Mediterranean Health State

through 10 key indicators.

UN environment programme | Mediterranean Action Plan Barcelona Convention | Plan Bleu

Regional Cooperation

Sharing of knowledge and strategic recommendations to support Mediterranean countries towards more sustainable and coherent public policies.

Mediterranean Strategy for Sustainable Development & Indicators

Monitoring and revision of the Mediterranean Strategy for Sustainable Development. Monitoring of indicators, evaluation of countries' progress, and aid in guiding public policies.

Plan Bleu and its Observatory

French Law 1901 Association and Regional Activity Centre of UNEP/MAP dedicated to environmental analysis and sustainable development in the Mediterranean, watchtower of the Mediterranean.

The 10 key indicators on the state of the Mediterranean

**Precautions and limits of analysis specific to each indicator appear at the end of the document*

Precautions and limits of analysis: p. 28

Indicator 1

Sources: UNDP, 2023.

Demography

Number of inhabitants in the Mediterranean (sum of annual populations of Mediterranean countries).

1990 — Period analysed — 2023

+163 M

+43,8%

Mediterranean inhabitants

1st global tourist destination

200 Million

visitors per year

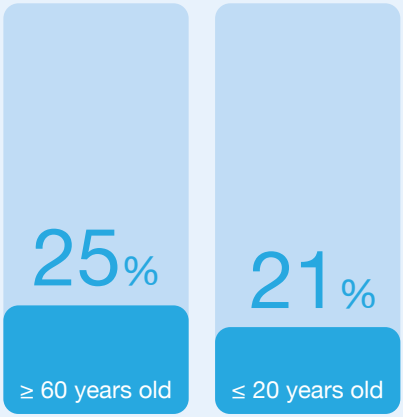
30% of the population lives in rural areas

70% of the population lives in cities

Mediterranean – North

+21.5%

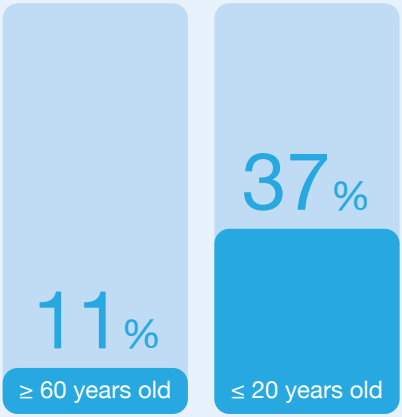
inhabitants



Mediterranean – South

+81.1%

inhabitants



Precautions and limits of analysis: p. 28

Indicator 2

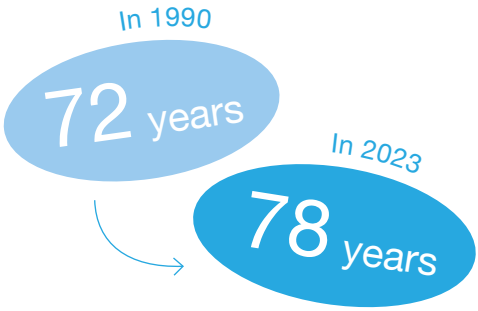
Sources: UN program and report, 2024

Life Expectancy at Birth

Average number of years an individual is expected to live at birth.

+8,9%

life expectancy gained on average



Mediterranean – North

+8,8%

life expectancy gained on average

In 2023

84 years	79 years
For women	For men

Croatia	71 years
Italy	72 years
France	74 years
Bosnia and Herzegovina	74 years
Spain	75 years
Greece	79 years

Mediterranean – South

+8,7%

life expectancy gained on average

In 2023

77 years	72 years
For women	For men

Syria	69 years
Lebanon	70 years
Egypt	71 years
Algeria	72 years
Tunisia	74 years
Morocco	75 years

Precautions and limits of analysis: p. 28

Indicator 3

Sources: UN program and report, 2024

Average Years of Schooling

Average number of years of study received by people aged 25 and over.

