GEOROUTE 3

COVES AND
FIERCE CLIFFS

SAKONETA

#GEOPARKEA

SAKONETA GEOROUTE

PRACTICAL INFORMATION

PR Gi 5001

DURATION

2 h 15 min

DISTANCE

4.7 km

ELEVATION DIFFERENCE

+365 m
-246 m

CIRCULAR

NO

geoparkea.eus

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((112))
SOS DEIAK

SAKONETA GEOROUTE

HOW TO GET THERE?

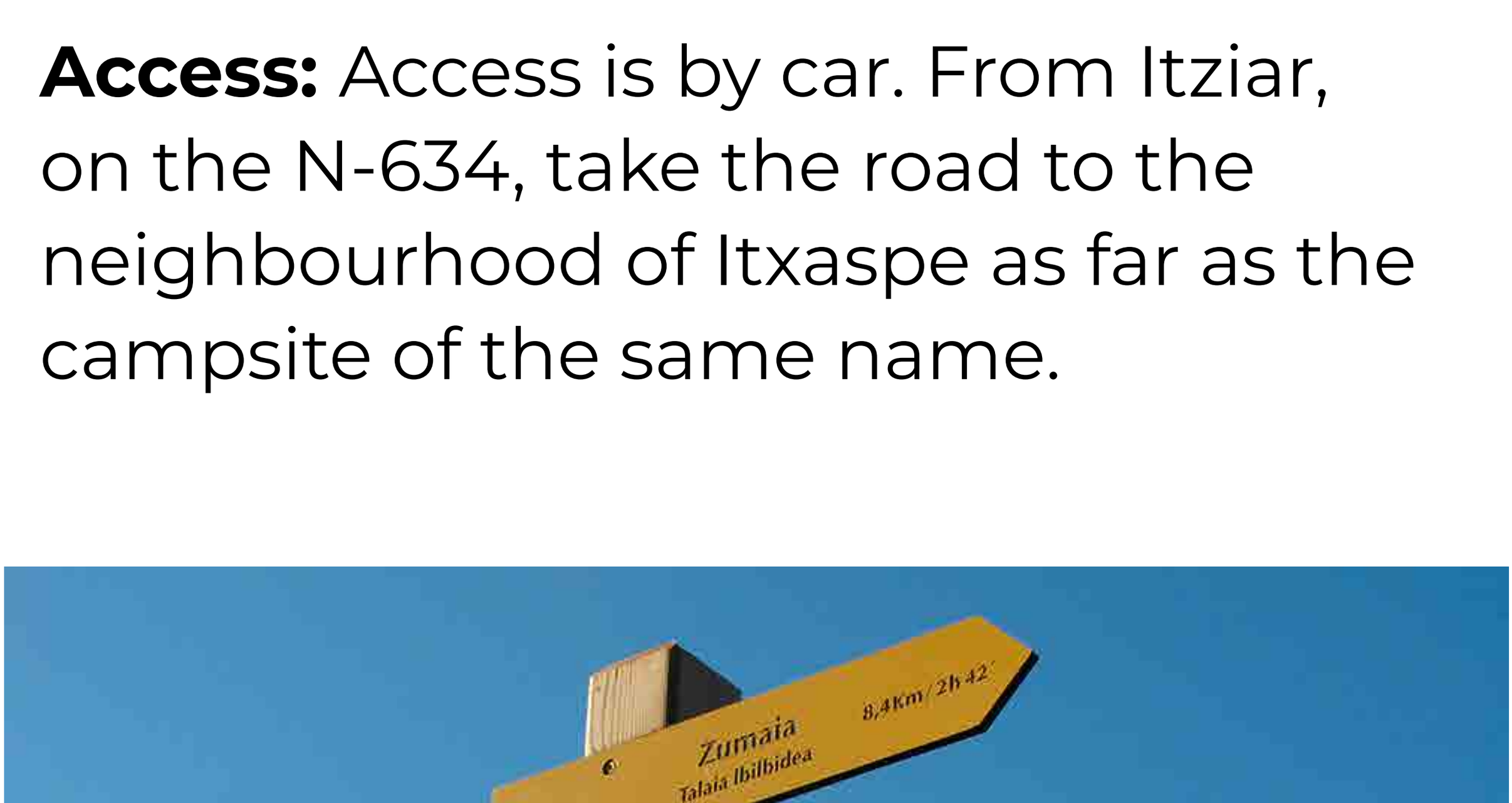
[View in Google Maps]

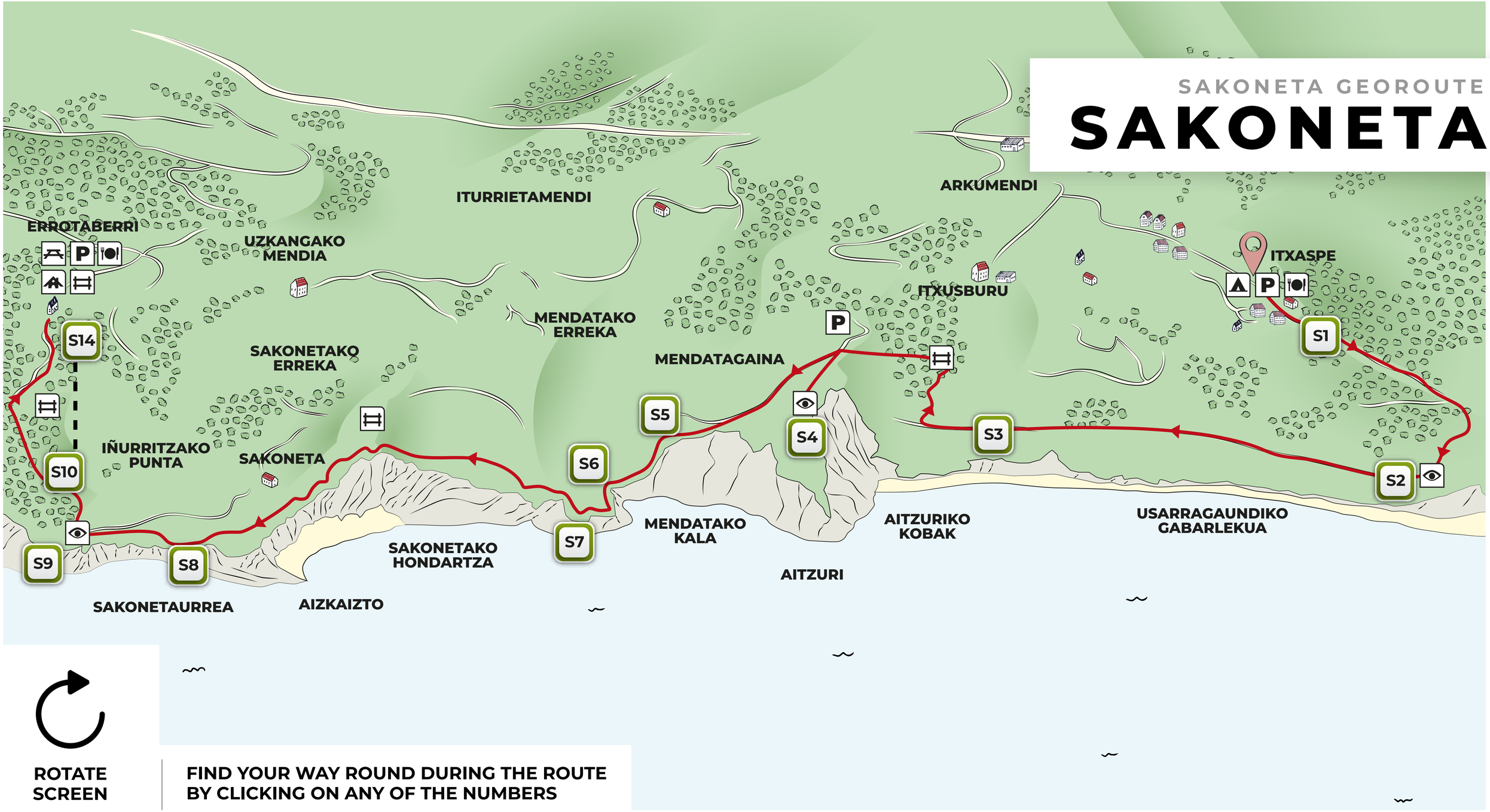
Starting point: Itxaspe campsite.

Nearest town: Itziar (Deba).

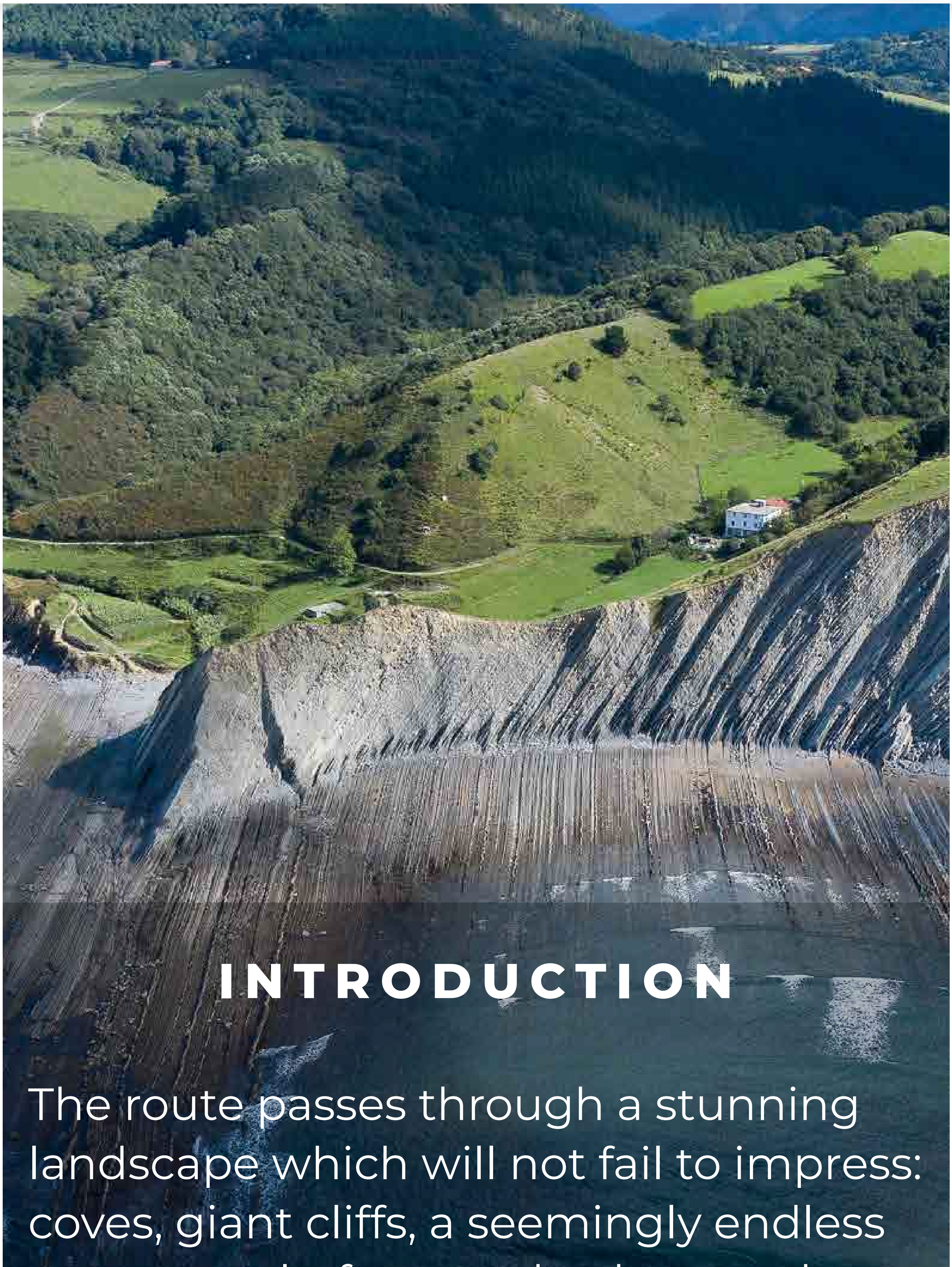
Coordinates: 43°17’40.5”N 2°19’47.6”W

Access: Access is by car. From Itziar, on the N-634, take the road to the neighbourhood of Itxaspe as far as the campsite of the same name.




