

# MONITORING THE IMPLEMENTATION OF THE MEDITERRANEAN STRATEGY FOR SUSTAINABLE DEVELOPMENT 2016-2025

## MEDITERRANEAN SUSTAINABILITY DASHBOARD: 2021 UPDATE



United Nations  
Environment Programme



Mediterranean Action Plan  
Barcelona Convention



Draft version  
2021

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**These factsheets concern 22 countries or entities bordering the Mediterranean Sea:**

ISO2 Code	Country or entity	Regions
AL	Albania	NMC
BA	Bosnia and Herzegovina	NMC
CY	Cyprus	NMC
DZ	Algeria	SEMC
EG	Egypt	SEMC
ES	Spain	NMC
FR	France	NMC
GR	Greece	NMC
HR	Croatia	NMC
IL	Israel	SEMC
IT	Italy	NMC
LB	Lebanon	SEMC
LY	Libya	SEMC
MA	Morocco	SEMC
MC	Monaco	NMC
ME	Montenegro	NMC
MT	Malta	NMC
PS	the State of Palestine	SEMC
SI	Slovenia	NMC
SY	the Syrian Arab Republic	SEMC
TN	Tunisia	SEMC
TR	Turkey	SEMC

**The analysis can consider the groups of countries usually utilized by Plan Bleu:**

- The Northern Mediterranean Countries (NMC) gather twelve countries or entities: AL, BA, CY, ES, FR, GR, HR, IT, MC, ME, MT and SI.
- The Southern and Eastern Mediterranean Countries (SEMC) gather ten countries or entities: DZ, EG, IL, LB, LY, MA, PS, SY, TN and TR.

The “indicator” factsheets, developed in the framework of the monitoring of the implementation of the Mediterranean Strategy for Sustainable Development (MSSD), are intended to provide a first answer to the question:

## ARE THE MEDITERRANEAN COUNTRIES PROGRESSING TOWARDS SUSTAINABLE DEVELOPMENT?

*The objectives of these factsheets are to have the MSSD 2016-2025 implementation monitored and evaluated on periodic basis through this agreed set of indicators in line with Sustainable Development Goals and to be presented as a Mediterranean sustainability dashboard adopted by the Barcelona Convention COP 21, Naples 2<sup>nd</sup> to 5<sup>th</sup> December 2019.*

This document includes 28 factsheets, for each of the 28 indicators selected to monitor the progress made by the Mediterranean countries regarding the 6 objectives of the MSSD 2016- 2025, in line as much as possible with the SDGs:

1. Ensuring sustainable development in marine and coastal areas
2. Promoting resource management, food production and food security through sustainable forms of rural development
3. Planning and managing sustainable Mediterranean cities
4. Addressing climate change as a priority issue for the Mediterranean
5. Transition towards a green and blue economy
6. Improving governance in support of sustainable Development

This document includes also some well-known composite indicators such Human Development Index (HDI) and Ecological Footprint to show the overall progress observed in terms of sustainable development.

The indicators shown in these factsheets are those with sufficient amount of data available mainly from international sources. Indicators 7, 20, 24 and 28 don't have new data for this round of update.

The indicators for the follow-up of the MSSD 2005-2015 were presented in similar factsheets updated and published every 2 years from 2005 to 2013. Some of them were also selected for the MSSD 2016-2025.

*Note: The boundaries, colors, denominations, and other information shown on any maps and charts in this document do not imply any judgment on the part of Plan Bleu concerning the legal status of any territory or the endorsement or acceptance of such boundaries.*

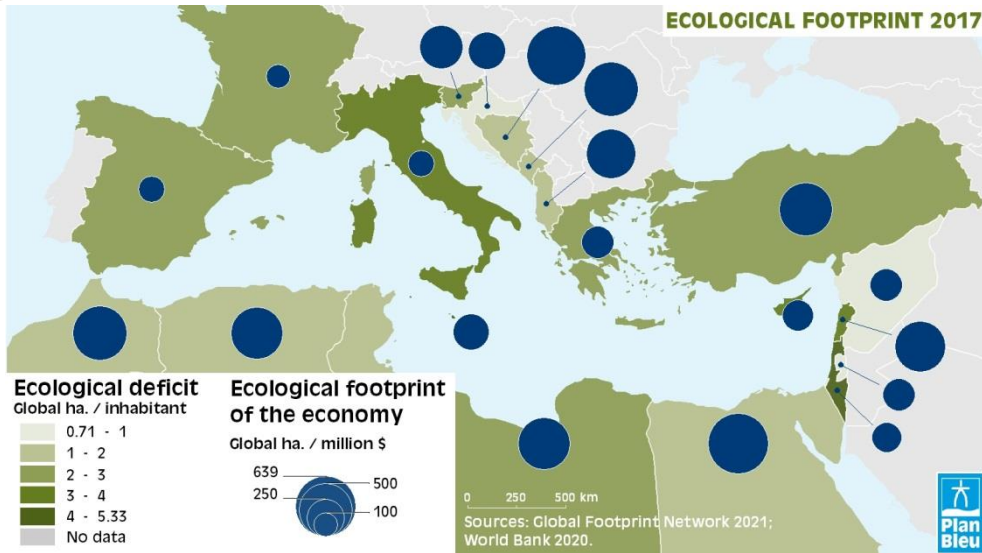
## LIST OF INDICATORS

N°	GOAL	INDICATOR
1	General indicators	Ecological footprint *
2	General indicators	Human Development Index
3	General indicators	Annual growth rate of real GDP per capita (SDG Indicator 8.1.1) *
4	General indicators	Youth literacy rate *
5	General indicators	Girl/Boy primary, secondary and tertiary school registration ratio *
6	1 - Sea and coast	Number of ratifications and level of compliance as reported by Barcelona Convention Contracting Parties
7	1 - Sea and coast	Coverage of protected areas in relation to marine territorial waters (SDG Indicator 14.5.1) *
8	1 - Sea and coast	Proportion of fish stocks within biologically sustainable levels (SDG Indicator 14.4.1) *
9	2 - Rural & Resources	Number of protected areas participating in the Green List initiative *
10	2 - Rural & Resources	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems (SDG Indicator 15.a.1) *
11	2 - Rural & Resources	Global Food Security Index
12	2 - Rural & Resources	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (SDG Indicator 6.4.2) *
13	2 - Rural & Resources	Water demand, total and by sector, compared to GDP *
14	2 - Rural & Resources	Proportion of population using safely managed drinking water service (SDG Indicator 6.1.1) *
15	2 - Rural & Resources	Proportion of population using safely managed sanitation services (SDG Indicator 6.2.1) *, **
16	2 - Rural & Resources	Proportion of agriculture quality products and Share of the agricultural land area used by organic farming *
17	2 - Rural & Resources	Red List Index (SDG Indicator 15.5.1) *

