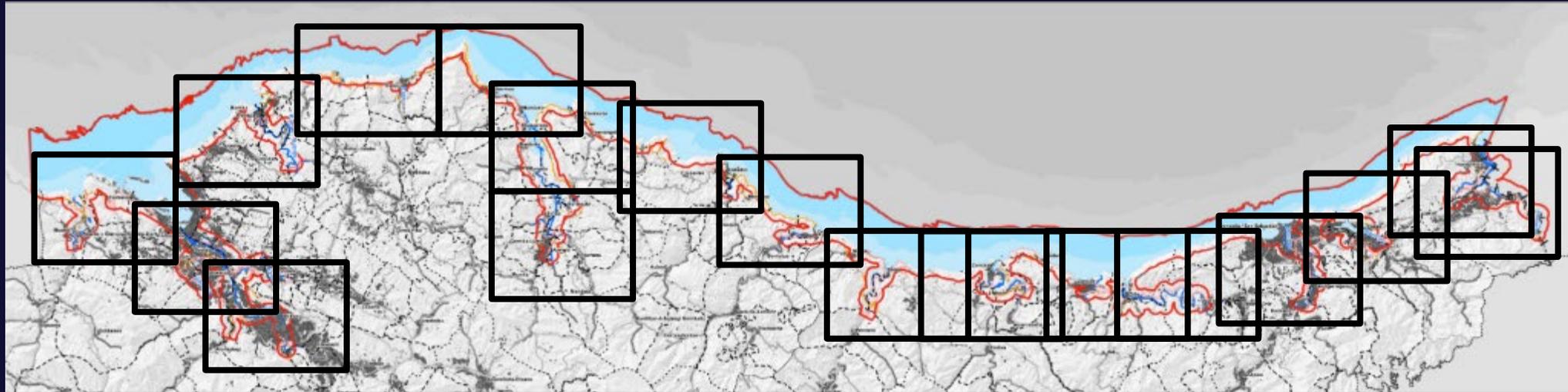


Figura nº13.- Espacio marino propuesto. Fuente: "Informe de Continuidad Ecológica Tierra-Mar en el ámbito territorial de la Costa Este de Gipuzkoa entre Ulia-Jaizkibel-Txingudi". Gobierno Vasco.2021

GRAPHIC DOCUMENTATION



INFORMATION MAPS

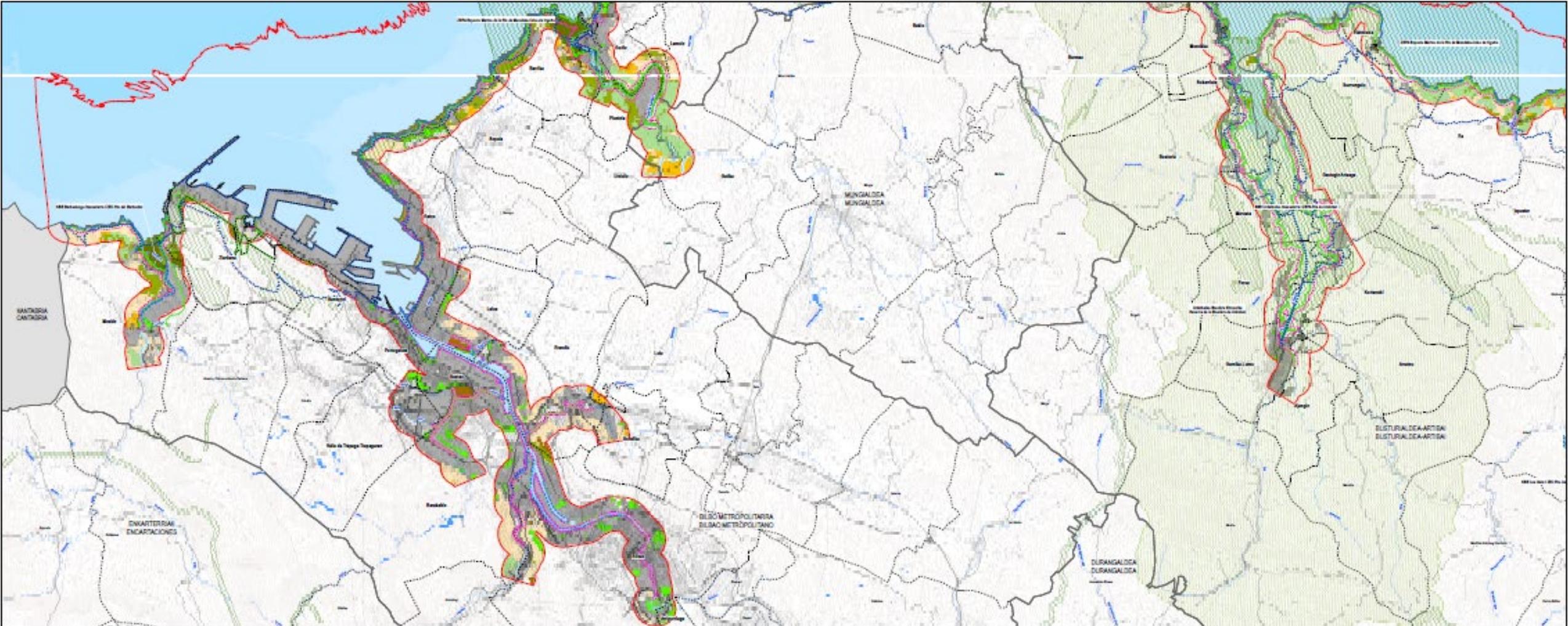
- I.1. Situation
- I.2. Coastal interest points
- I.3. Current Territorial Planning. Zonification
- I.4. Overlapping conditions. Natural risks
- I.5. Overlapping conditions. Coastal and river flood risk