SAKONETA GEOROUTE
SAKONETA
ITURRIETAMENDI
ARKUMENDI
ERROTABERRI
UZKANGAKO MENDIA
ITXUSBURU
ITXASPE
MENDATAKO ERREKA
SAKONETAKO ERREKA
MENDATAGAINA
IÑURRITZAKO PUNTA
SAKONETA
MENDATAKO KALA
AITZURIKO KOBAK
USARRAGAUNDIKO GABARLEKUA
SAKONETAKO HONDARTZA
AITZURI
SAKONETAURREA
AIZKAIZTO
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S14
ROTATE SCREEN
FIND YOUR WAY ROUND DURING THE ROUTE BY CLICKING ON ANY OF THE NUMBERS

SAKONETA GEOROUTE



INTRODUCTION

The route passes through a stunning landscape which will not fail to impress: coves, giant cliffs, a seemingly endless wave-cut platform and a thousand notches sculpted in the flysch.
And remember to check the tide table! You should arrange your visit to coincide with low tide.

SAKONETA GEOROUTE

This georoute has 14 points of interest identified with plaques on the route itself. Locate them and read the interesting explanations.


BEHATOKIA
MIRADOR
VIEWPOINT
500 m. / 5 min.
Geoparkea
Gipuzkoako Foru Aldundia
KASPE
S1
ITXASPE
nduak izan ezik
Yculos autorizados

SAKONETA GEOROUTE

S1 ITXASPE

S1

Look at the landscape around you. It is a smooth and rounded landscape. Under the vegetation is the black flysch. You will soon see it appear on the cliffs of Itxaspe.

S2

THE GREAT WALL AND ITS CAVES

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S2 THE GREAT WALL AND ITS CAVES

S2

Approach from the **Itxaspe viewpoint** and enjoy the panorama.

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S2 THE GREAT WALL AND ITS CAVES

The wall of Aitzuri is completely fractured and very unstable. From time to time there are **great landslides** such as the one that occurred in 2018.

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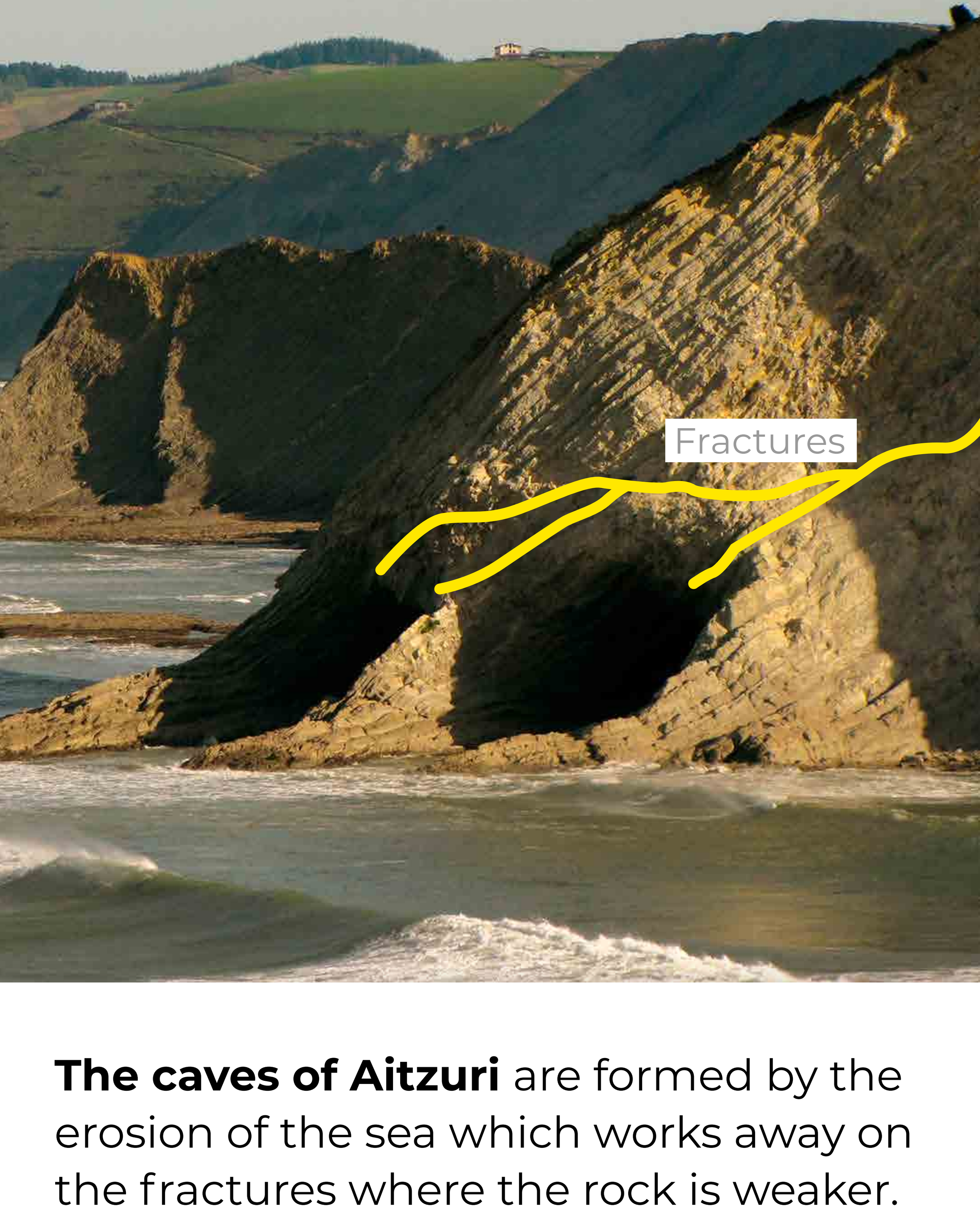
S2 THE GREAT WALL AND ITS CAVES



The caves of Aitzuri are formed by the erosion of the sea which works away on the fractures where the rock is weaker. These caves are about 15 metres high and have an interior length of 25 m.

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S2 THE GREAT WALL AND ITS CAVES

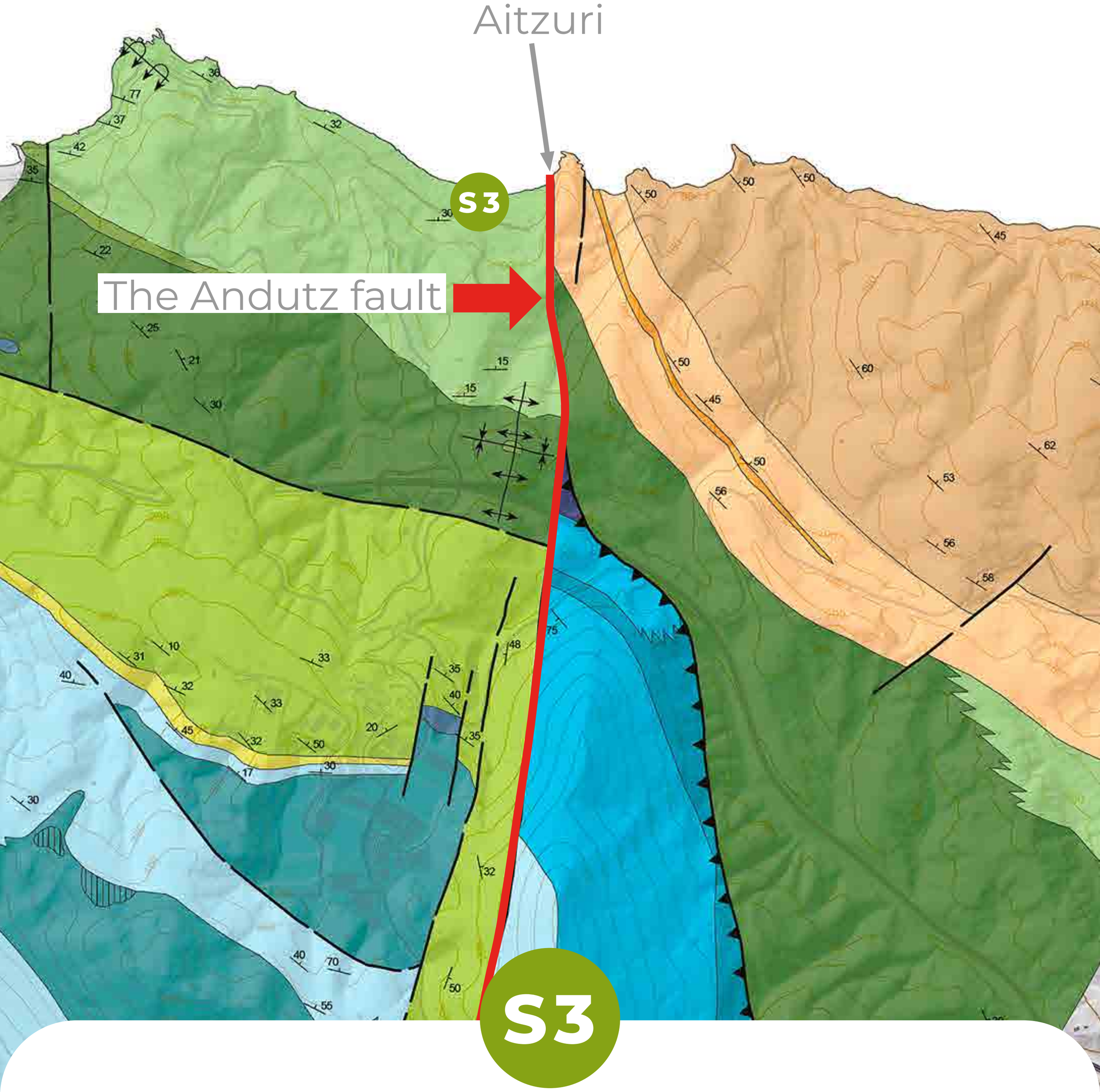
The wall is home to the nest of a **peregrine falcon**. It is not uncommon to see them in flight and plummeting at dizzying speeds of more than 200 km/h.

S3

THE FAULT THAT CHANGES EVERYTHING

SAKONETA GEOROUTE

S3 THE FAULT THAT CHANGES EVERYTHING



The **cliff wall of Aitzuri** is shaped by the **Andutz fault**, one of the most important in the geopark. This fault has an N-S alignment and its origin is related to the opening up of the Bay of Biscay.

HOW WAS THE FLYSCH FORMED?

Before continuing with the fault let's look at how the flysch formed. The different layers are like the pages of a great book formed by the settling of sediments and small shells at the bottom of the sea. Going through the layers we can read more than 50 million years of the history of the Earth.

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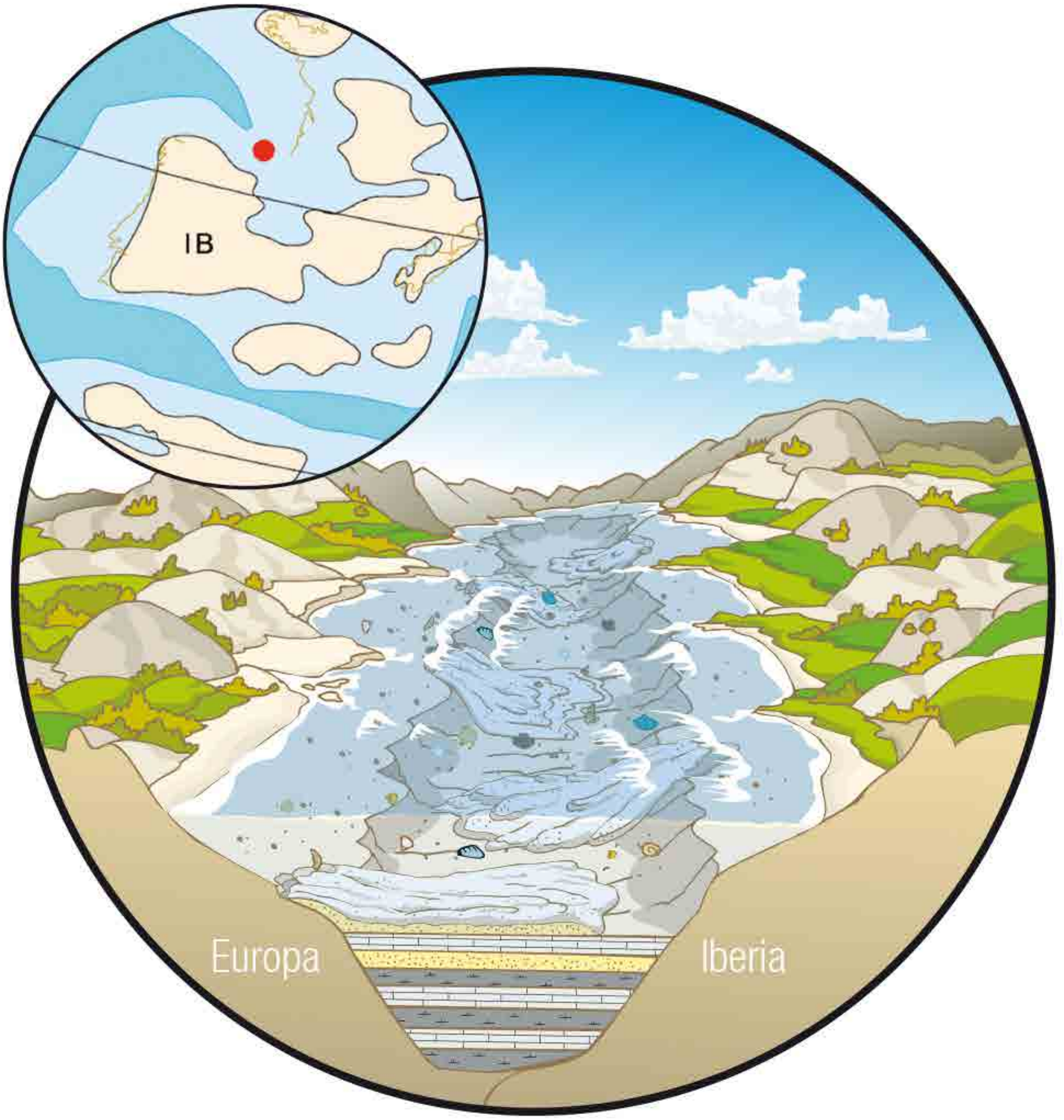
S3 HOW WAS THE FLYSCH FORMED?