+ 4 years

of additional schooling

In 2021

14 years
Mediterranean Average

8 years
Global Average

Women study longer than men

+29%

In 2021

In 2021

21%

of graduated women have a qualified job

Mediterranean – North

15 years
Of Average Years of Study

+23%
Of Men

+38%
Of Women

Mediterranean – South

12 years
Of Average Years of Study

+34%
Of Men

+43%
Of Women

Precautions and limits of analysis: p. 28

Indicator 4

Sources: OECD, 2024.

Gross Domestic Product per Capita

2000 Period analysed 2022

+73%

increase in GDP
in the Mediterranean

+43%

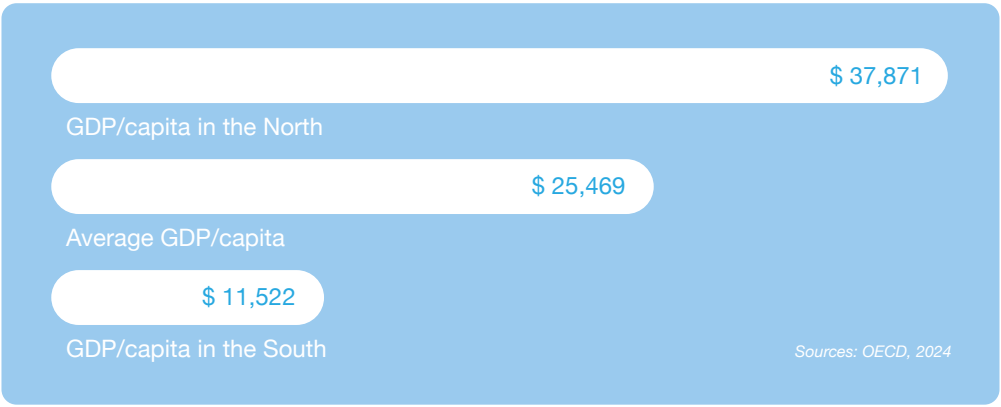
increase in
global GDP

+60%

of the total
Mediterranean
GDP comes from
European countries

1/3

The average GDP per capita in the South is 3 times lower than in European countries



Sources: OECD, 2024

Mediterranean – North

+42%

GDP/capita in the North

Mediterranean – South

+193%

GDP/capita in the South

Precautions and limits of analysis: p. 28

Indicator 5

Sources : UNDP, 2024.

Territorial Carbon Dioxide Emission per Capita

Resident CO2 emissions in the country, divided by the total population.

2000 Period analysed 2022

-17%

Decrease in local CO2 emissions per capita

5,5%

In 2022, the Mediterranean basin represents only 5.5 % of global CO_2 emissions, but it's experiencing particularly marked warming there.

Mediterranean – North

In 2000

6,36
tonnes / capita

↓

In 2022

5,08
tonnes / capita

-20%

Mediterranean – South

In 2000

2,51
tonnes / capita

↓

In 2022

2,70
tonnes / capita

+8%

Precautions and limits of analysis: p. 28

Indicator 6.1

Sources: Copernicus Interactive Climate Atlas, 2024.

Surface Atmospheric Temperature (SAT)

AT is defined as the Atmospheric temperature (in °C) 2 m above the ground surface.

1850 Period analysed 2023

+1.1°C

annual average

+60 %

Acceleration of heat waves since the 1990s.