## LIST OF INDICATORS

N°	GOAL	INDICATOR
18	3 - Cities	Proportion of urban population living in slums, informal settlements, or inadequate housing (SDG Indicator 11.1.1) *
19	3 - Cities	Status of UNESCO world heritage sites*
20	3 - Cities	Waste generated and treated by type of waste and treatment type *, **
21	4 - Climate change	Green House Gas emissions (related to GDP)*
22	4 - Climate change	Energy intensity measured in terms of primary energy and GDP (SDG Indicator 7.3.1)*, Renewable energy share in the total final energy consumption (SDG Indicator 7.2.1)*
23	5 – Green/blue economy	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP (SDG Indicator 12.2.2) *
24	6 - Governance	Number of National Strategies for Sustainable Development adopted or updated [and number of updates since first edition] *
25	6 - Governance	Proportion of bank credit allocated to the private sector – Existence of alternative financing systems using bank credit
26	6 - Governance	Research and development expenditure as a proportion of GDP (SDG Indicator 9.5.1)*
27	6 - Governance	Number of countries that have clear mechanisms in place for ensuring public participation and guarantying public access to environmental information*
28	6 - Governance	Number of countries that have National Strategies/Action Plans on Education for Sustainable Development in place*

\* Similar or linked to SDG indicators, \*\* Similar or linked to SEIS / Horizon 2020 indicators



All Mediterranean countries had an Ecological Deficit in 2016. This means that the environmental capacity of the region is used up faster than it is renewed.

**Definition:**

- **Ecological Footprint:** A measure of how much area of biologically productive land and water an individual, population, or activity requires to produce all the resources it consumes and to absorb the waste it generates, using prevailing technology and resource management practices.
- **Biocapacity:** Ecosystems' capacity to produce biological materials used by people and to absorb waste material generated by humans, under current management schemes and extraction technologies.
- **Ecological deficit / reserve:** The difference between the Biocapacity and Ecological Footprint of a region or country.

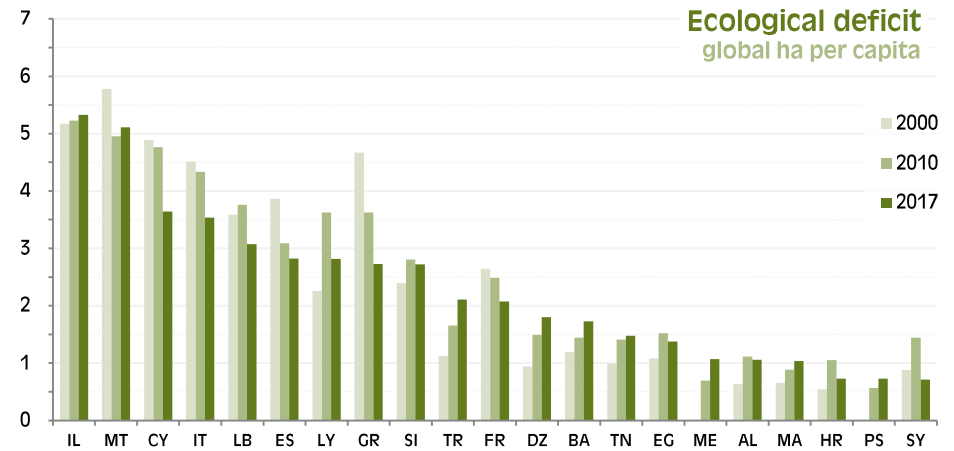
Ecological Footprint and Biocapacity are expressed in units of global hectares (gha).

**Precautions / Notes:**

- Ecological Footprint: It only measures one aspect of sustainability, which is whether human societies are able to live within their annual biocapacity budget. It therefore deals with only the environmental pillar of sustainability and, even for this pillar, important environmental parameters are not considered (pollution due to GHGs other than CO<sub>2</sub>, impact of nuclear energy, etc.).

Source: Global Footprint Network, *National Footprint and Biocapacity Accounts*, 2021 Edition.

WHAT IS THE IMPACT OF HUMAN ACTIVITIES ON THE ENVIRONMENT?

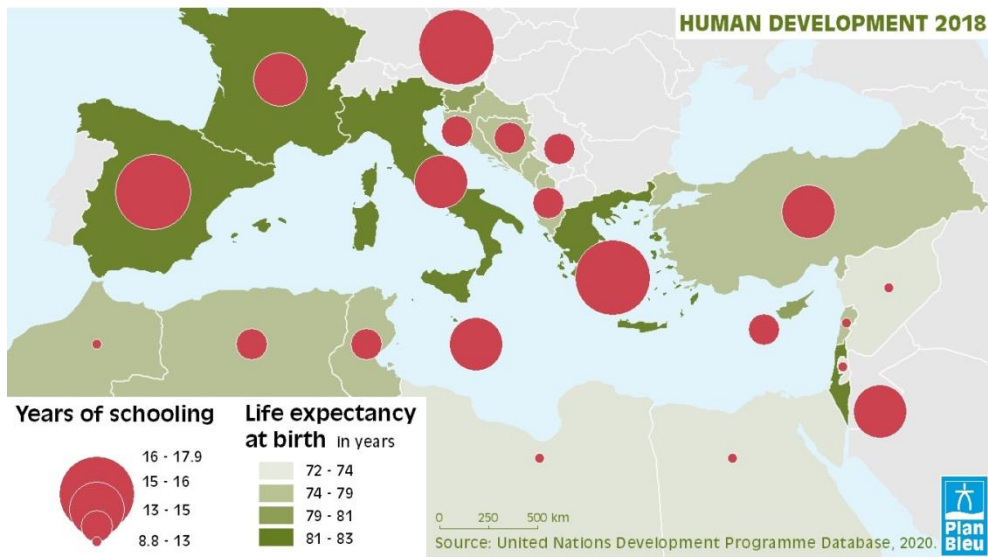


Sources: Global Footprint Network, 2021.