PLANNING MAPS

- O.1. Zonification and Green Infrastructure
- O.2. Climate Change Adaptation

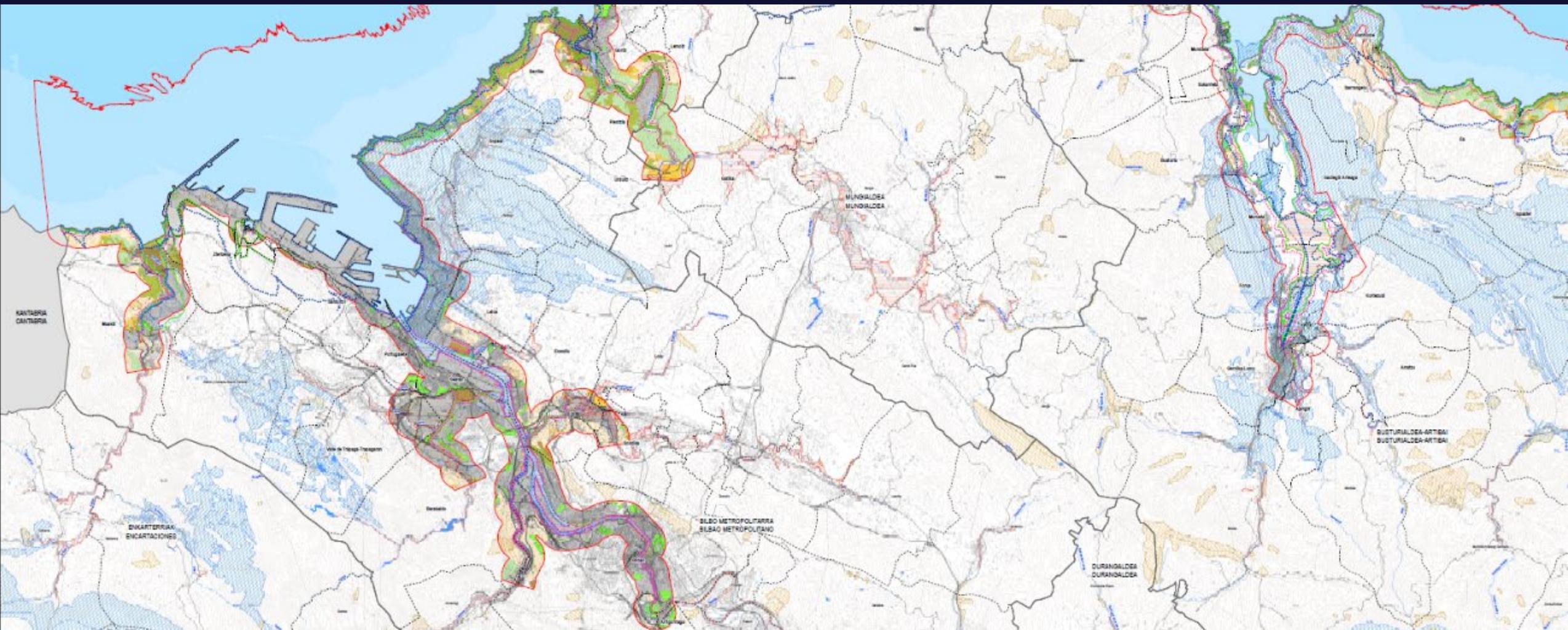
GRAPHIC DOCUMENTATION