Marl Limestone Sandstone

1. Settling of sediments at a depth of around 1000 m on the seabed.
100 – 50 million years ago

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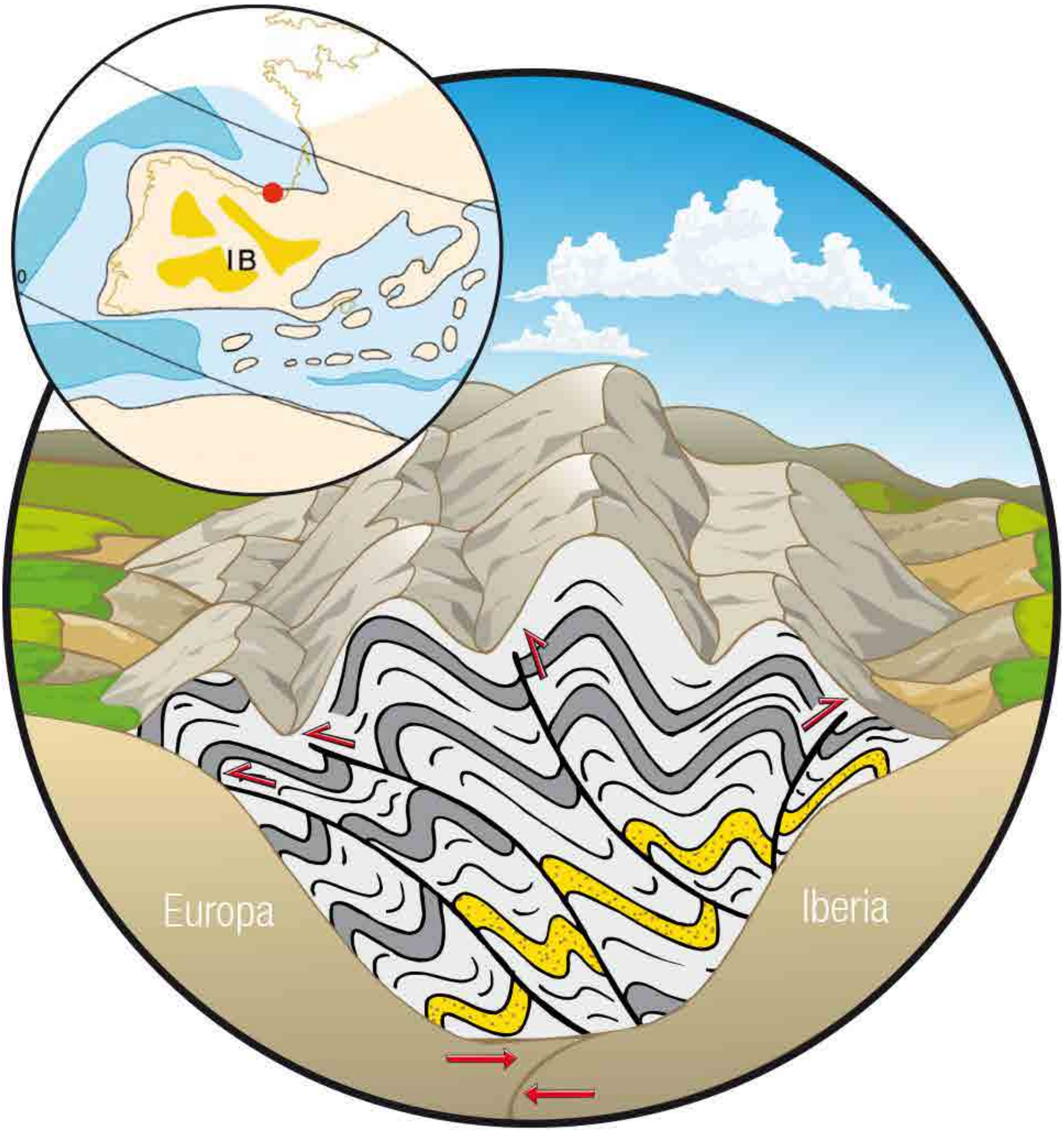
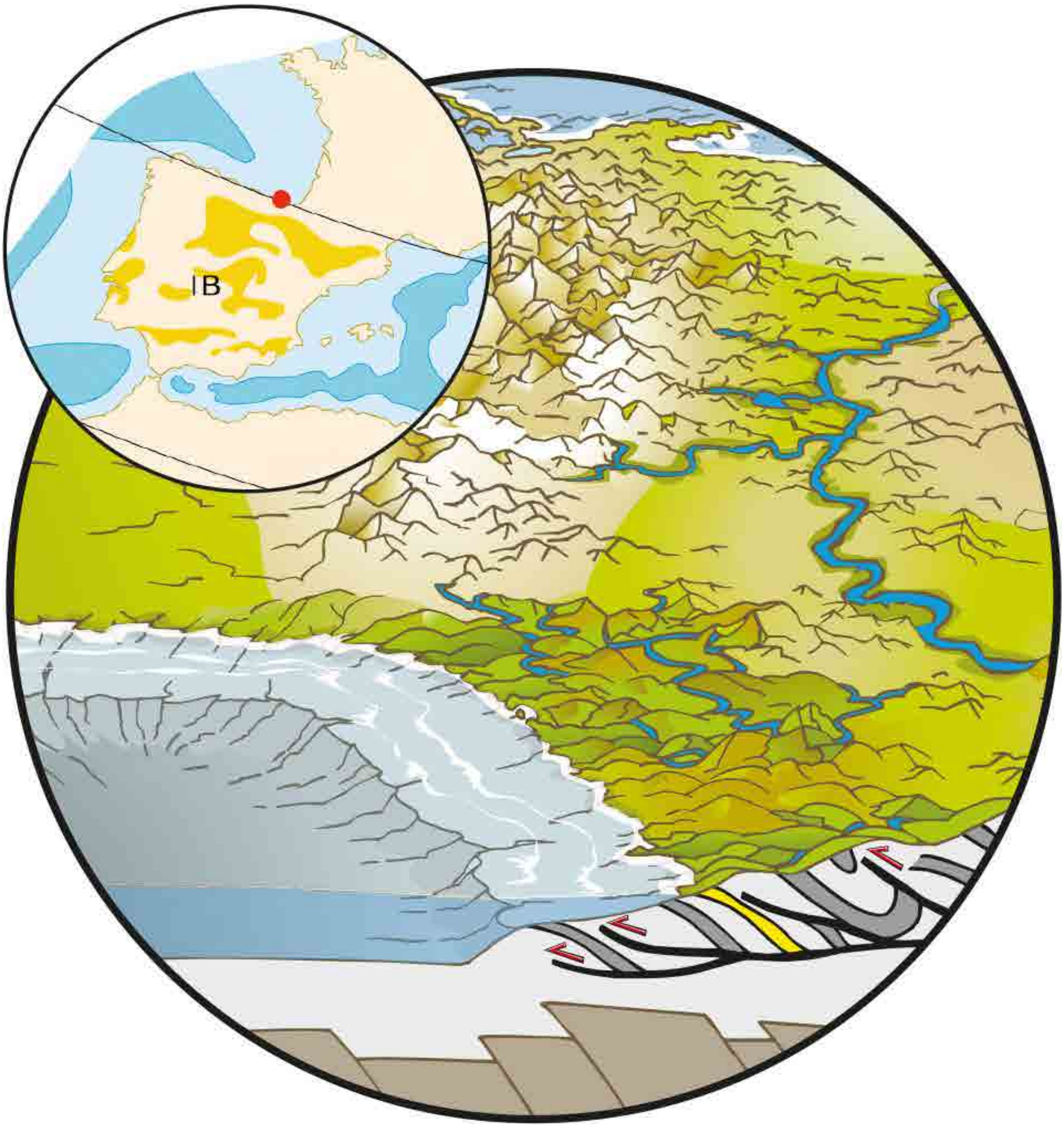
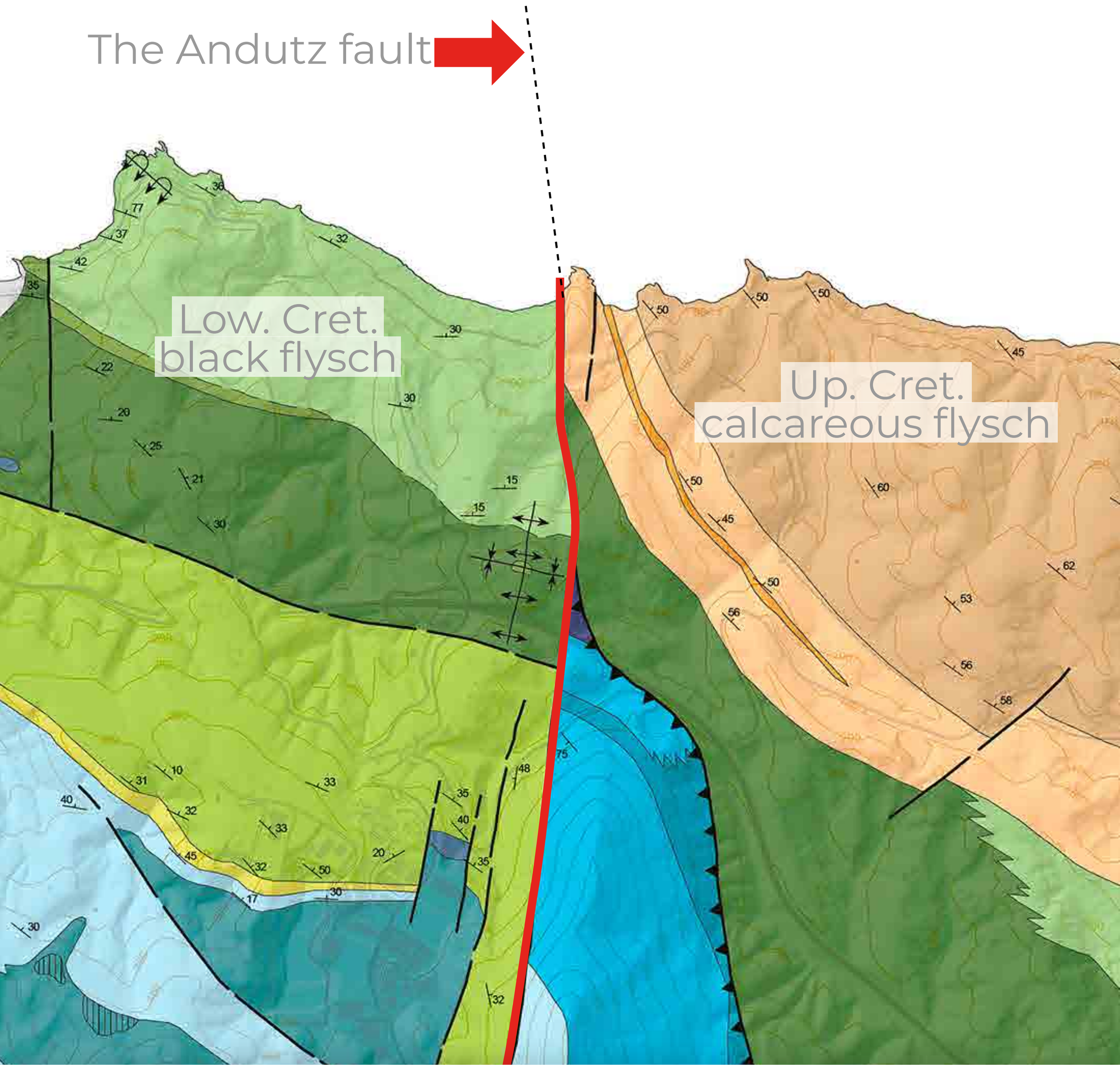
S3 HOW WAS THE FLYSCH FORMED?