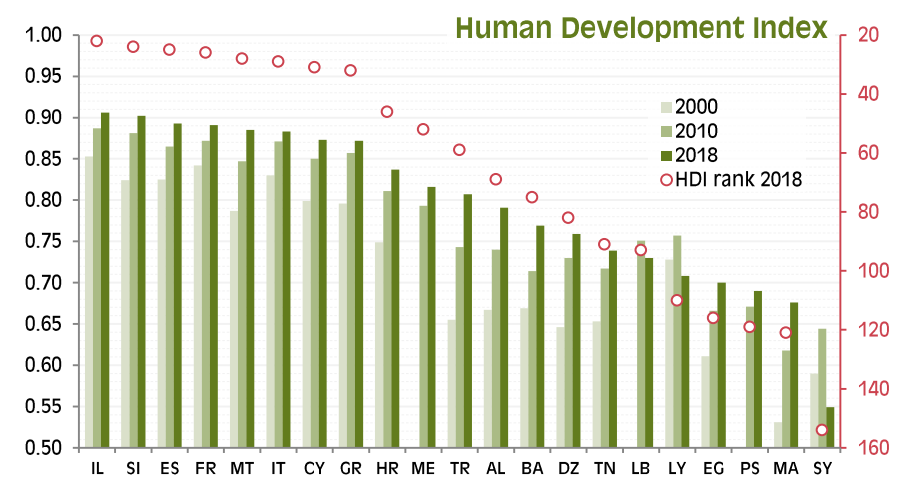
The Ecological Footprint is used to assess the level of the consumption of available resources connected to human activities. Compared to the Biocapacity, this indicator offers the possibility to calculate the Ecological Deficit or Reserve in a region or country.

From 2010 to 2017, the Ecological Footprint per capita decreased in most Mediterranean countries.

- Thus, the Mediterranean Ecological Footprint (3.2 gha/cap) is higher than the planet's Ecological Footprint (2.8 gha/cap).
- The Mediterranean's Biocapacity Deficit (2.1 gha/cap) is almost two times higher than the world's Biocapacity Deficit (1.2 gha/cap).
- The Ecological Footprint of the northern Mediterranean countries started to decrease in the last few years (from 5.4 gha/cap in 2010 to 4.3 gha/cap in 2017). This is mostly due to the effects of the economic crisis, which slowed down resource consumption and, primarily, CO<sub>2</sub> emissions
- The Ecological Footprint per unit of GDP is less than 230 gha per million dollars for half of the northern countries. However Bosnia and Herzegovina and Montenegro peak respectively at 633 gha and 526 gha. In the southern countries the maximum values are for Egypt (639 gha per million of dollars) and Morocco (529).



## IS SOCIAL WELFARE PROGRESSING IN THE MEDITERRANEAN COUNTRIES?



Source: United Nations Development Programme Database, 2020.

The human development index has constantly progressed in most Mediterranean countries since 1990.

### Definition:

The Human Development Index (HDI) is a composite index, developed by UNDP, that measures the evolution of a country according to three basic criteria:

- **Health and longevity**, measured by life expectancy at birth.
- **Knowledge and education**, measured by the mean years of schooling and the expected years of schooling.
- **Standard of living**, indicated by the GNI per Capita (PPP not constant US dollars).

The HDI is standardized and used to classify countries by values between 0 and 1.

### Precautions / Notes:

An HDI value greater than 0.8 is generally considered high. A value below 0.55 is considered low. The calculation methodology was changed in 2013 and had the effect of decreasing the HDI values (with a small impact on country rankings).

Source: United Nations Development Programme Database and report, 2020.

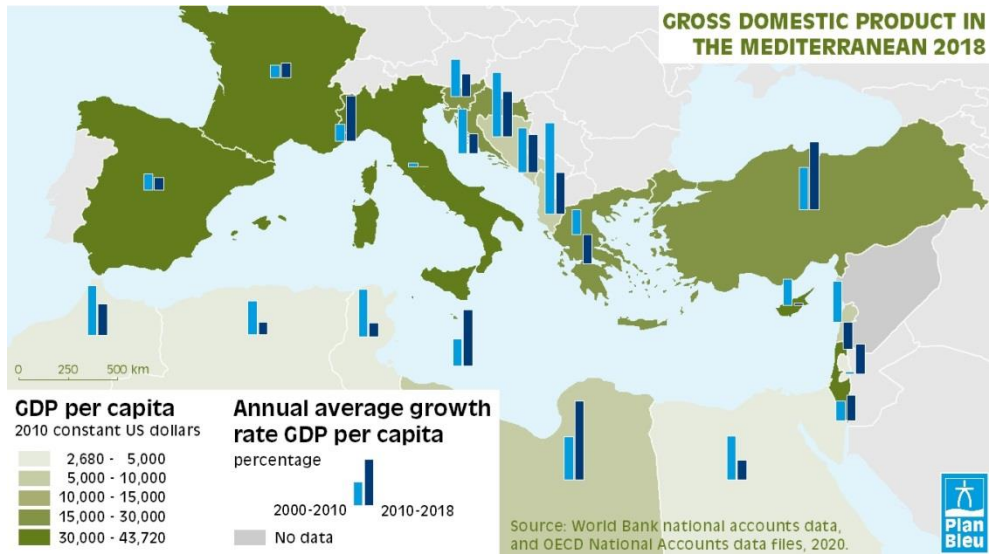
The human development index (HDI) with its three components (health, education and income) enables us to identify and understand the social component of sustainable development.

With an average HDI of 0.794 in 2018, the Mediterranean region was above the world value of 0.731.