13. INFORMATION. Current Territorial Planning. Zonification and Green infrastructure



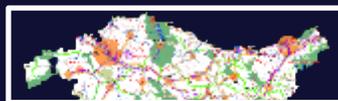
GRAPHIC DOCUMENTATION

14. INFORMATION. Overlapping conditions related to natural risks

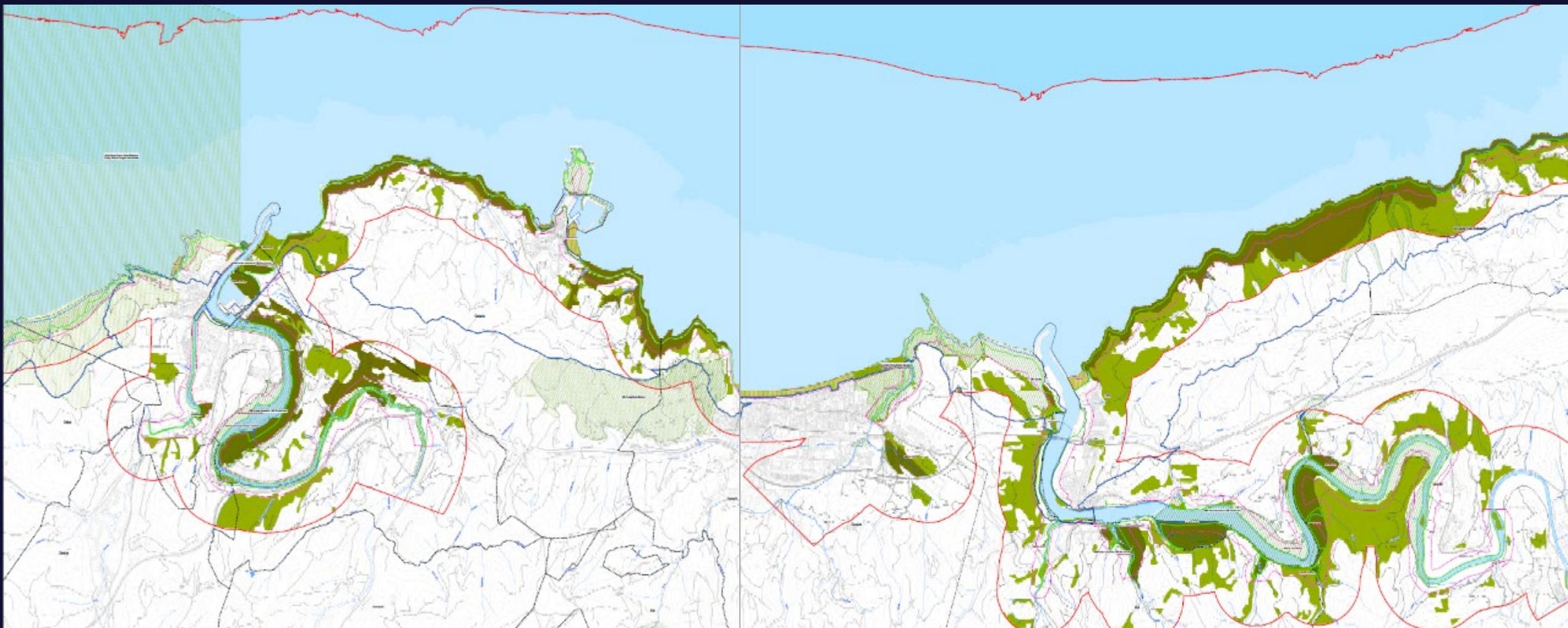


GRAPHIC DOCUMENTATION

01. PLANNING. Zonification and Green infrastructure



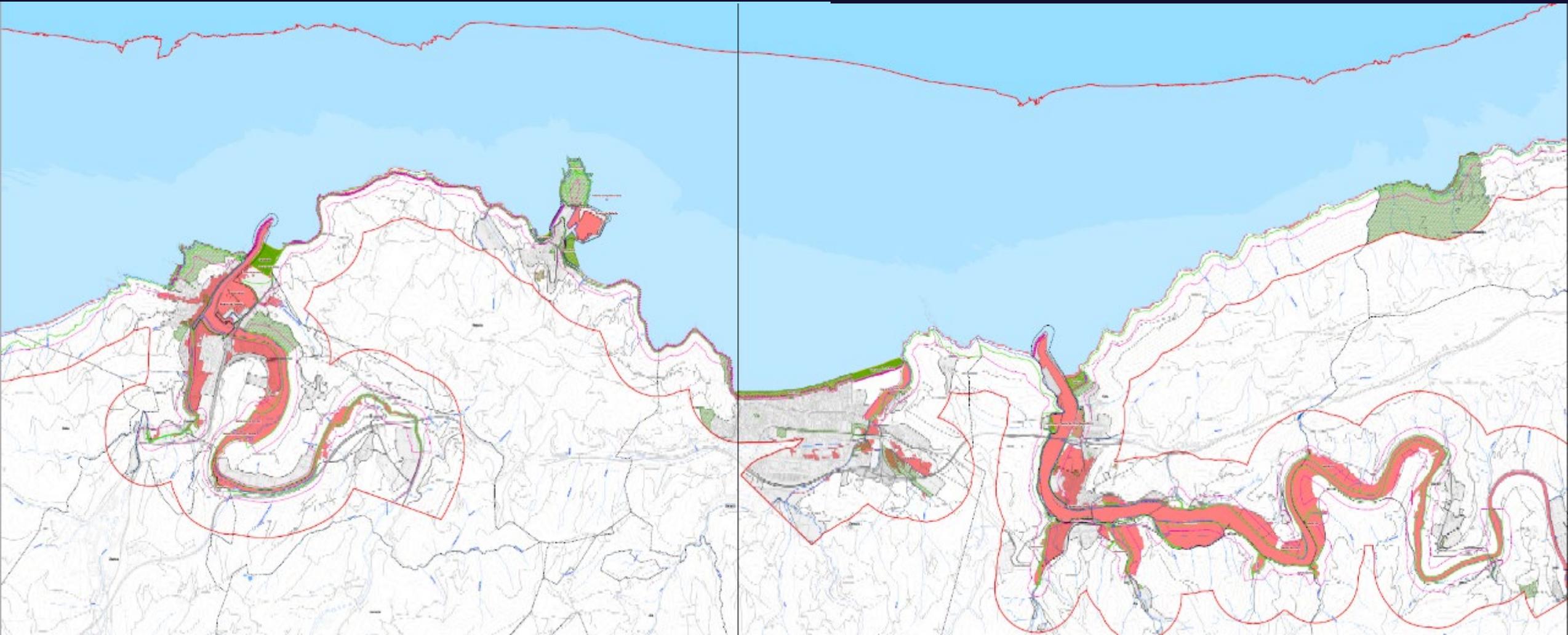