2. Collision between Iberia and Europe and lifting of the layers.
50 – 10 million years ago

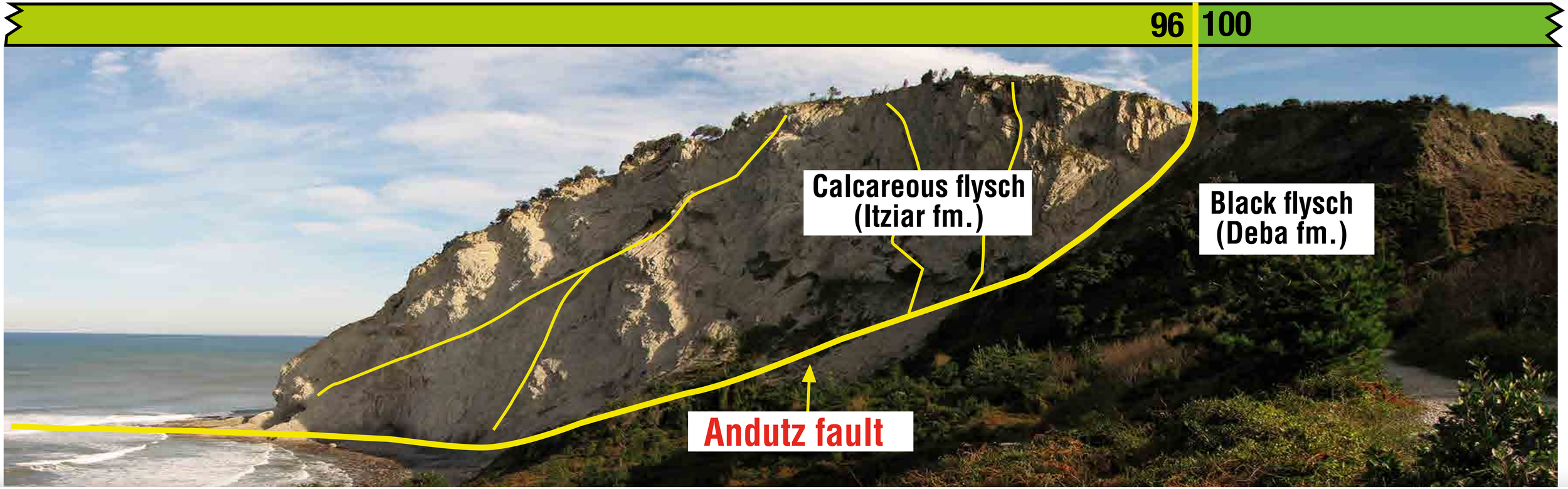


3. Erosion and formation of the cliffs.
1-0 million years ago



THE BOUNDARY BETWEEN TWO COLOURS

The Andutz fault separates the oldest black flysch of the Lower Cretaceous (in green and to the west) from the most recent calcareous flysch of the Upper Cretaceous (in brown and in the east).



ROTATE SCREEN

The Andutz fault is not just a single fault plane. It is an extensive area full of fractures. Look at the white cliff wall.

S4

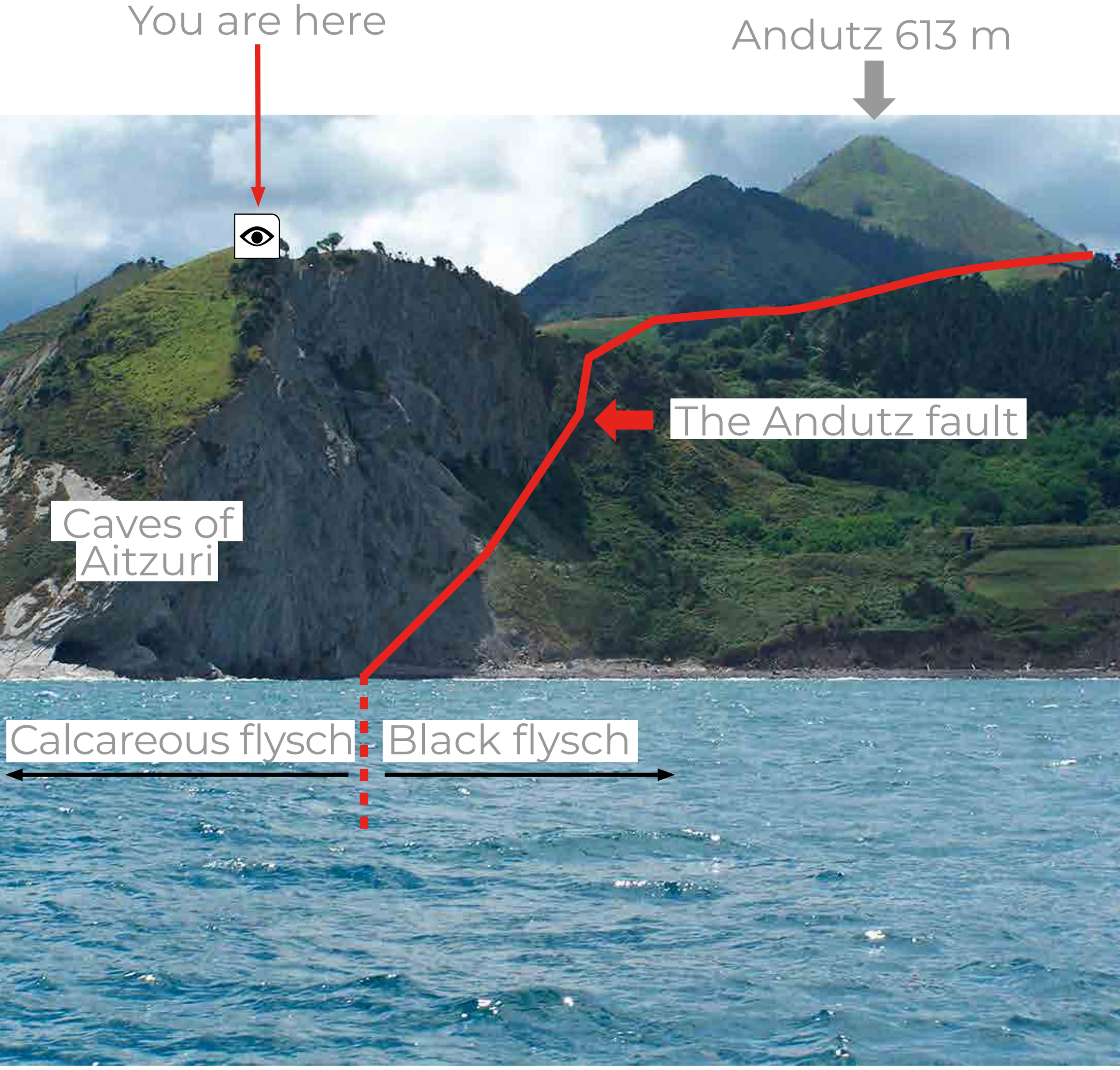
WHERE YOU CAN SEE EVERYTHING

SAKONETA GEOROUTE

S4 WHERE YOU CAN SEE EVERYTHING

S4

Take your time. Make the most of the 360° view. There are not many places like this.



THE PYRAMID-SHAPED MOUNTAIN

It is called Andutz and gives its name to the fault that lies beneath our feet. Its summit is one of the best viewpoints of the entire Basque Coast.

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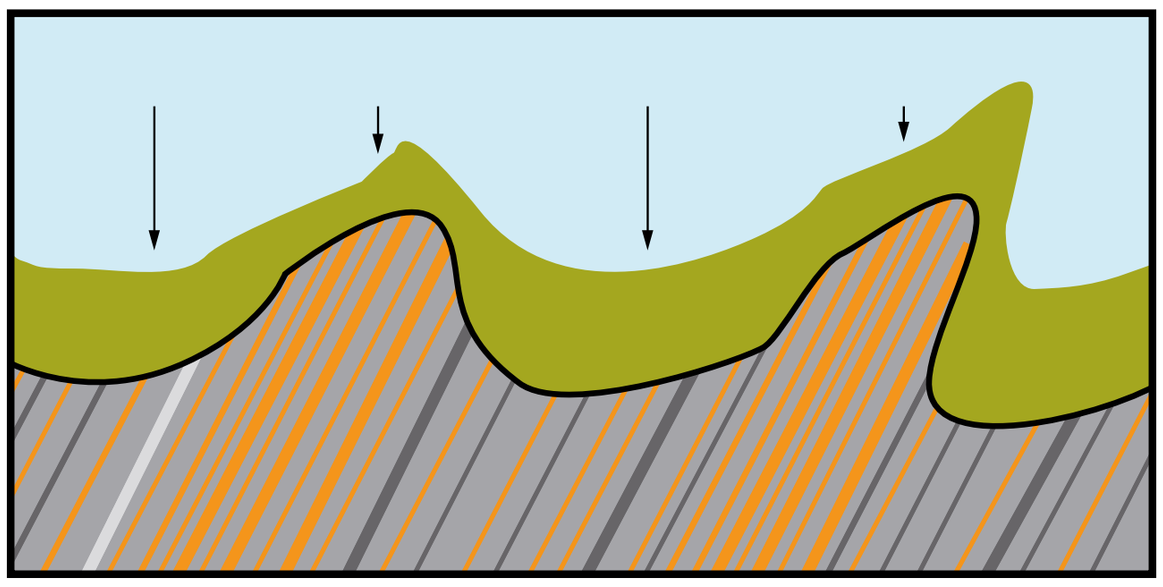
S4 WHERE YOU CAN SEE EVERYTHING

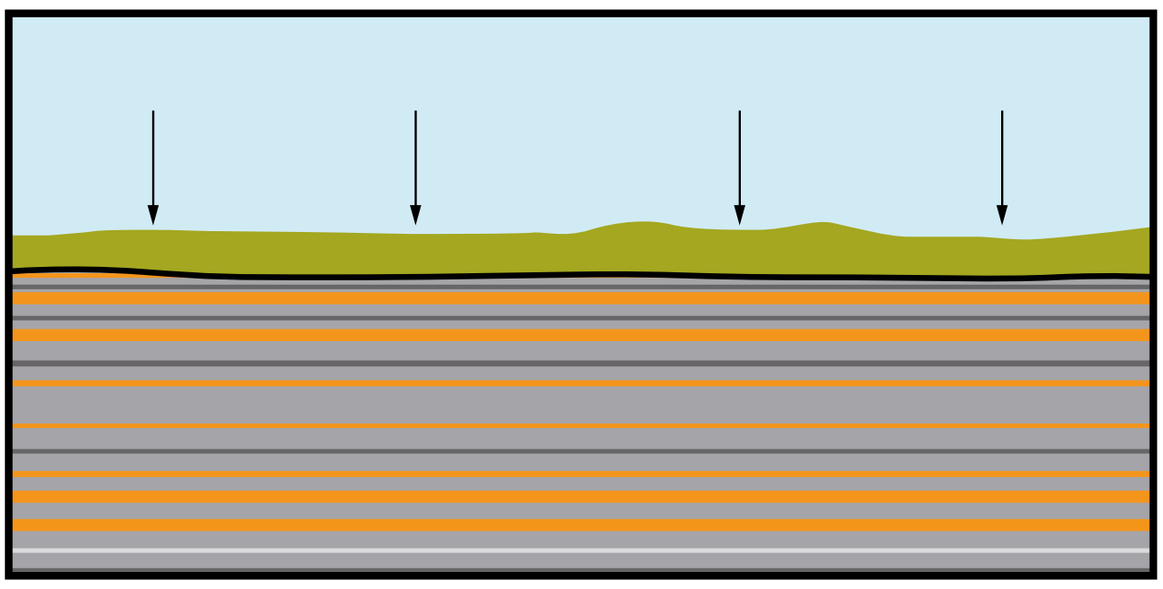
Perpendicular layers

Differential erosion



Parallel layers

Homogeneous erosion



WHY DOES THE SHAPE OF THE COAST CHANGE?