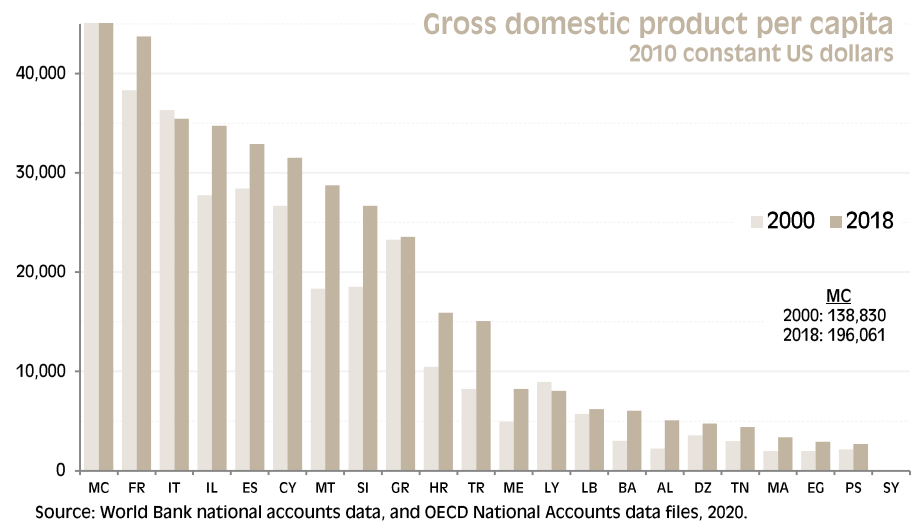
However, there are great differences between countries:

- 11 countries have high HDI, greater than 0.8: Israel (ranked 22<sup>nd</sup> out of 189 worldwide), Slovenia, Spain, France, Malta, Italy, Cyprus, Greece, Croatia, Montenegro and Turkey (59<sup>th</sup> worldwide).
- 7 countries have HDI between 0.7 and 0.8: Albania, Bosnia and Herzegovina, Algeria, Tunisia, Lebanon and Libya (110<sup>th</sup> worldwide).
- 4 countries have HDI lower than 0.7: Egypt, State of Palestine, Morocco and The Syrian Arab Republic with 0.536 (154<sup>th</sup> worldwide).

The life expectancy at birth, which accounts for one third of the HDI, shows a gap of 11.6 years between The Syrian Arab Republic (71.8) and Italy and Spain (83.4).



### ARE THE INCOME GAPS BETWEEN THE SOUTH AND NORTH COUNTRIES GETTING SMALLER?



In 2018, the EU Mediterranean countries count for 75% of the Mediterranean GDP.

**Definition:**

SDG Indicator 8.1.1: Annual growth rate of real GDP per capita

- The Gross Domestic Product (GDP) is the value of all the goods and services produced in a country in a year. The GDP can be calculated by adding up all the items of income – salaries, interests, profits and rents – or by calculating the expenditure – consumption, investment, public purchases, net exports, (exports less imports) – of an economy.
- Annual growth rate of real Gross Domestic Product (GDP) per capita is calculated as the percentage change in the real GDP per capita between two consecutive years. Real GDP per capita is calculated by dividing GDP at constant prices by the population of a country or area. The data for real GDP is measured in constant US dollars to facilitate the calculation of regional and global aggregates.

**Precautions / Notes:**

By using PPP rather than the exchange rate, the GDP per capita of a country, calculated in units of national currency, can be converted into GDP per capita in dollars, while taking into account the differences in domestic prices for the items being considered (PPP gives the value of a typical basket of goods in different countries).

Source: World Bank national accounts data and Organisation for Economic Co-operation and Development National Accounts data files, 2020.

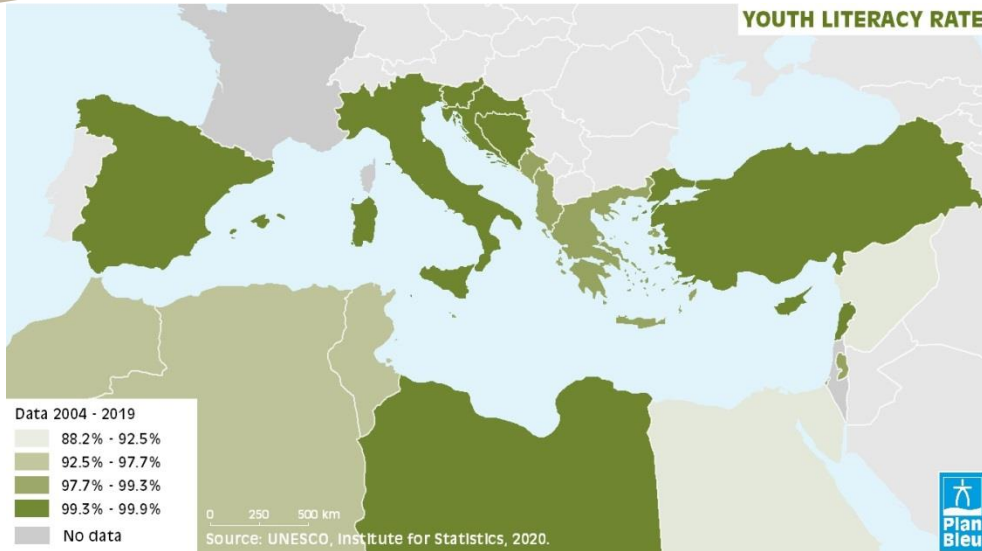
Although insufficient to measure the development level of a country, the GDP per capita remains an unavoidable indicator for comparing economic situations in terms of income.

The GDP growth rates in the south and east Mediterranean countries are higher than those of the EU Mediterranean countries. However, they are considered low when compared to the population growth rates, as the demographic growth is still high in the southern Mediterranean countries.

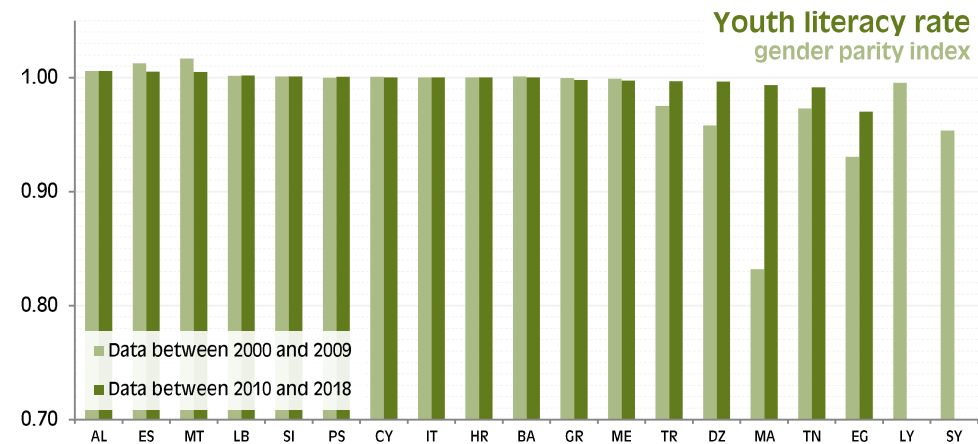
In 2018, the average income per capita in the South and East Mediterranean countries (11 000\$) is more than 3 times lower than the average income in the EU Mediterranean countries (38 000\$).