ETXEBIZITZA ETA
HIRI AGENDA SAILA
DEPARTAMENTO DE VIVIENDA Y
AGENDA URBANA



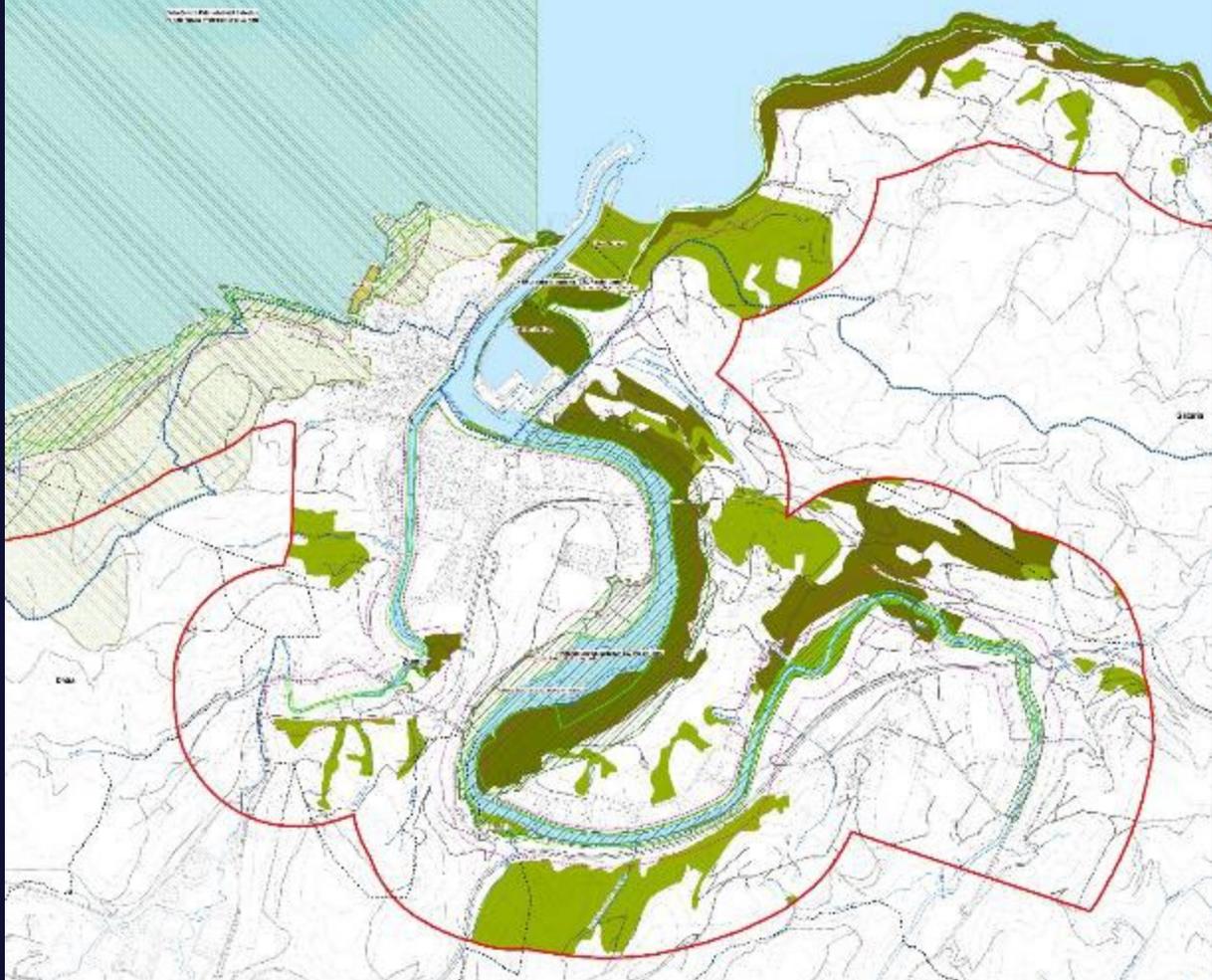
GRAPHIC DOCUMENTATION

O2. PLANNING.