Mediterranean – North

+2.10°C
in France

+1,8°C
in Greece

+1,7°C
in Croatia

+1.04°C
in Spain

+0.74°C
in Italy

Mediterranean – South

+2,0°C
in Egypt

+1.59°C
in Algeria

+1,3°C
in Lebanon

+0.95°C
in Tunisia

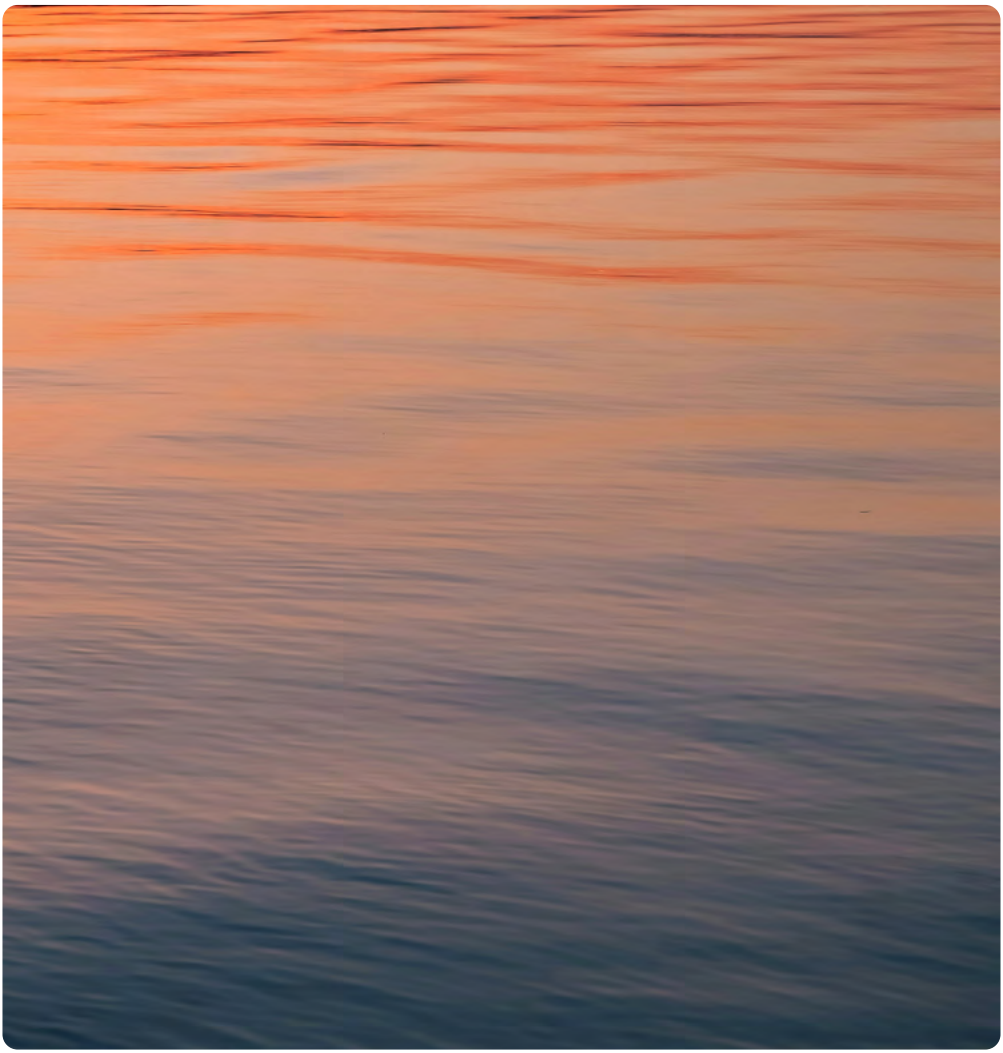
+0.50°C
in Morocco

Precautions and limits of analysis: p. 28

Indicator 6.2

Sources: Copernicus Interactive Climate Atlas, 2024.

Sea Surface Temperature (SST)