The share of the Mediterranean GDP in the world GDP is decreasing: from 14.1% in 2000 to 12.6% in 2010 and 11.3% in 2018. Meanwhile, the share of the Mediterranean population remains constant in the world population (about 7%).





## IS THE LITERACY RATE OF YOUNG ADULTS IMPROVING?



Source: UNESCO Institute for Statistics, 2020.  
When gender parity index is higher than 1 more girls than boys are literate.

**Literacy rate of young adults: The Mediterranean average (98%) is above the world average (92%).**

### Definition:

Literacy rate between ages 15 to 24 is presented as a percentage of the total population of this age group. People are considered as literate when they can read, write, and understand a short simple article concerning their daily life (Millennium Indicator n°8). This indicator is linked to the SDG Indicator 4.6.1: Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex.

### Precautions / Notes:

Measurement of literacy can vary from a simple question "Can you read and write?" to various evaluation tests to assess the levels of literacy. In some cases, literacy is roughly measured in censuses with self-report or by estimating the population not attending school or uneducated.

The definitions of literacy used in the national surveys often differ from that of UNESCO. The types of survey carried out in different countries to estimate the literacy rate are also different from one another and from year to year. The data resulting from these surveys should, therefore, be considered with caution.

Source: United Nations Educational, Scientific and Cultural Organization Institute for Statistics, 2020.

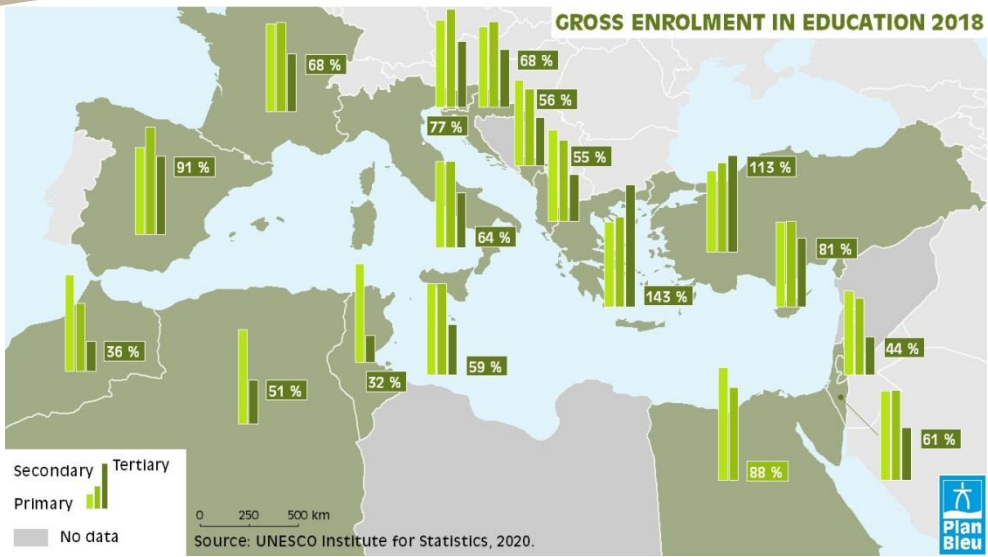
Access to primary education is a key issue for the UNESCO « Education for All » programme as well as for the Sustainable Development Goal 6.

The literacy rate of young adults reflects the primary education received in the previous decade.

This objective has been taken up in the MSSD for all the young adults, by stressing its importance in rural areas and for girls in order to reduce the disparities yet significant in the Mediterranean.

Since 1990, the literacy rate of young adults has increased significantly in all of the southern and eastern Mediterranean countries and is satisfactory in most of the northern Mediterranean countries.

The ratio of the literacy rate of girls compared to boys less than 1 indicates a lack of education for girls. The rate is less than 0.99 in Egypt and The Syrian Arab Republic.



Girls' education has improved: the parity index for the gross combined enrolment rate is over 0.98 in 14 Mediterranean countries.

**Definition:**

This indicator is the parity index between girls and boys for the gross enrolment rate (primary, secondary and combined) defined by UNESCO. It refers to the number of girls enrolled in primary and secondary schools, in public and private schools compared to the number of boys.

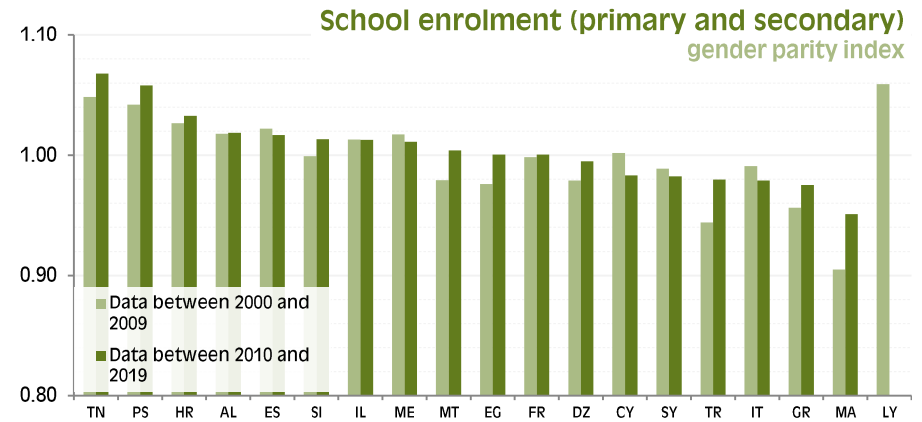
The gross enrolment rate is the ratio of the number of students enrolled in schools at different grade levels (such as elementary, middle school and high school), regardless their age, and is expressed as a percentage of the population in the official age group corresponding to this level of education.