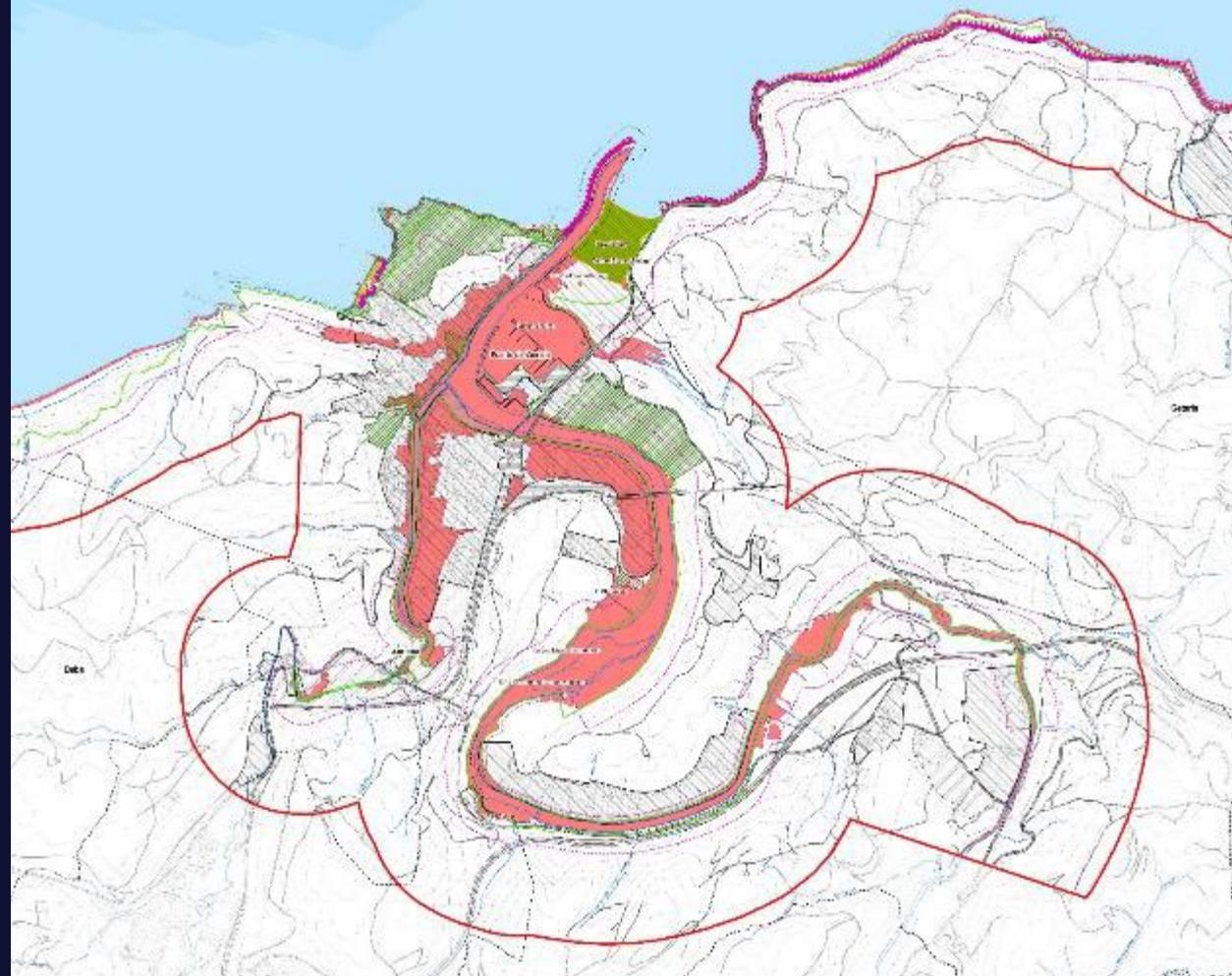
Climate Change adaptation



O1. PLANNING. Zonification and Green infrastructure



O2. PLANNING. Climate Change adaptation



The Coastal STP on the Internet

< Departamento de Vivienda y Agenda Urbana

Planificación Territorial y Agenda Urbana

Planificación Territorial y Udalplan | Planeamiento urbanístico e Inventario | Comisión de Ordenación del Territorio | Normativa | Euskal Hiria Kongresua | Paisaje | Regeneración Urbana | Agenda Urbana Bultzatu 2050 | GeoEuskadi