This fault also changes the **orientation of the layers** (see map S3) and this fundamentally conditions the erosion and the shape of the coast.

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S4 WHERE YOU CAN SEE EVERYTHING

To the west, the orientation of the black flysch layers is **parallel to the coastline**. Erosion occurs homogeneously and the coastline is quite straight.

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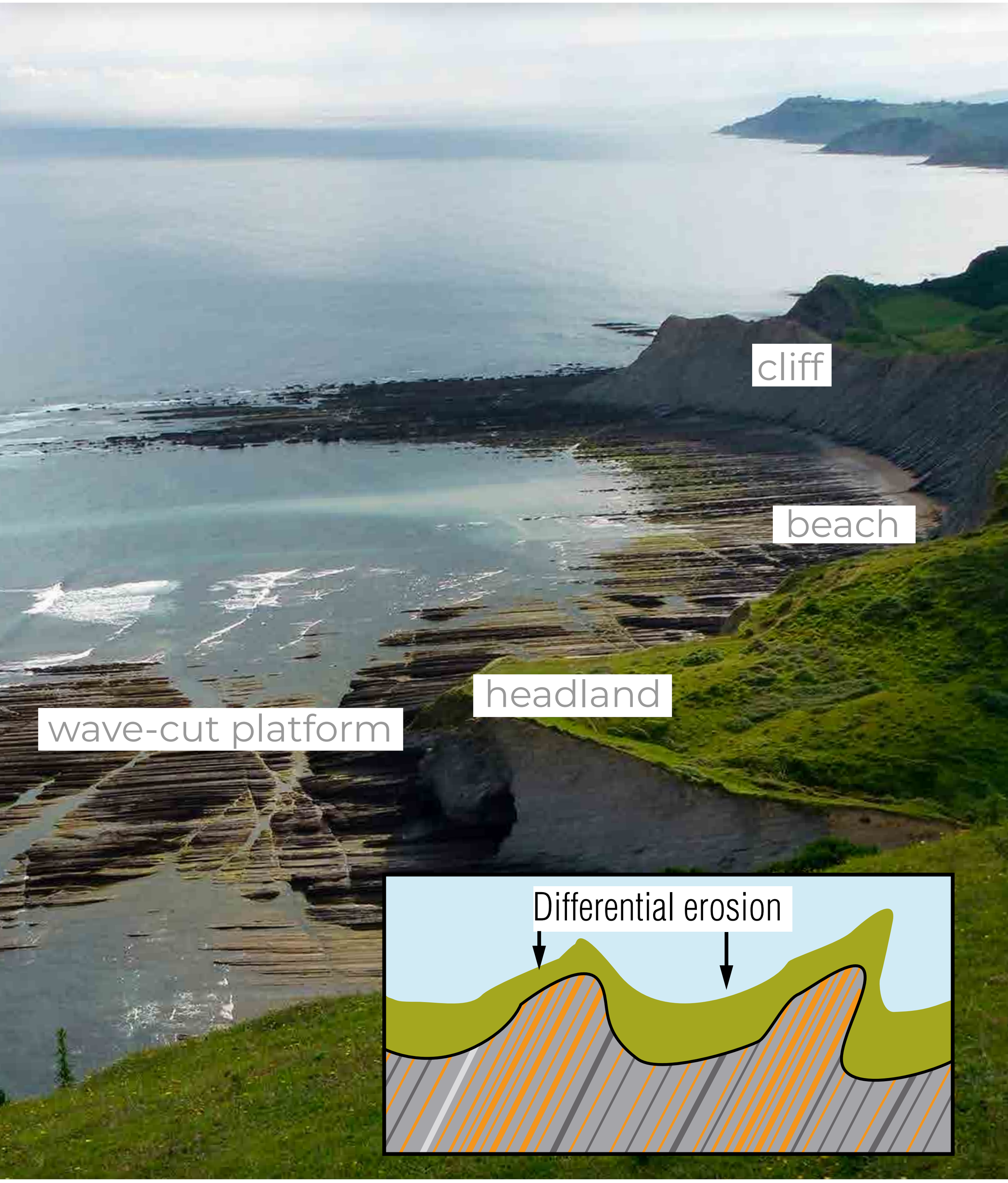
S4 WHERE YOU CAN SEE EVERYTHING



To the east the **layers** are **almost perpendicular**. The erosion acts differently on the hard and soft layers and gives rise to a coast of inlets and headlands such as Sakoneta.

S5

A GREAT LANDSLIDE IN MENDATA

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S5 A GREAT LANDSLIDE IN MENDATA

S5

Look at the great landslide down to the cove of Mendata. Possibly the fractures of the nearby Andutz fault have had an influence.

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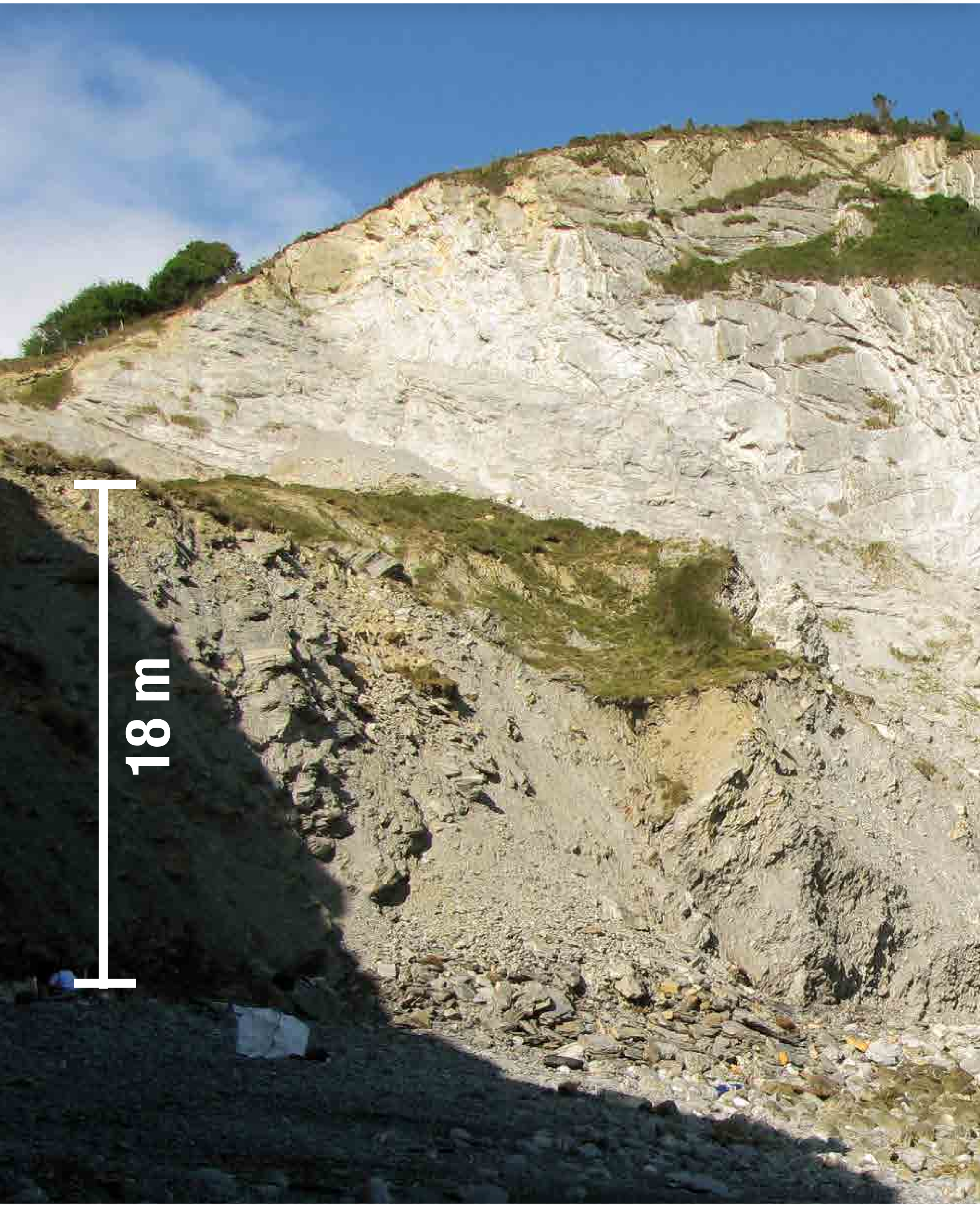
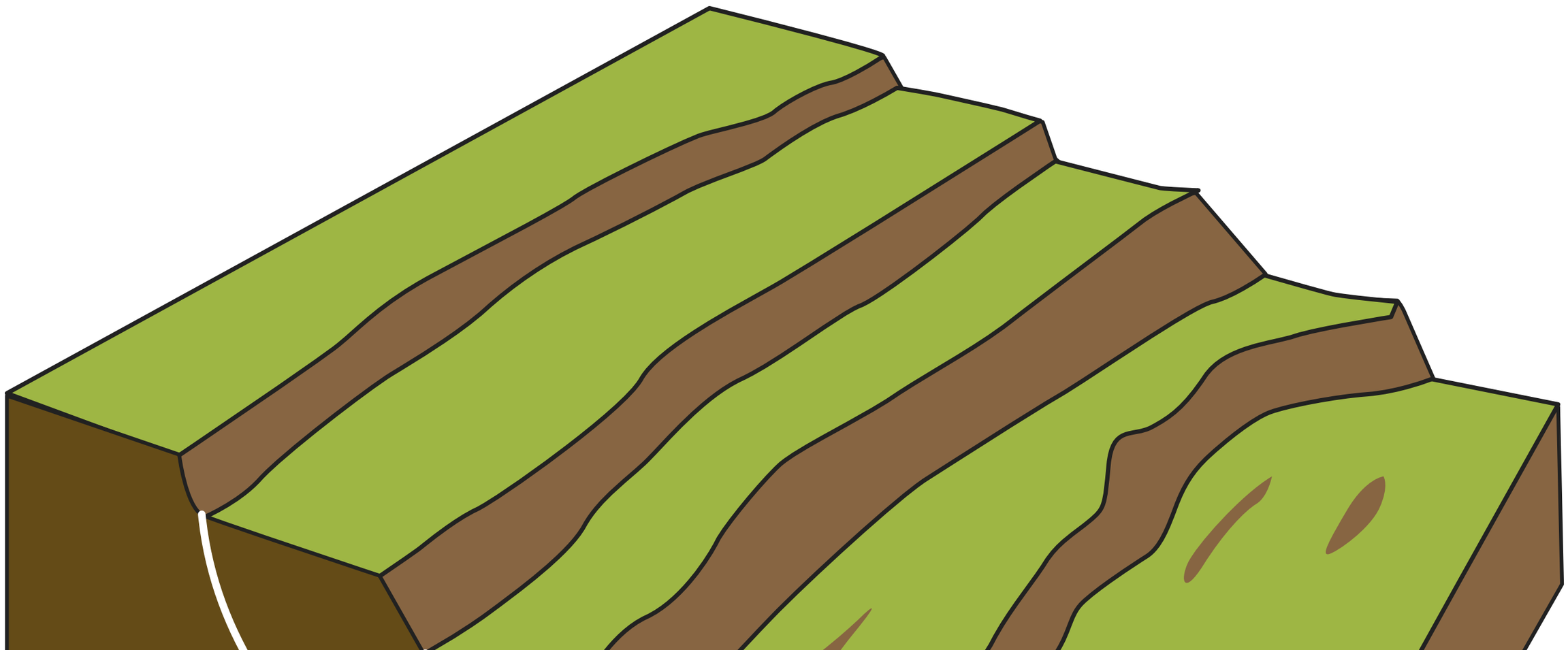
S5 A GREAT LANDSLIDE IN MENDATA



The vegetation has almost completely covered the landslide, but if we go down to the beach the **scree-covered area** is **18 metres high!**

Diagram of a typical landslide.



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S5 A GREAT LANDSLIDE IN MENDATA

At low tide and at sunset the cove of Mendata is a little paradise.