**Precautions / Notes:**

This indicator is not an accurate measurement of school access for girls because the improvements of the report may reflect an increase enrolment of girls receiving education or a decrease in the case of boys. The gross enrolment rate could be over 100% because of late admission and/or because of repletions.

Source: United Nations Educational, Scientific and Cultural Organization Institute for Statistics, 2020. United Nations Educational, Scientific and Cultural Organization, Global education monitoring report summary, 2020: *Inclusion and education: all means all.*

ARE WE GOING IN THE DIRECTION OF ACHIEVING GENDER PARITY AT ALL LEVELS OF EDUCATION?



Source: UNESCO Institute for Statistics, 2020. When gender parity index is higher than 1 more girls than boys are enrolled in school.

Education and gender equality are central concerns in the new sustainable development agenda.

The Education 2030 Framework for Action, agreed by the global education community in November 2015 to accompany the SDG agenda, recognizes that gender equality is inextricably linked to the right to education for all, and that achieving gender equality requires an approach that « ensures that girls and boys, women and men not only gain access to and complete education cycles, but are empowered equally in and through education ».

In 2018, worldwide some 59 million children of primary school age, or 8%, were out of school in 2018, as were 62 million adolescents of lower secondary school age (16%) and 138 million youth of upper secondary school age (35%).

**In 2018, the enrolment rate in primary education is over 99% in most Mediterranean countries except in The State of Palestine (98.6%), Turkey (94.9%) and Croatia (94.6%).**

In secondary education the gross enrolment rate is over 95% in 11 countries.



### Morocco and The Syrian Arab Republic are the two contracting parties which have at least ratified the Barcelona Convention and all its protocols

#### Definition:

The signature qualifies the signatory state to proceed to ratification, acceptance or approval. It also creates an obligation to refrain, in good faith, from acts that would defeat the object and the purpose of the convention.

Ratification defines the international act whereby a state indicates its consent to be bound to a convention if the parties intended to show their consent by such an act.

Entry into force of an international convention takes place when it becomes legally binding on the parties. The parties have to decide to apply the convention.

#### Precautions / Notes:

This indicator is very complex and this factsheet provide only an overview of the status. All details can be found in the official documents of the Convention.

A country can implement a protocol without signature and it can take more protective measures.

Source: United Nations Environment Programme/Mediterranean Action Plan, 2020.  
<http://www.unenvironment.org/uneppmap/who-we-are/contracting-parties>

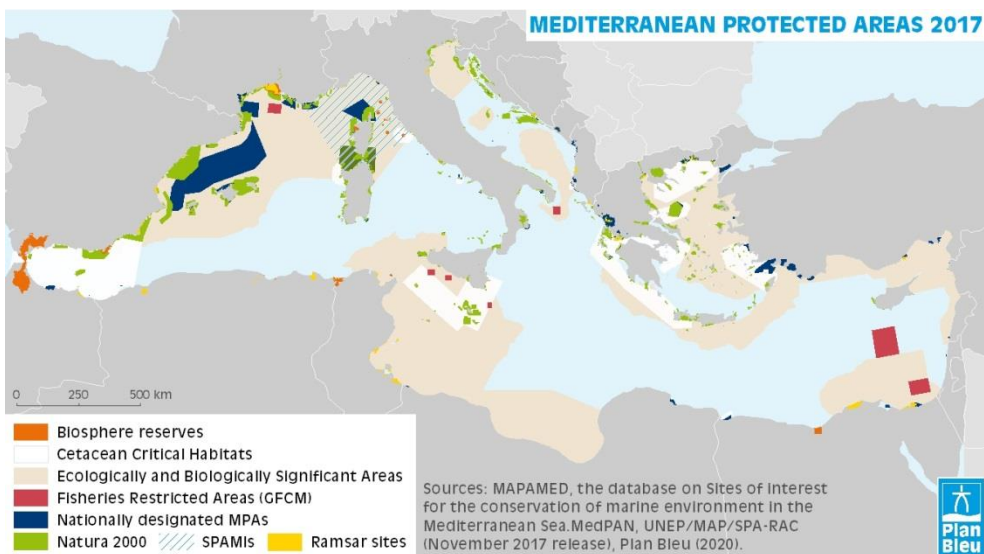
## WHAT IS THE LEVEL RATIFICATION OF THE BARCELONA CONVENTION?

	Barcelona Convention and its protocols
I	Barcelona Convention - 1976
II	Dumping Protocol - 1976
III	Emergency Protocol - 1976
IV	Prevention and Emergency Protocol - 2002
V	Protocol on Land-Based Source (LBS) - 1980
VI	Specially Protected Areas (SPA) Protocol - 1982
VII	SPA Protocol and SPA & Biodiversity Protocol - 1995
VIII	Offshore Protocol - 1994
IX	Hazardous Wastes Protocol - 1996
X	Protocol « Integrated Coastal Zone management » (ICZM) - 2008

The Convention for the Protection of the Mediterranean Sea Against Pollution was adopted on 16 February 1976 and has entered into force on 12 February 1978. The original Convention has been modified by amendments and the “Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean” was adopted on 10 June 1995 and has entered into force on 9 July 2004.

#### Major dates and number of parties where the Barcelona Convention and its protocols are ratified or entered into force (2020)

Legal instruments	Date of Adoption	Entry into force	Number of parties
Barcelona Convention	1976 (1995)	1978 (2004)	22
Dumping Protocol	1976	1978	21
Emergency Protocol	1976	1978	21
Prevention and Emergency Protocol	2002	2004	17
LBS Protocol	1980	1983	22
SPA Protocol and SPA & Biodiversity Protocol	1982 (1995)	1999	21 and 17
Offshore Protocol	1994	2011	8
Hazardous Wastes Protocol	1996	2008	7
ICZM Protocol	2008	2011	12



## ARE MARINE TERRITORIAL WATERS PROTECTED?

"In 2018, there was a strong boost towards achieving the Aichi Target 11 and SDG 14 through the declaration of the Spanish Cetacean Corridor MPA along the east coast of Spain"

### Definition:

Indicator 14.5.1: Coverage of protected areas in relation to marine areas shows temporal trends in the mean percentage of each important site for marine biodiversity (i.e., those that contribute significantly to the global persistence of biodiversity) that is covered by designated protected areas.

