



**We want to... Hear the Sea**

**Measuring the World**

**Iaac**

**Albert Vila Bonfill\_Anthuanet Falcon\_Flora Berkowitz\_Manuja Agnihotri\_Nicolò Baldi**

# Objectives

The perception of Sea Sounds in relation to the Noise Pollution in Barcelona.



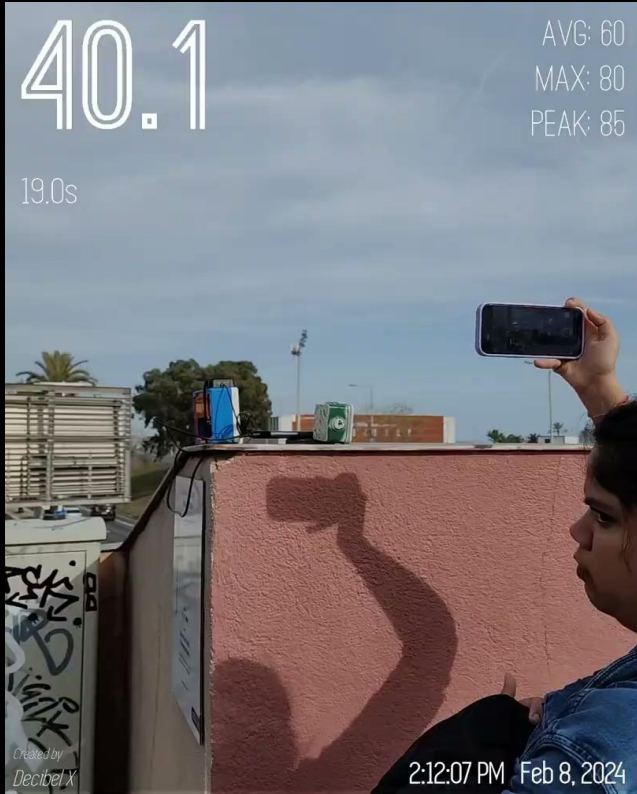
Zona Franca from 1984 to 2023 | Google Earth



# Objectives

Measurement of Urban Noise Pollution:

Location: **Barcelona - Mar Bella Beach**



- Utilize strategically placed the Smart Citizen to assess and record noise pollution levels in various coastal urban zones.
- Identify common sources of noise, such as vehicular traffic, industrial activity, and urban events, to comprehend their impact on the acoustic quality of the environment.
- Perception Range of Sea Sounds.

# Questions

- Does the rhythm of the waves change in the different beaches of Barcelona?
- Does the noise of the sea improve the quality of life of the citizens?
- Are the levels of noise pollution in Barcelona harmful to citizens?
- Does the frequencies of the waves resonate with the ones from the body?
- How does the prices differ from living near the sea than to live further away?
- How is living by the sea perceived as a currency?
- Can we hear the sound of the waves from 300m from the beach?

# Tool

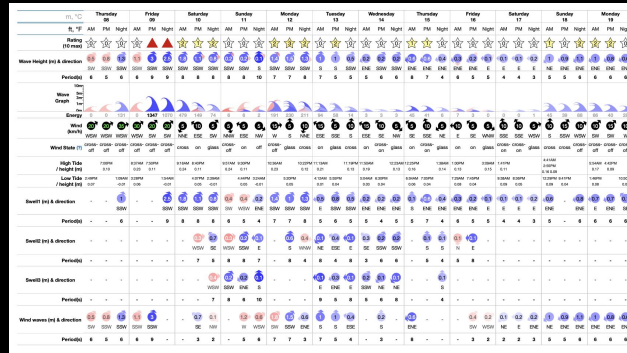


# Data Resources



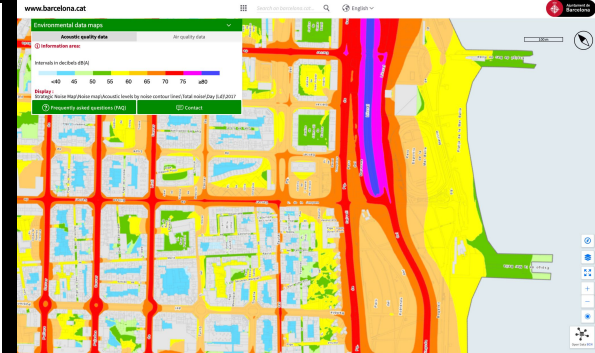
Skyline Webcams

<https://www.skylinewebcams.com/en/webcam/espaa/cataluna/barcelona/barcelona.html>