S6

A WATERFALL FALLING INTO THE SEA

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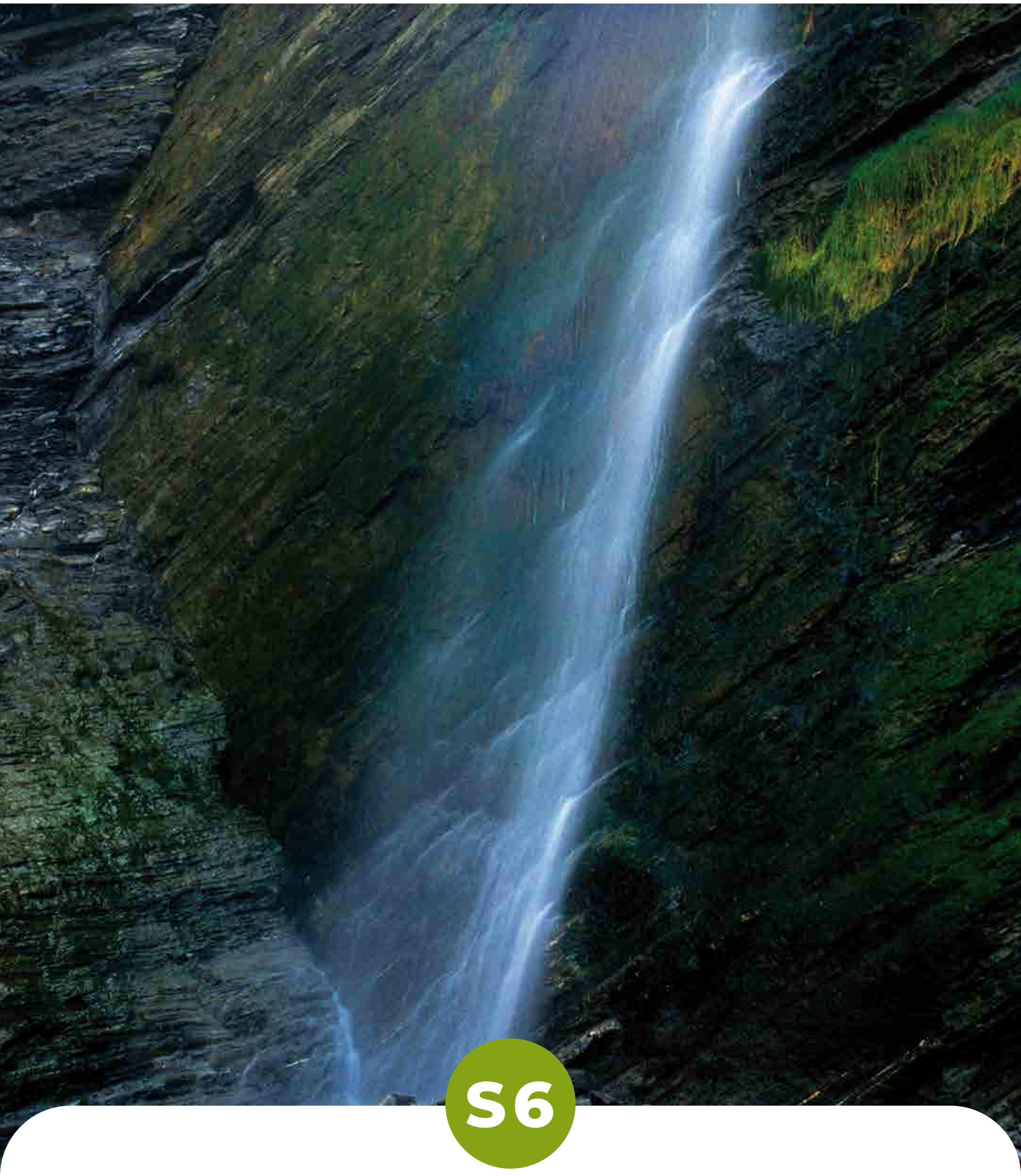
S6 A WATERFALL FALLING INTO THE SEA



The river always ends up reaching the sea. Waterfalls in cliffs are created when **the erosion of the cliffs is greater than the erosion of the river channel itself**.

The case of Mendata is special.

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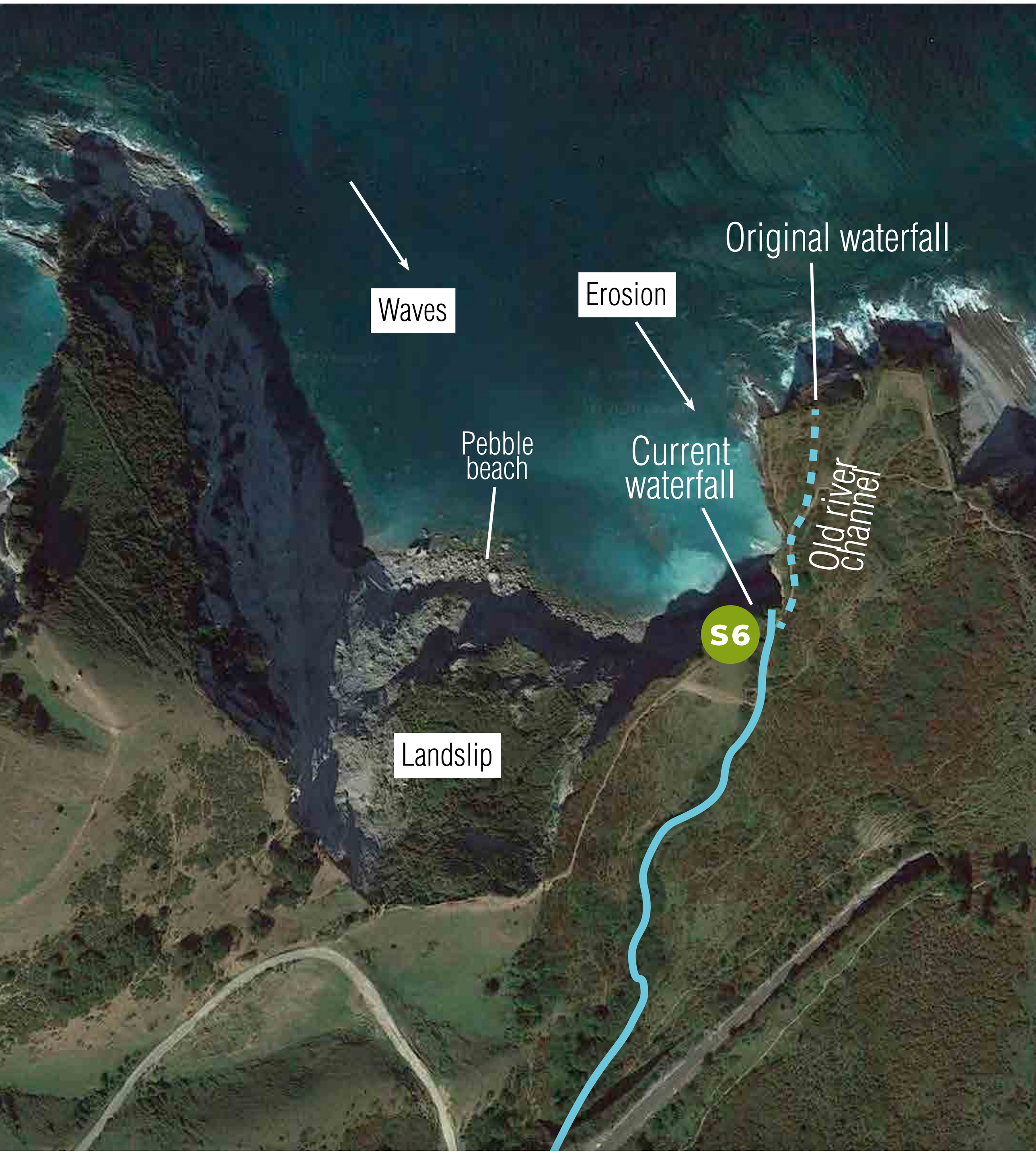
S6 A WATERFALL FALLING INTO THE SEA



Notice the route of the old channel. **The waterfall was originally located further on**. Not all that long ago, the erosion of the cliff caught up with a small meander of the stream and the water began to fall here.

THE WHALE TOWER

When you start climbing, take the detour to the restored whaling watchtower. In the past, whales swam in the Bay of Biscay and were the mainstay of many coastal towns.

S7

HOW WAS THE WAVE-CUT PLATFORM FORMED?

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S7 HOW WAS THE WAVE-CUT PLATFORM FORMED?

S7

The sea erodes the cliffs and they recede to expose a horizontal rock platform called a **wave-cut platform**.

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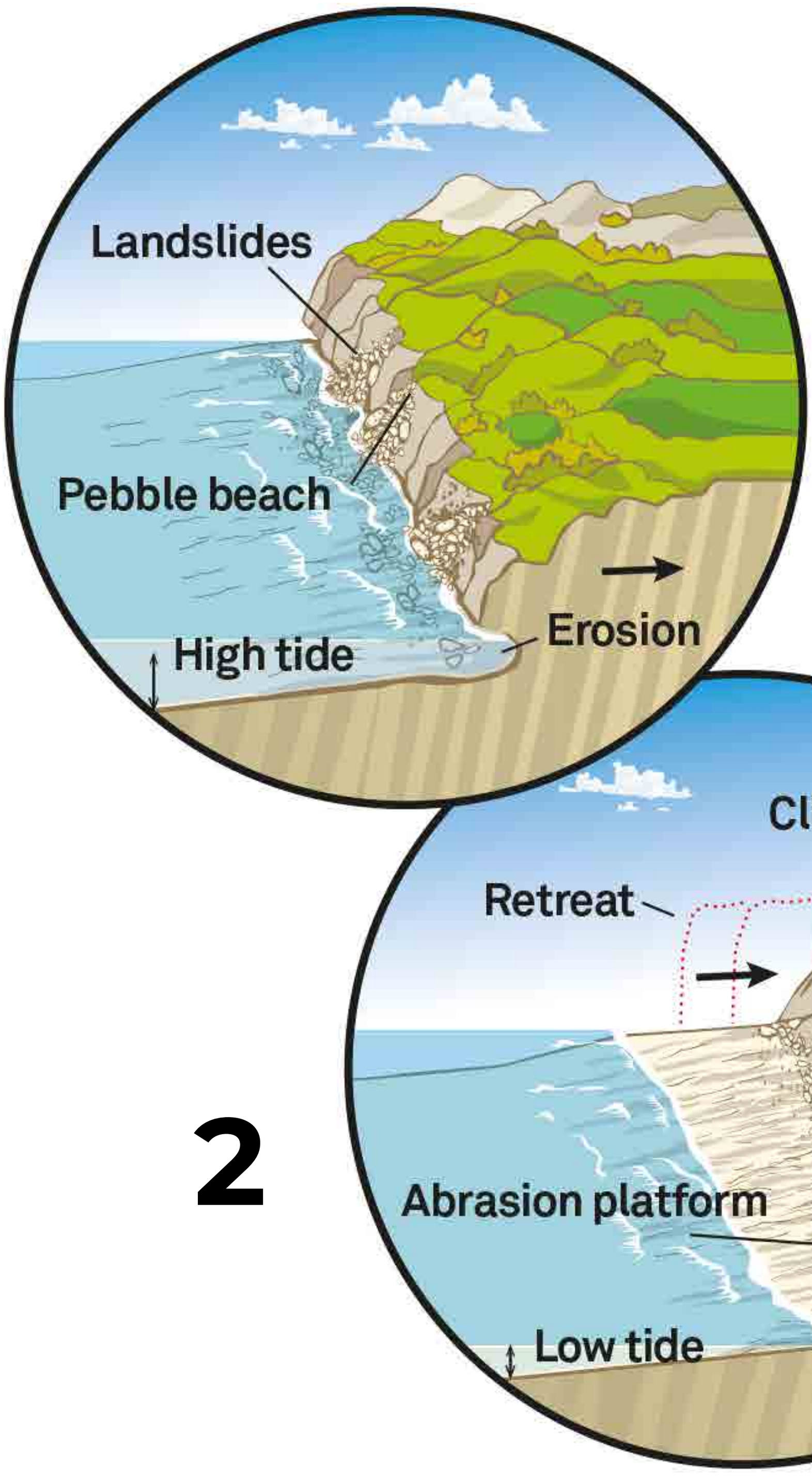
S7 HOW WAS THE WAVE-CUT PLATFORM FORMED?