In the Mediterranean, "Marine Protected Area" (MPA) is understood as any marine and/or coastal area (including lagoons that are permanently linked to the sea) that has been put under protection generally by legal means for the conservation of natural habitats, species or specific natural features as its prime purpose. It thus includes a wide range of areas, established under various designations, at various levels (subnational, national, regional or even international), and providing various degrees of protection.

"Other Effective area-based Conservation Measures" (OECMs), originates from the Convention on Biological Diversity to also indicate protection designations, although there is no clear international guidance as to how the term applies.

### Precautions / Notes:

The indicator is used to track progress towards the 2011–2020 Strategic Plan for Biodiversity and was used as an indicator towards the Convention on Biological Diversity's 2010. Some discrepancies could be due to the numerous types of protected areas and their overlapping.

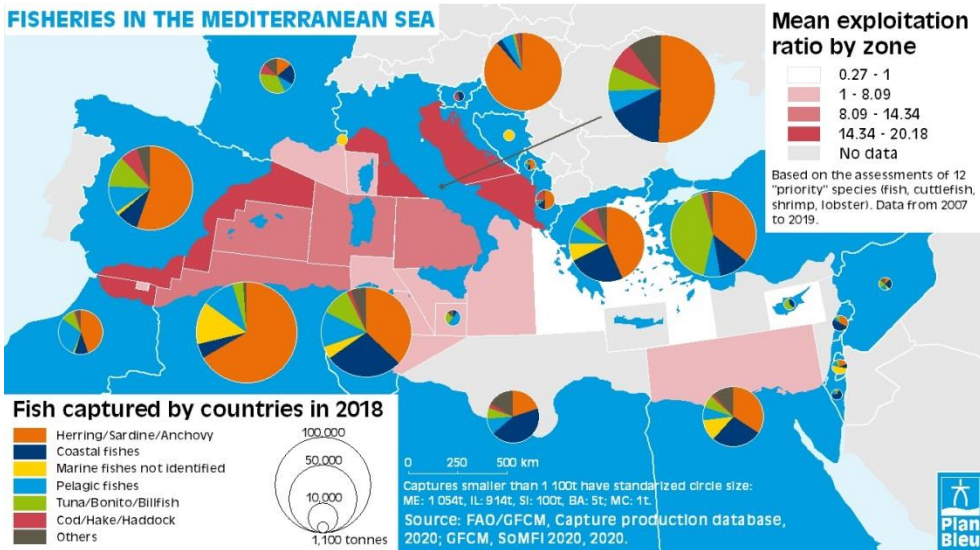
Sources: MAPAMED, the database on Sites of interest for the conservation of marine environment in the Mediterranean Sea. MedPAN, UNEP/MAP/SPA-RAC. November 2017 release. United Nations Environment Programme/Mediterranean Action Plan and Plan Bleu (2020), State of the Environment and Development in the Mediterranean, Nairobi.

The 1,233 MPAs and OECMs cover 9% (226,665 km<sup>2</sup>) of the Mediterranean (2,516,900 km<sup>2</sup>) through a large variety of conservation designations. Over 70% of the surface covered is located in the Western Mediterranean. Designations cover more than 10% of European waters due to national MPAs and to the Natura 2000 at sea network which rarely affords strict restrictive measures.

The declaration of the Spanish Cetacean Corridor MPA, on 30 June 2018, has revitalized the process of protecting Mediterranean marine areas. One of the main objectives of this MPA of 42,262.82 km<sup>2</sup> along the east coast of Spain is to avoid, mitigate and reduce anthropogenic underwater noise. The enlargement of the Cabrera National Park (43,070.55 km<sup>2</sup>, also in Spain), officially recognized on January 2019, extends the dynamic of protecting the Mediterranean.

Now to reach the quantitative Aichi Target of 10% coverage, an additional 25,025 km<sup>2</sup> (1 % of the Mediterranean) would need to be placed under strong protection designations.

Beyond the coverage figures, clear action plans must accompany the establishment of MPAs and OECMs in order to improve their management effectiveness.



**"While climate change and human activities put increasing pressure on the marine environment, a corner is finally being turned on overexploitation in the region's vital fisheries."**

**Definition:**

Indicator 14.4.1: Proportion of fish stocks within biological sustainable levels (not overexploited). This indicator measures the sustainability of the world's marine capture fisheries by their abundance. It is classified Tier I (conceptually clear, internationally established methodology and standards are available, and data are regularly produced by countries). A fish stock of which abundance is at or greater than the level, that can produce the maximum sustainable yield is classified as biologically sustainable. The maximum sustainable yield (MSY), is the highest theoretical equilibrium yield that can be continuously taken (on average) from a stock under existing (average) environmental conditions without significantly affecting the reproduction process.

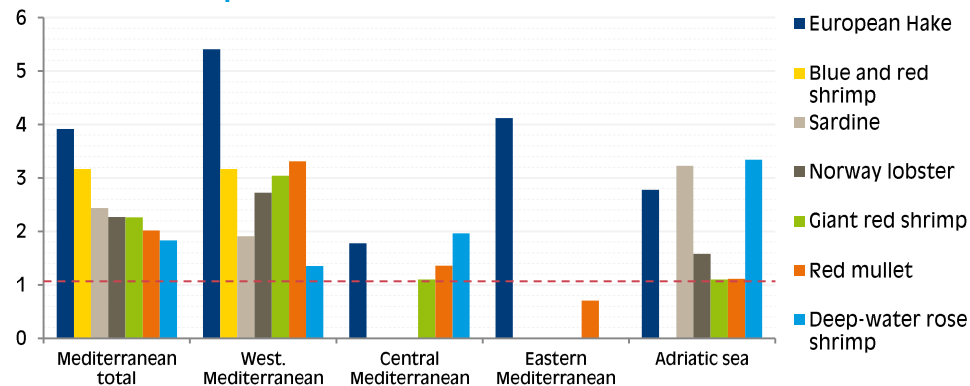
**Precautions / Notes:**

The number of GFCM's assessments validated differs a lot depending on years and Geographical Subareas (GSA) (e. g.: 27 in 2007 and 53 in 2018 for the entire Mediterranean). This could lead to misleading exploitation ratio means. "Priority species" are important species in terms of landings and/or economic value at the regional and subregional levels. On the map, the "Other" category represents all fish species whose catches from 1970 to 2018 represent less than 500,000 tonnes in total.