SurfForecast.com

[https://www.surf-forecast.com/breaks/Barcelone/ta/forecasts/latest/six\\_day](https://www.surf-forecast.com/breaks/Barcelone/ta/forecasts/latest/six_day)



Open Data BCN

<https://opendata-ajuntament.barcelona.cat/data/en/dataset/poblacio-exposada-mapa-estrategic-soroll>

## Map Plan

Mar Bella Beach | Barcelona

**Point 0: 370 m**

**Noise: 61.2dB**

Non human ear can hear the waves from here.

**Point 1: 280 m**

**Noise: 70dB**

The sound of the highway is too loud, no chance to hear the sound of the sea.

**Point 2: 200 m**

**Noise: 55.5dB**

We can barely hear the sound of the waves, but only in very silent conditions and by paying a lot attention and intentions

170m | We started hearing the waves from here

**Point 3: 100 m**

**Noise: 53.7dB**

We now can listen the sound of the waves in normal mood

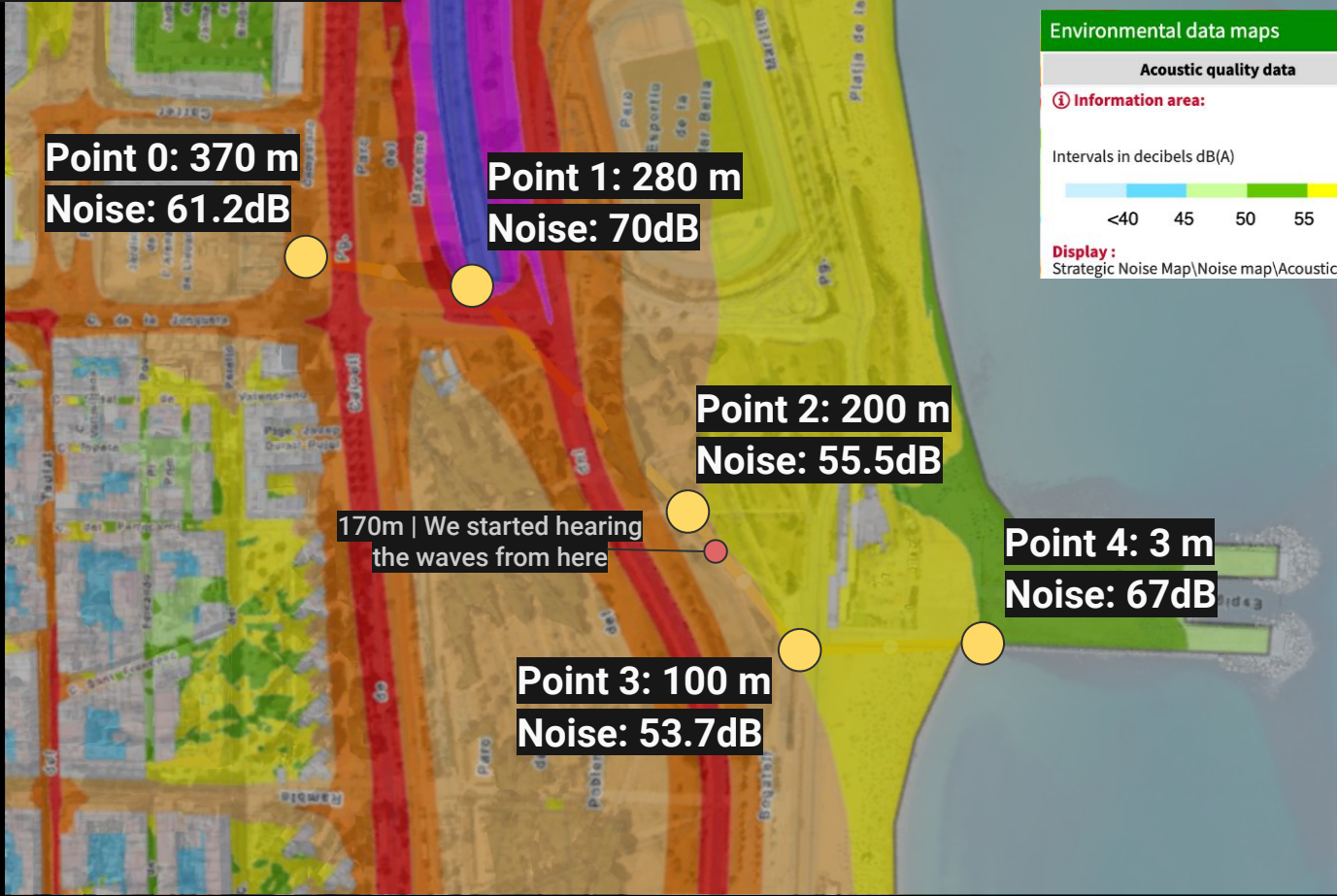
**Point 4: 3 m**

**Noise: 67dB**

We can definitely hear the waves now.



# Noise Comparison



Environmental data maps

Acoustic quality data

Air quality data

Information area:

Intervals in decibels dB(A)

<40

45

50

55

60

65

70

75

≥80

Display:

Strategic Noise Map\Noise map\Acoustic levels by noise contour lines\Total noise\Day (Ld)\2017