Planeamiento Territorial

- Presentación
- Directrices de Ordenación Territorial (DOT)
- Planes Territoriales Parciales (PTP)
- Planes Territoriales Sectoriales (PTS)

Plan Territorial Sectorial de Protección y Ordenación del Litoral de la CAPV

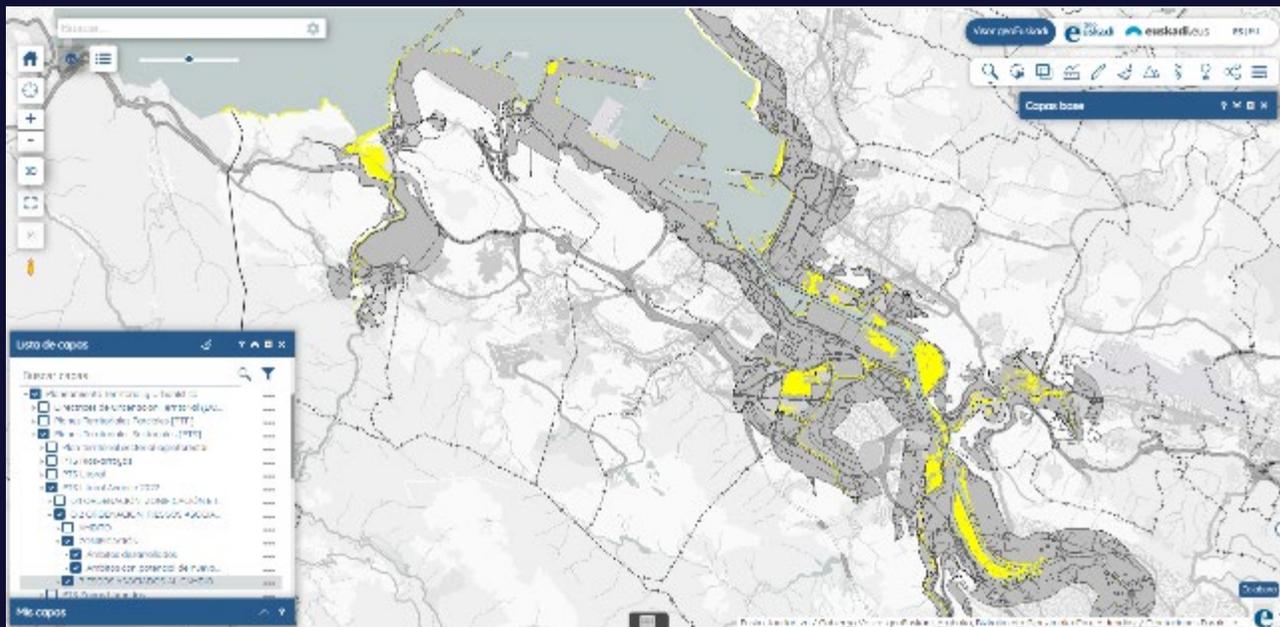
- + Plan Territorial Sectorial de Protección y Ordenación del Litoral de la CAPV (2007)
- + Revisión y adaptación del Plan Territorial Sectorial de Protección y Ordenación del Litoral de la CAPV al reto del Cambio Climático
- + Modificación del PTS del Litoral, relativa a Barrikabaso (2016)

Territorial Planning Directorate

https://www.euskadi.eus/web01-a3lurral/es/contenidos/informacion/pts_litoral_indice/es_def/index.shtml

→ CURRENT PLAN

→ REVIEW



geoEuskadi. Spatial Data Infrastructure

<https://www.geo.euskadi.eus/geobisorea>

Eskerrik asko - Gracias
ΕΥΧΑΡΙΣΤΩ



<https://www.euskadi.eus/gobierno-vasco/planificacion-territorial-agenda-urbana/>