1990 Period analysed 2023

+0.86°C

Average increase in Sea Surface Temperature

Since 1990

25

positive variations

In Summer

The average SST was higher than the average annual temperature

+7.89°C
in 1993

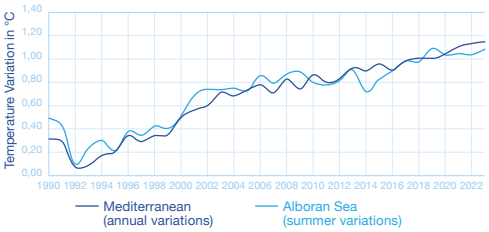
+8.34°C
in 2013

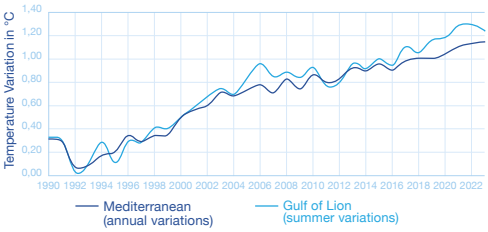
August 15, 2024: Submarine heatwaves

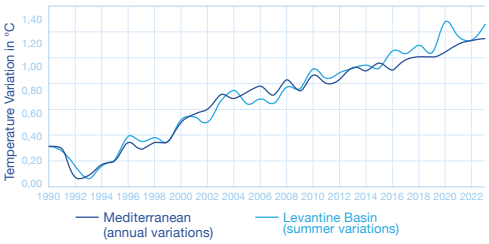
28.4°C
average across the entire basin

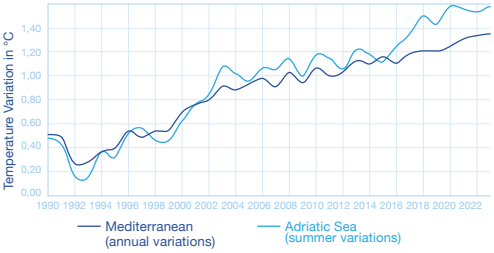
Some regions remained above **28 °C** for more than one week

31.87°C
in the Balearic Islands









Precautions and limits of analysis: p. 29

Indicator 7

Sources: FAO AQUASTAT, 2024

Water Availability per Capita

Average annual water availability per capita (m^3/capita/year) at the national level

-13,3%

Water availability across the entire Mediterranean basin

Increase in **water withdrawal**

+60%

1995 - 2020

Mediterranean – North

-42.7%	+20%	France
-38%	-20%	Spain
-36%	+1.7%	Malta
-21.5%	+26%	Greece
-20%	-92%	Croatia

Mediterranean – South

-73.3%	+36%	Algeria
-67.2%	-0.1%	Lebanon
-30%	+25%	Morocco
-23.5%	+50%	Egypt
-19%	-5%	Tunisia

Precautions and limits of analysis: p. 29

Indicator 8

Sources: WHO, 2024.

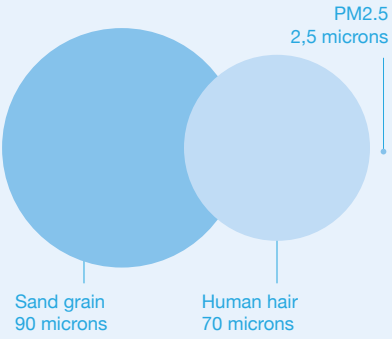
Air Quality

Annual average of atmospheric concentrations of PM2.5 particles (diameter < 2.5 micrometers).

2010 Period analysed 2022

19 µg/m3

average across the entire Mediterranean basin



In 2022

60,75%
of urban stations recorded an average of 13.50 µg/m³ PM2.5

55,91%
of peri-urban stations recorded an average of 13.19 µg/m³ PM2.5

59,12%
of rural stations recorded an average of 7.56 µg/m³ PM2.5

400 000
premature deaths per year on average in Europe due to PM2.5

Mediterranean – North

Sharp drop
in PM2.5 concentrations

20 µg/m3 in 2000
15 µg/m3 in 2019

Mediterranean – South

Slight drop
in PM2.5 concentrations

23,7 µg/m3 in 2000
23,0 µg/m3 in 2019

In Egypt

60 µg/m3 in 2019

PM2.5 concentrations two to three times higher

Precautions and limits of analysis: p. 29

Indicator 9

Sources: OECD, 2021

Plastic Stock in Aquatic Environments

Stocks (integrating various aquatic stocks) of plastic in millions of tons.

Worrying increase in plastic discharges into rivers, lakes, and seas despite regulations.

Forecasts

475 Mt in 2020	Plastic Production →	736 Mt in 2040
81 Mt in 2020	Volume of Mismanaged Waste →	119 Mt in 2040
20 Mt in 2020	Leaks into the Environment →	30 Mt in 2040

Mediterranean – North

10 Mt in 2000

16 Mt in 2019

Mediterranean – South

3 Mt in 2000

10 Mt in 2019

Precautions and limits of analysis: p. 29

Indicator 10

Sources: MAPAMED, 2022.