1. EROSION
2. RETREAT

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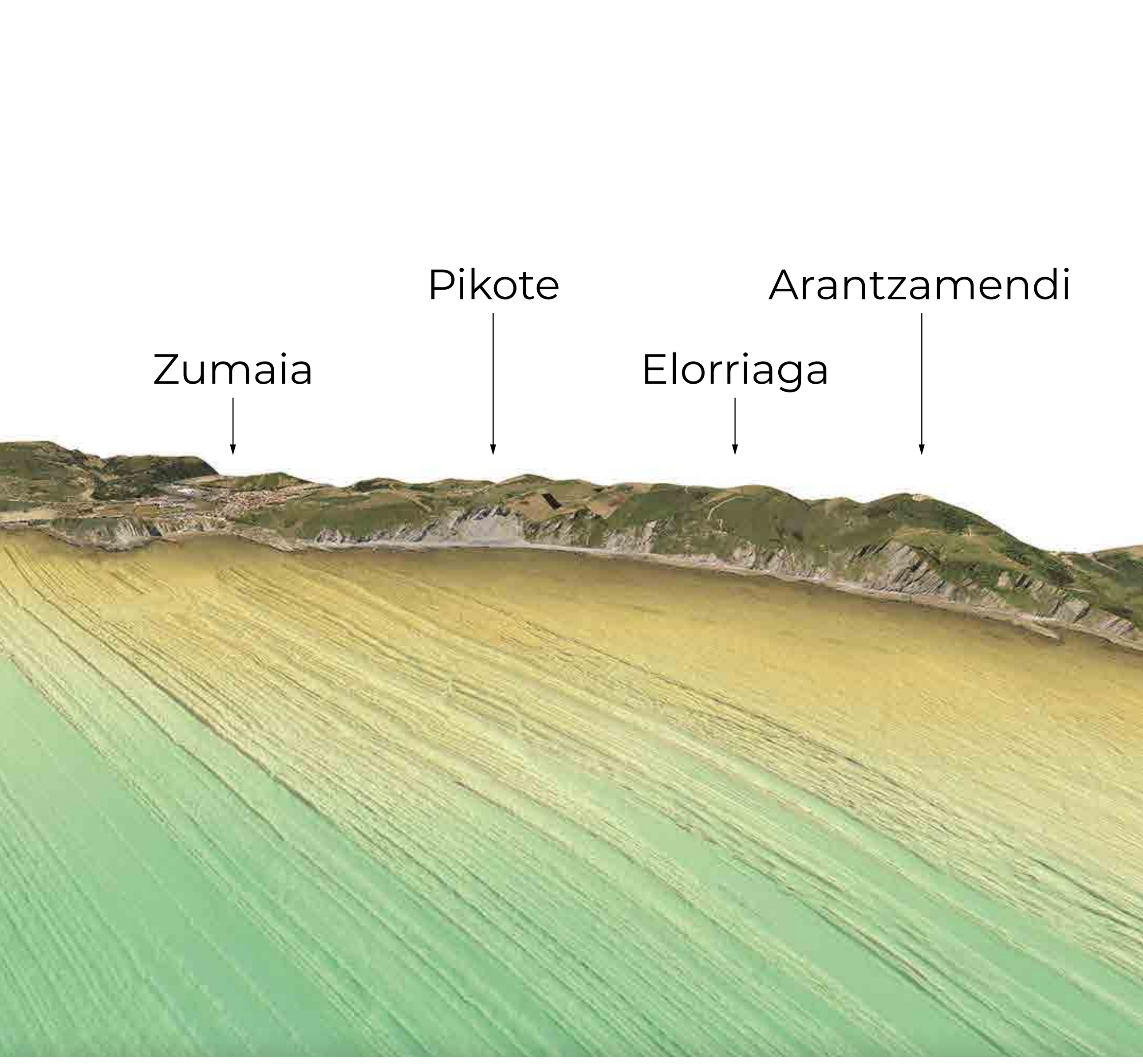
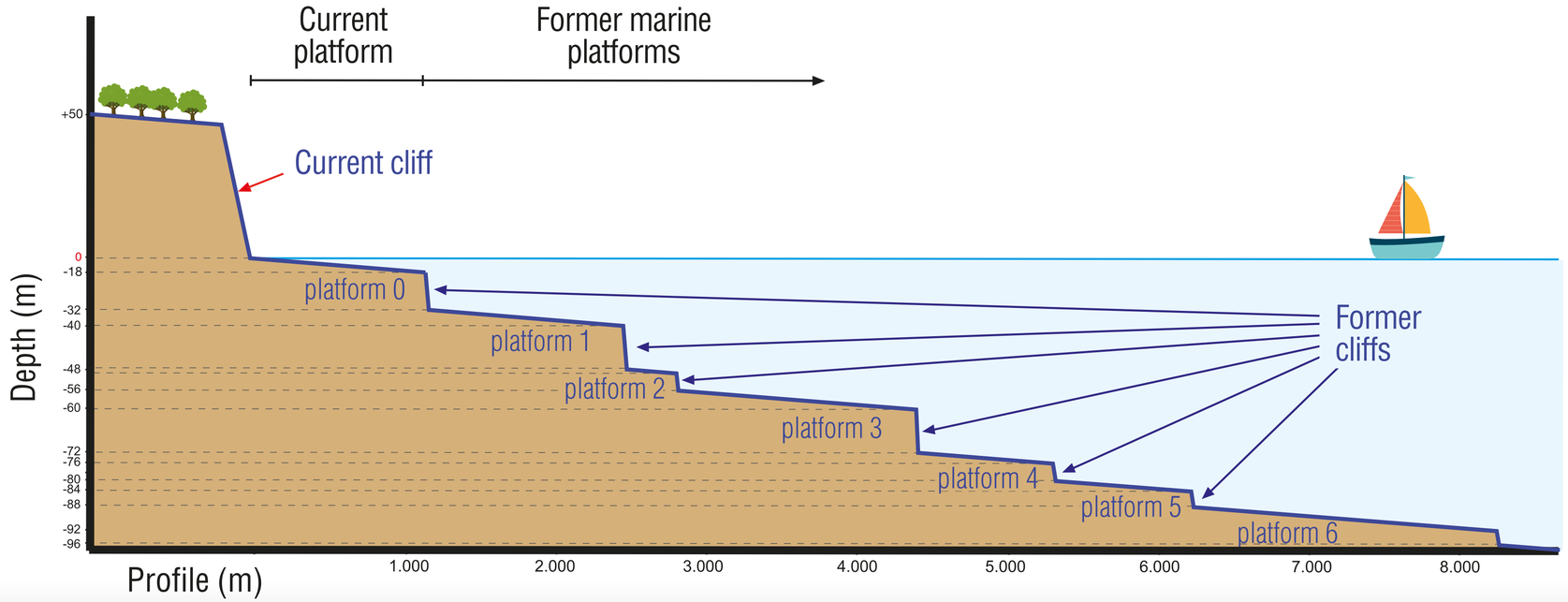
S7 HOW WAS THE WAVE-CUT PLATFORM FORMED?

The blocks that have accumulated at the base of the cliffs act as **projectiles that increase erosion**.
There is normally a temporary accumulation of sand.

S7 HOW WAS THE WAVE-CUT PLATFORM FORMED?



Following it out to sea, the wave-cut platform continues with a slope of approximately 1% for about 8 km. Only 20,000 years ago, during the last ice age, the sea level was 100 m lower.



ROTATE SCREEN

If you look closely at the profile you can make out **steps** that mark the position of **ancient cliffs** and wave-cut platforms from when the sea level was lower than it is now.

S8

THE ONLY RIVER THAT REACHES THE SEA

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S8 THE ONLY RIVER THAT REACHES THE SEA

All the small streams in the biotope fall into the sea from the cliffs in waterfalls like Mendata (Point S6).

Why is the Errotaberri the only one which manages to reach sea level?

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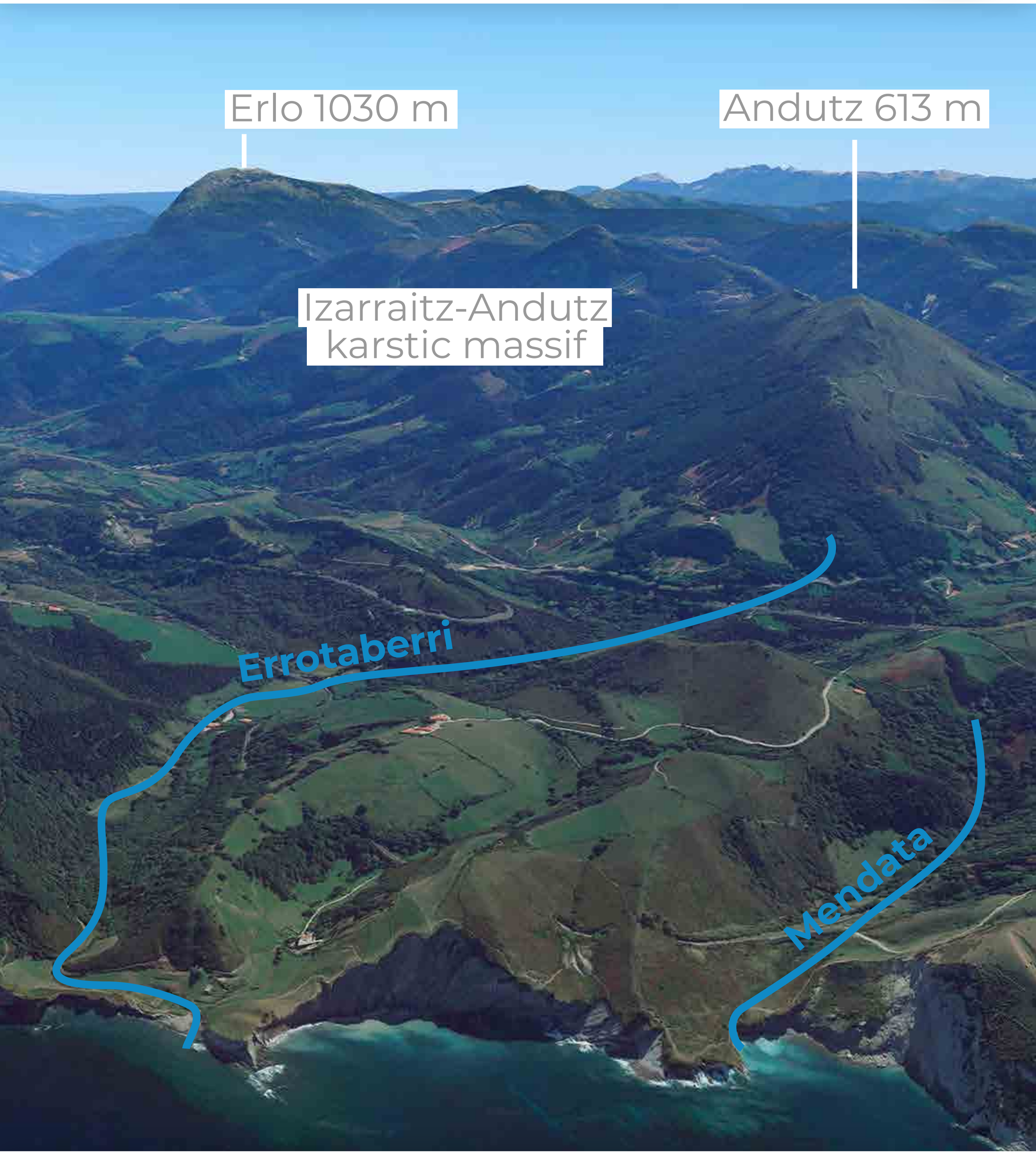
S8 THE ONLY RIVER THAT REACHES THE SEA



All the streams of the biotope are very short in length. However, the Errotaberri rises in the **karst massif of Andutz** and its underground waters provide a sufficient flow to continue eroding the channel throughout the year.

S9

THE VIEWPOINT OF PORTUTXIKI

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S9 THE VIEWPOINT OF PORTUTXIKI

Sometimes it is better not to get distracted.
Enjoy the wildest part of the protected Biotope.

S10

S14

THE BOTANICAL TRAIL

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S10-S14 THE BOTANICAL TRAIL

S10-S14

Walk along the trail and try to identify the different forest units.

Water, soil type, orientation and the agro-livestock use of pastures and forests have created a very rich mosaic of biodiversity.