## Point Zero

370 meters from the beach

## Point One

280 meters from the beach

## Point Two

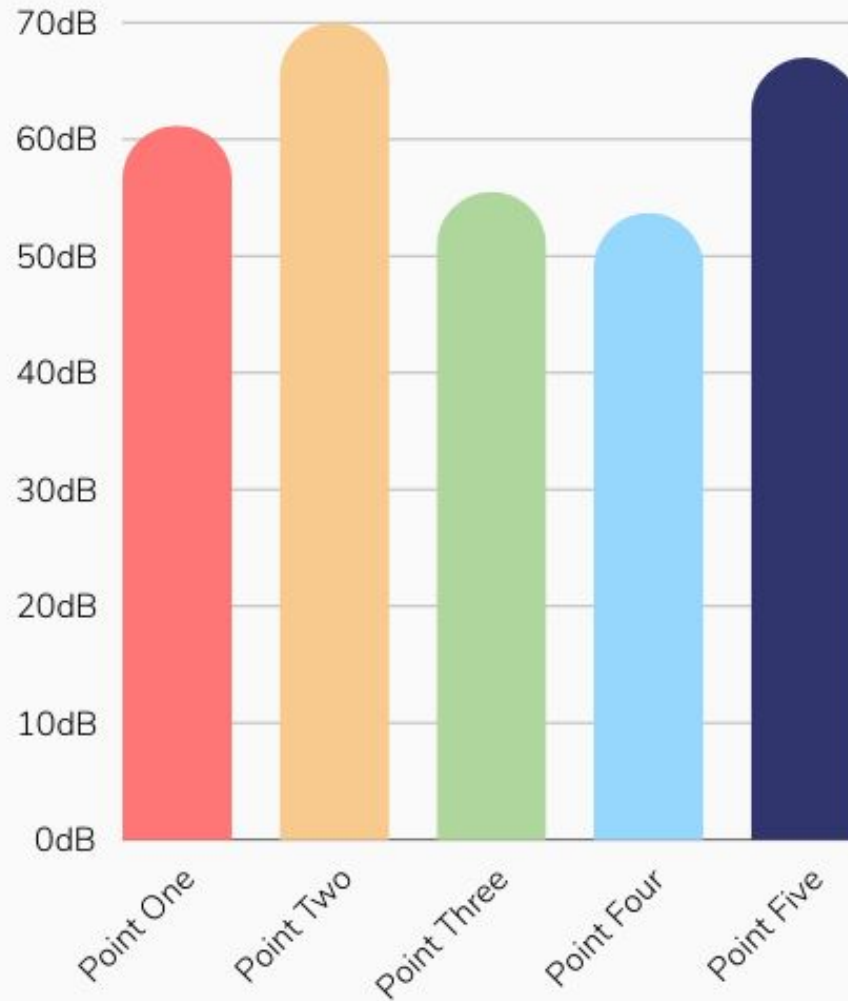
200 meters from the beach

## Point Three

100 meters from the beach

## Point Four

3 meters from the beach

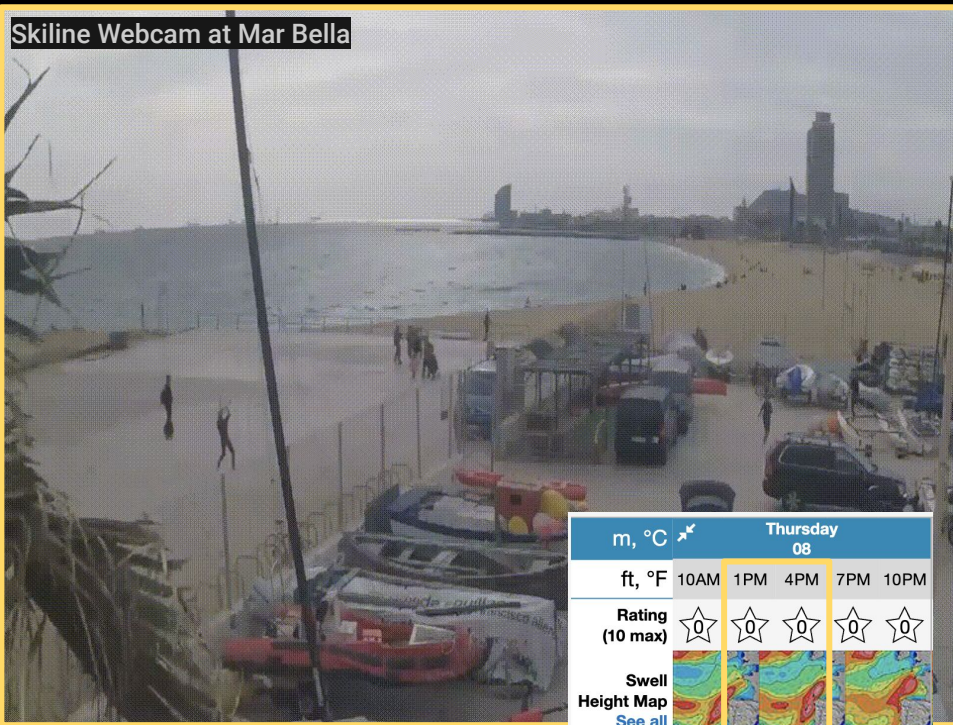




# Waves Status

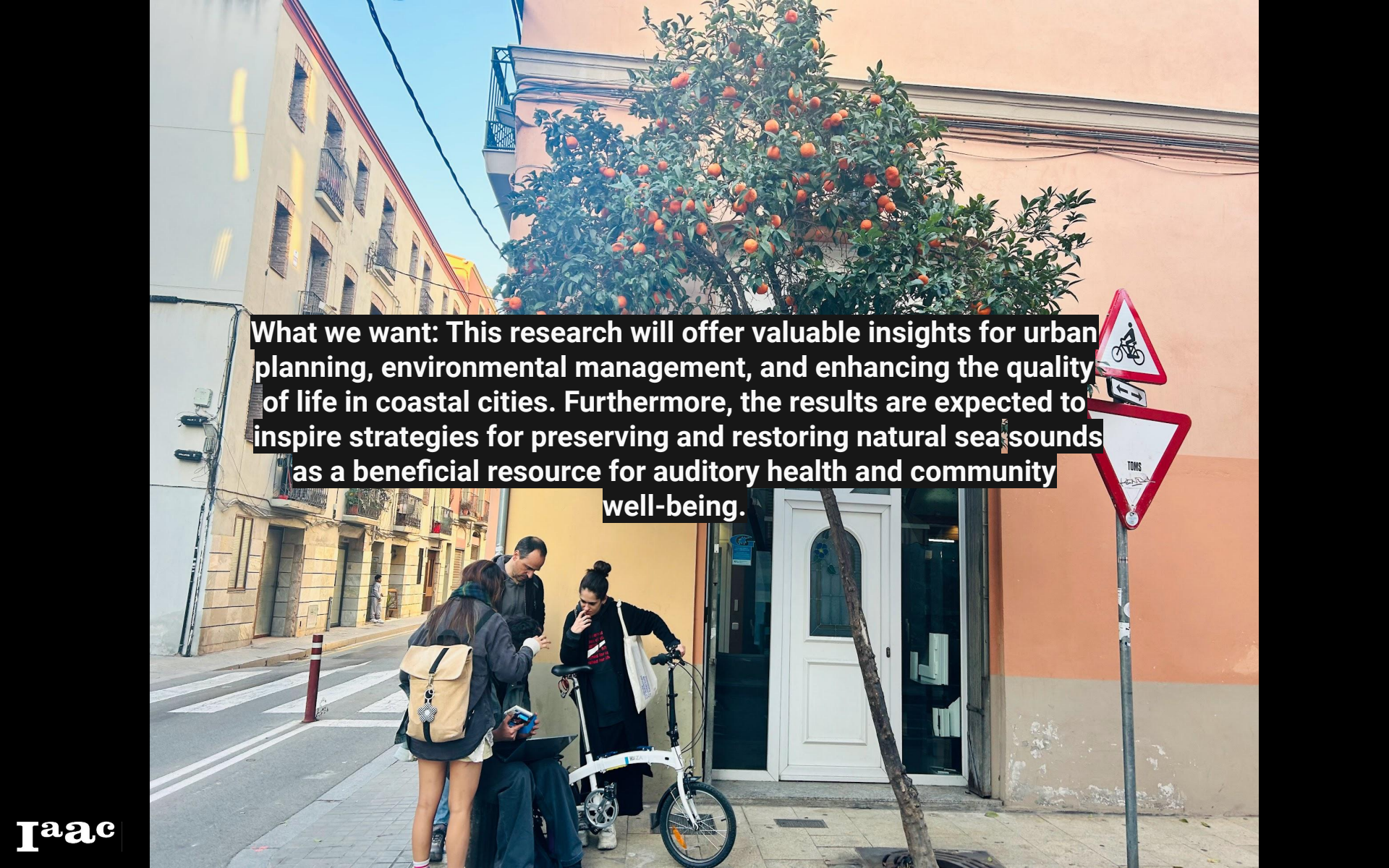


Skiline Webcam at Mar Bella



m, °C	Thursday 08				
ft, °F	10AM	1PM	4PM	7PM	10PM
Rating (10 max)	☆0	☆0	☆0	☆0	☆0
Swell Height Map <a href="#">See all maps</a>					
Wave Height (m) & direction (?)	0.4 SSW	0.5 SW	0.6 SSW	0.8 SSW	0.9 SSW
Period(s) (?)	6	6	5	5	6
Wave Graph (?)					
Energy (?)	12	15	19	28	43
Wind (km/h)	15 W	20 WSW	20 SW	20 WSW	20 SW





**What we want: This research will offer valuable insights for urban planning, environmental management, and enhancing the quality of life in coastal cities. Furthermore, the results are expected to inspire strategies for preserving and restoring natural sea sounds as a beneficial resource for auditory health and community well-being.**





**Thank youuuuu (Shout ouuuut to Adai and Oscar <3)**

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