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. 26

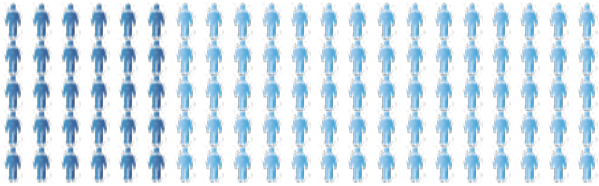
Indicator 1

Sources: UNDP, 2023.

Demography

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

1990 Period analysed 2023



30% of the population lives in rural areas

70% of the population lives in cities

Mediterranean – North

In 2022

285 Millions of inhabitants

The northern shore has an ageing population

Mediterranean – South

In 2022

252 Millions of inhabitants

The southern shore has a younger population

Precautions and limits of analysis: p. 26

Indicator 2

Sources: UN program and report, 2024

Life Expectancy at Birth

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

1990 Period analysed 2023

Mediterranean – North

79,7 years

Average life expectancy

In 2023

84 years
For women

79 years
For men

Italy	72 years
Bosnia and Herzegovina	74 years
Spain	75 years
Greece	79 years

Mediterranean – South

75 years

Average life expectancy

In 2023

77 years
For women

72 years
For men

Syria	69 years
Egypt	70 years
Lebanon	71 years
Algeria	72 years

Precautions and limits of analysis: p. 26

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.

1990 Period analysed 2021

+ 4 years

of additional schooling

In 2021

Mediterranean average

14 years

Global average

8 years

In 2021

+29%

Women study longer than men

Precautions and limits of analysis: p. 26

Indicator 4

Sources: OECD, 2024.

Gross Domestic Product per Capita

2000 Period analysed 2022

+73%
Increase in Mediterranean GDP

+43%
Increase in global GDP

In 2024

$ 37,871
GDP per capita in the North

$ 11,552
per capita in the South

Mediterranean – North

+42%
GDP per capita in the North

Mediterranean – South

+193%
GDP per capita in the South

Precautions and limits of analysis: p. 26

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

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

-20 %

5,08
tonnes / capita

Mediterranean – South

In 2000

2,51
tonnes / capita

In 2022

+8 %

2,70
tonnes / capita

Precautions and limits of analysis: p. 26

Indicator 6

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

Atmospheric surface temperature

+1.1°C
Average increase
in surface temperature

+60%
Increase in
heatwaves since
the 1990s

1990 Period analysed 2023

Sea surface temperature

+0.86°C
Average increase in sea
surface temperature

Precautions and limits of analysis: p. 27

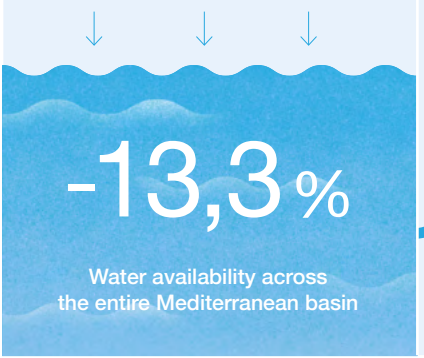
Indicator 7

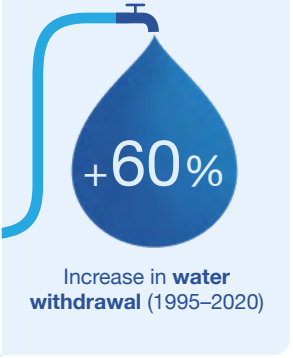
Sources: FAO AQUASTAT, 2024

Water Availability per Capita

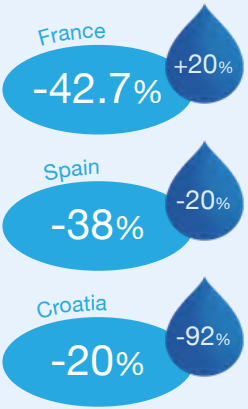
Average annual water availability per capita (m^3/capita/year) at the national level

1990 Period analysed 2020

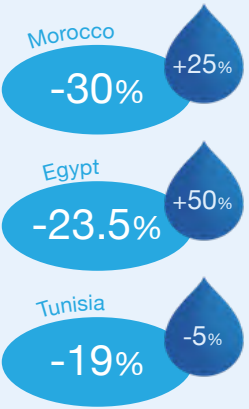




Mediterranean – North



Mediterranean – South



Precautions and limits of analysis: p. 27

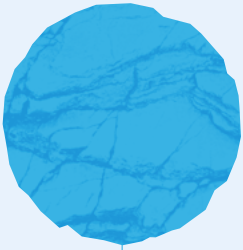
Indicator 8

Sources: WHO, 2024.

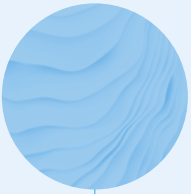
Air Quality

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

1990 Period analysed 2020



Sand grain
90 microns



Human hair
70 microns

PM2.5
2,5 microns

400 000

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

In 2022

Urban stations

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

Peri-urban stations

55,91%
of peri-urban
stations recorded
13.19 µg/m³

Rural stations

59,12%
of rural stations
recorded
7.56 µg/m³

Precautions and limits of analysis: p. 27

Indicator 9

Sources: OECD, 2021

Plastic Stock in Aquatic Environments

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

2000 Period analysed 2040

In 2019

North – Mediterranean

16 Millions of tonnes

South – Mediterranean

10 Millions of tonnes

In 2019, the equivalent weight of about 90 Colosseums was released into aquatic environments and ended up in the sea.

X 90

Forecasts

	In 2020	In 2040
Plastic production	475 Mt	736 Mt
Mismanaged waste	81 Mt	119 Mt
Leaks into nature	20 Mt	30 Mt

Precautions and limits of analysis: p. 27

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

1 278
MPAs in 2020

11%

of the marine area
of the region is an MPA

30%

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

⚠ Less than 0,1%

MPAs enjoy strong protection
equivalent to that of
a marine reserve.

Mediterranean – North

1200 MPAs

179 798 km²

Mediterranean – South

78 MPAs

11 602 km²

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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