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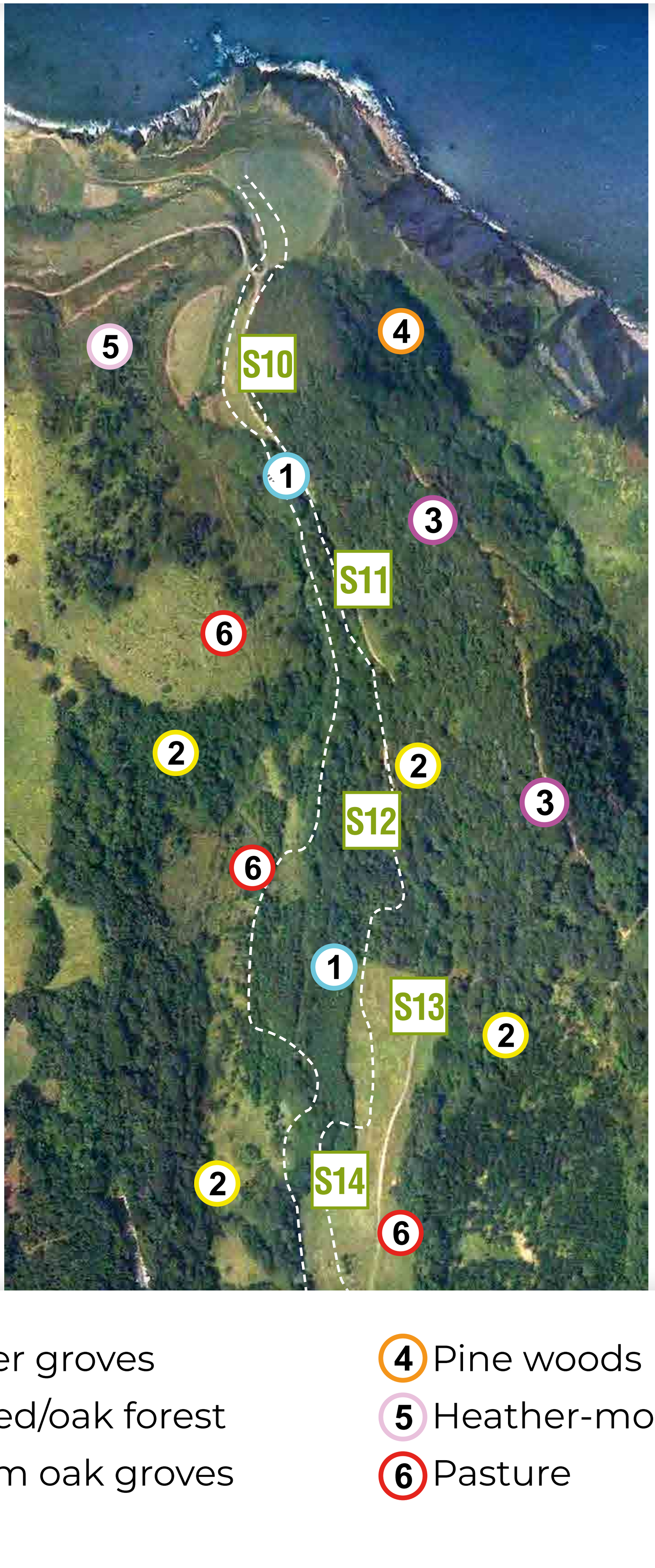
S10-S14 THE BOTANICAL TRAIL



1 Alder groves

2 Mixed/oak forest

3 Holm oak groves

4 Pine woods

5 Heather-moorland

6 Pasture

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S10-S14 THE BOTANICAL TRAIL

Erica vagans / Erica cinerea
(Heathers)

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S10-S14 THE BOTANICAL TRAIL

Ulex europaeus
(Gorse)

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S10-S14 THE BOTANICAL TRAIL

Plantago lanceolata
(Ribwort plantain)

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S10-S14 THE BOTANICAL TRAIL

Smilax aspera
(Common smilax)

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S10-S14 THE BOTANICAL TRAIL

Quercus ilex
(Holm oak)

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S10-S14 THE BOTANICAL TRAIL

Ilex aquifolium
(Holly)

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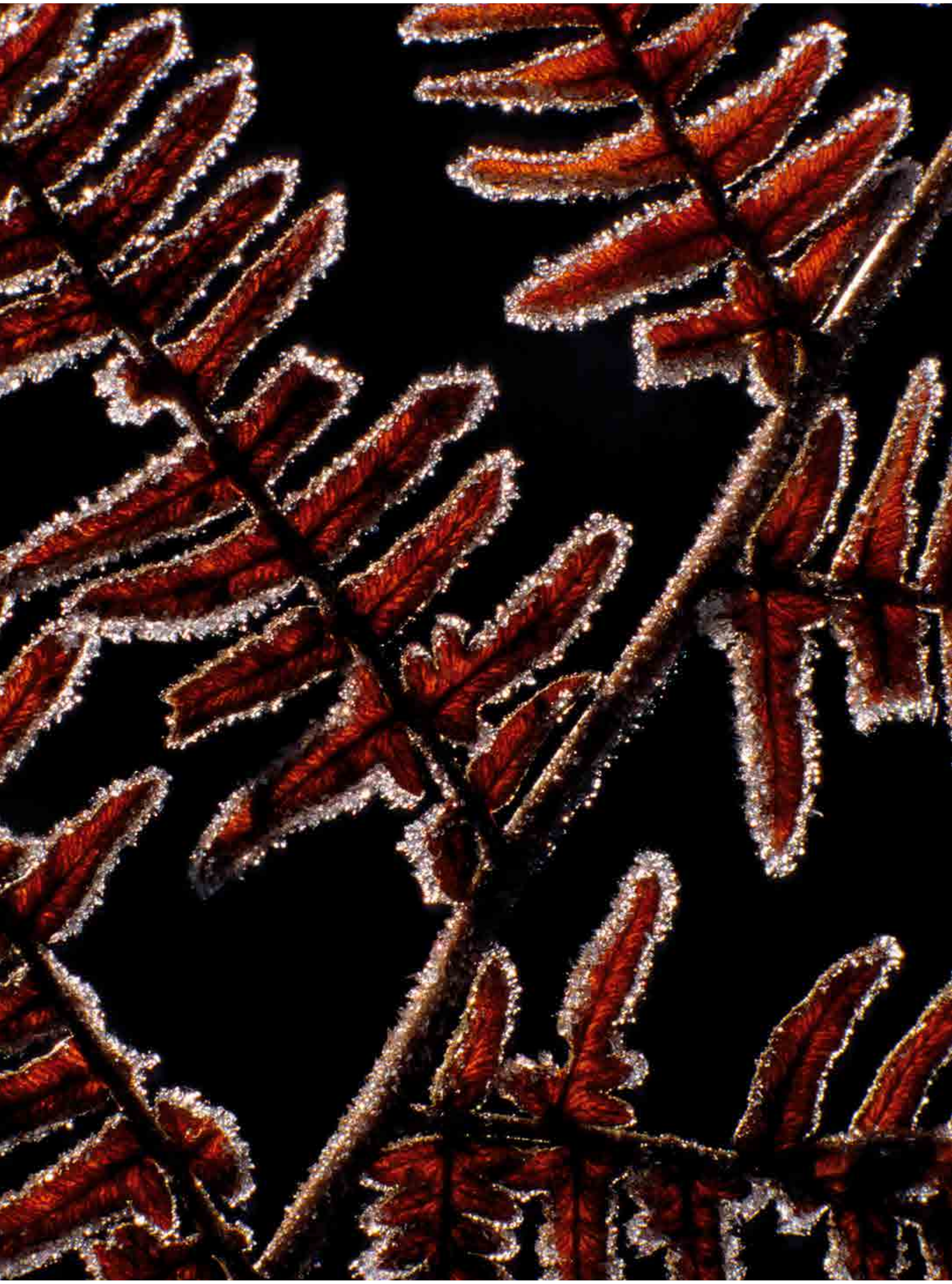
S10-S14 THE BOTANICAL TRAIL



Pteridium aquilinum
(Bracken)

SAKONETA GEOROUTE

MORE INFORMATION

BUY COMPLETE GUIDE

SEE OTHER GEOROUTES

PROGRAMME OF GUIDED EXCURSIONS

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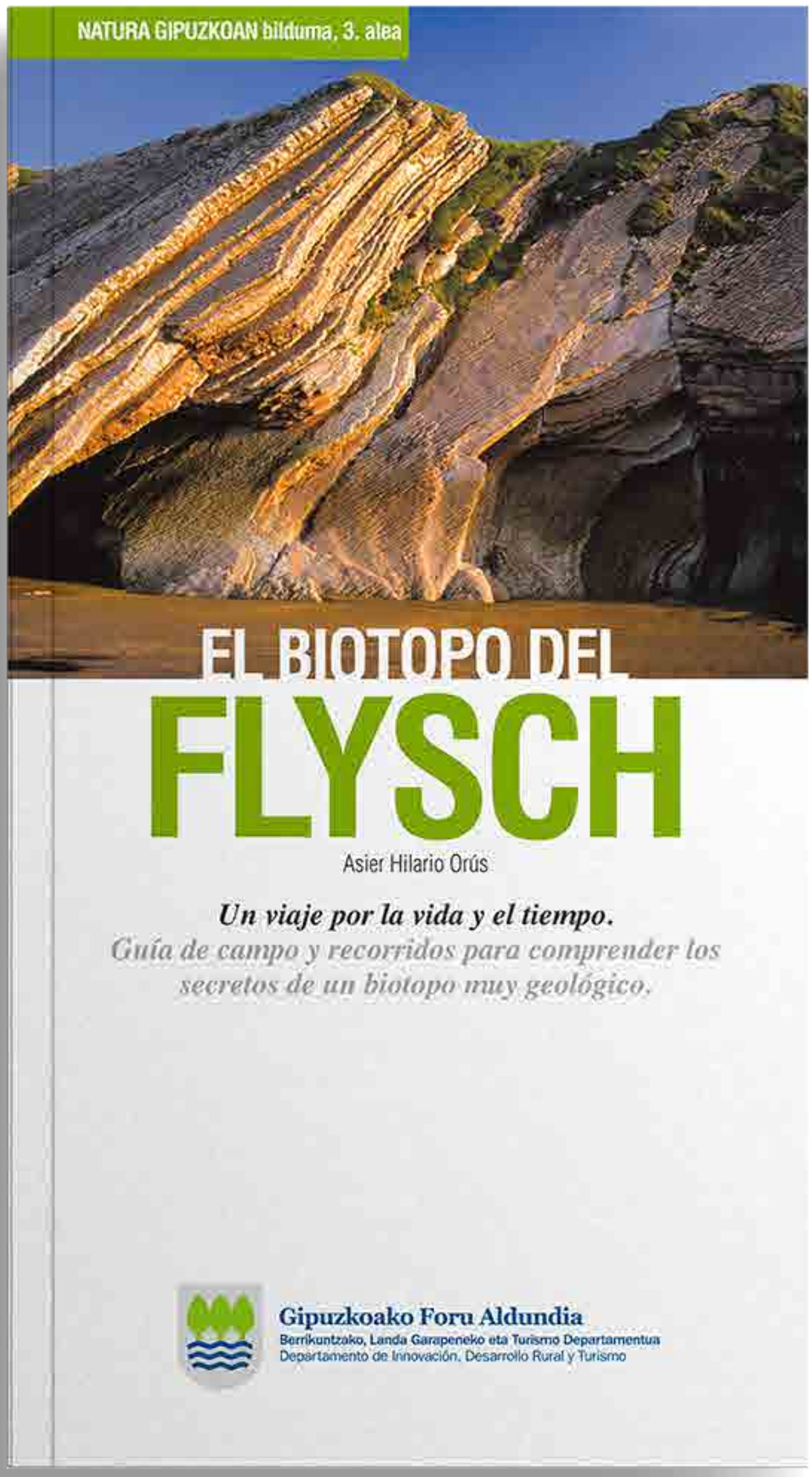

BUY COMPLETE GUIDE

For more complete information about the flysch we have the guide ‘The Flysch Biotope’ which is on sale at the geopark’s tourist offices.

Geoparkea

Euskal Kostaldea - Costa Vasca

Gipuzkoako Foru Aldundia

Diputación Foral de Gipuzkoa

ETORKIZUNA ORAIN

Es futuro

BABESTUTAKO BIOTOPOA
BIOTOPO PROTEGIDO

DEBA ETA ZUMAIA
ITSASERTZEKO BABESTUTAKO BIOTOPOA

EUSKO JAURLARITZA

GOBIERNO VASCO

INGURUMEN, LURRALDE PLANGINTZA ETA ETXEBIZITZA SAILA

DEPARTAMENTO DE MEDIO AMBIENTE, PLANIFICACIÓN TERRITORIAL Y VIVIENDA

EUSKADI

BASQUE COUNTRY