Marine Protected Areas

Percentage (% of the total area of Mediterranean waters) of coverage of Marine Protected Areas from 1990 to 2020

1990 Period analysed 2020

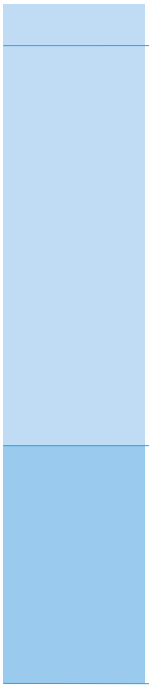
1278

MPAs in 2020

1 **+987%** **Croatia**
24 MPAs in 2010
261 MPAs in 2020

2 **+428%** **Malta**
7 MPAs in 2010
37 MPAs in 2020

3 **+132%** **Italy**
148 MPAs in 2010
344 MPAs in 2020



30%
target objective Aichi 11 of the Convention on Biological Diversity (CBD), which was reaffirmed in 2022 at COP15 of the CBD.

11%
of the marine area of the region is an MPA

Less than 0,1%
MPAs enjoy strong protection equivalent to that of a marine reserve.

Mediterranean – North

1200 MPAs

179 798 km²

94%
protected sites

Mediterranean – South

78 MPAs

11 602 km²

6%
protected sites

Precautions and limits of analysis:

1 Demography

Migrations (emigration and immigration) as well as 'sending' and 'receiving' countries are not taken into account. The coastal population is not differentiated here. Other variables should be included in the analysis, such as national birth and death rates.

2 Life Expectancy at Birth

Factors such as income and gender inequalities, as well as lifestyle choices influencing life expectancy are not reflected here due to the HDI methodology (itself).

3 Average Years of Schooling

The quality of education and disparities within countries are not reflected due to a specific methodological flaw of the HDI: factors such as income inequality, gender inequality, and lifestyle choices that influence years of schooling are not taken into account.

4 Gross Domestic Product per Capita

GDP does not reflect the distribution of wealth or standards of living per capita.

5 Carbon Dioxide Emission per Capita

Does not take into account consumption-related emissions or total global impact. Only national territorial emissions are considered.

6.1 Surface Atmospheric Temperature (SAT)

All analyses presented come from extracted data which show average annual values without taking into account seasonal and infra-seasonal variabilities.

6.2 Sea Surface Temperature (SST)

The data represents values at the national level, whereas greater variability constantly occurs at smaller spatial scales (regional climates, microclimates, etc.), particularly for SST, which is associated

with a very dense physical domain with varied surface current movements and energy transfers. There is no integration of drastic and isolated climatic events: downwelling and upwelling currents (cold water masses) can cool marine water surfaces. Extreme events (marine storms, oceanic eddies) can also directly affect local SST.

7 Water Availability per Capita

Economic and social factors are not taken into account in the water withdrawal indicator. Seasonal water demand (generally more intense in summer) is not considered. A holistic and intersectoral analysis (NCWR) and in-depth analysis (national studies) could be implemented to better understand the variations. The indicator assumes that water is equally available to all, whereas significant geographic and temporal disparities may appear; the qualitative dimension of renewable freshwater resources is not taken into consideration; demographic dynamics can significantly affect estimates of renewable freshwater resources per capita; the indicator assumes that resources remain constant, potentially underestimating the impact of climate change on the major water cycle and associated hydrological processes.

8 Air Quality

A finer geographical analysis could be provided (at urban, suburban, and rural scales). Average annual values exclude extreme daily peaks, particularly those induced by daily traffic rush hours. No information on the chemical composition of PM2.5 particles is provided, even though they are very dangerous for human health.

9 Plastic Stock in Aquatic Environments

The data was analyzed at the interregional level (not refined for other scales). The notion of stock has been simplified (no reference to «fluxes» and «living stocks»). Significant data gaps, particularly regarding emissions at the source. There is no centralized (qualitative and quantitative) database for the Mediterranean.

10 Marine Protected Areas

Data accuracy, overlap of designations, and effectiveness of conservation efforts.

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