Sources: United Nations Food and Agricultural Organization/General Fisheries Commission for the Mediterranean, Capture production database, 2020; FAO/GFCM, The State of the Mediterranean and Black Sea Fisheries 2020, 2020.

**ARE MEDITERRANEAN FISHERIES SUSTAINABLE?**

Mean exploitation ratio for some "priority species" in the Mediterranean



Source: GFCM, SoMFI 2020, 2020. (Based on assessments realized between 2007 and 2019) (1 = fishing mortality rate allowing maximum sustainable yield; Higher value = overexploited stock)

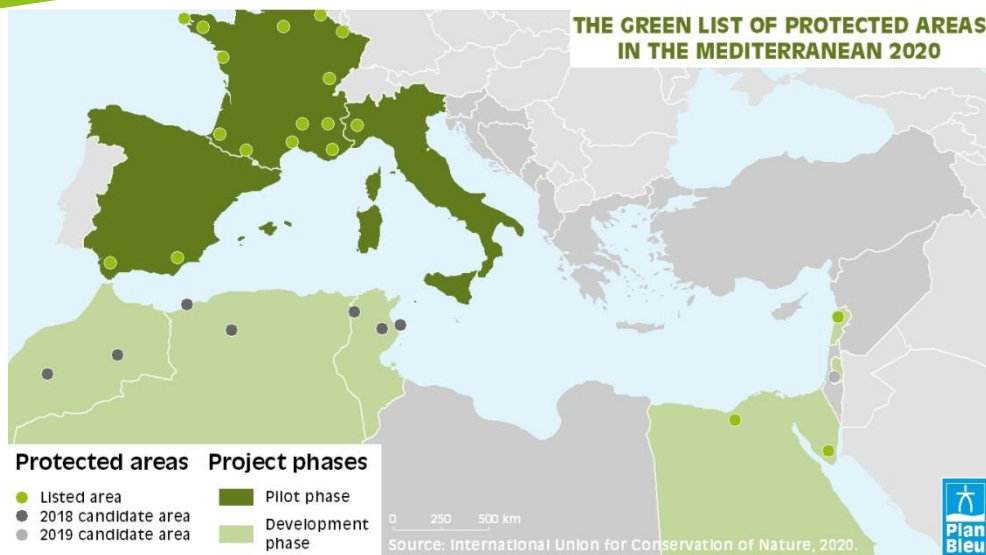
Most stocks for which validated assessments are available continue to be fished beyond biologically sustainable limits. Nevertheless, in the Mediterranean (and Black Sea), recent trends continue to show a consistent decrease of overexploited stocks, especially since 2014:

- The percentage of stocks in overexploitation was around 65% in 2008. It culminated to around 88% from 2012 to 2014 and was close to 75% in 2018.
- The exploitation ratio has decreased from 2.9 x MSY in 2012 to 2.4 x MSY in 2018.
- An increase in biomass levels is observed in 6 out of 18 stocks, and 46% of assessed stocks now have high relative biomass.

Of the major fishing countries in the Mediterranean Sea (annual catch > 20,000 tonnes), Turkey has seen the largest increase in landings\* (+20.4 %) since 2016, while Morocco has seen the largest decrease (-10.6 %).

Half of the Mediterranean countries caught\* less than 4,500t in 2018, while Italy captured 127,000t, Algeria 111,000t and Turkey 80,000t.

\*Fisheries catches are considered as the total live weight caught during fishing, whereas landings represent the weight landed as recorded at the time of landing. The difference between both can be explained by discarded catch, losses in handling or others reasons.



## The development of IUCN Green List aims to provide an accurate framework for protected areas' management.

### Definition:

The IUCN Green List is one of the flagship initiatives included in the MSSD to measure the effectiveness of the protected areas management in the Mediterranean region.

The IUCN 'Green List of Protected and Conserved Areas' (GLPCA) is a global programme to encourage, achieve and promote effective, equitable and successful protected and conserved areas. To be added to the Green List, protected and conserved areas have to show that they meet the indicators of the GLPCA Standard by means of an independent evaluation.

### Precautions / Notes:

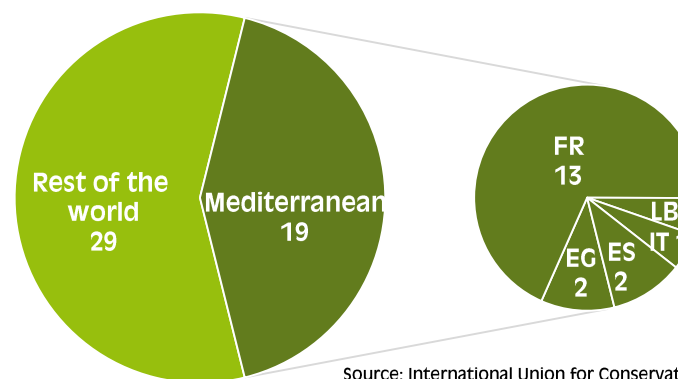
At the moment, only a few Mediterranean countries are concerned by the IUCN Green List Programme, which has been launched in 2013.

The map and graph summarize the situation of all Green List sites of the Mediterranean countries (except 3 overseas French sites). The analysis should be focused on Mediterranean sites but there are only few at the moment.

Sources: International Union for Conservation of Nature, *Green List areas*, 2020. International Union for Conservation of Nature, centre for Mediterranean cooperation, *Annual report 2019*.

## WHAT EXPECTATIONS FOR IUCN GREEN LIST OF PROTECTED AND CONSERVED AREAS?

### "Green-Listed" sites per country, 2020



Source: International Union for Conservation of Nature, 2020.

The Green List of Protected and Conserved Areas has been recognized as a Flagship Initiative under the Mediterranean Strategy for Sustainable Development 2016-2025, adopted during the 19th meeting of the Contracting Parties to the Barcelona Convention.

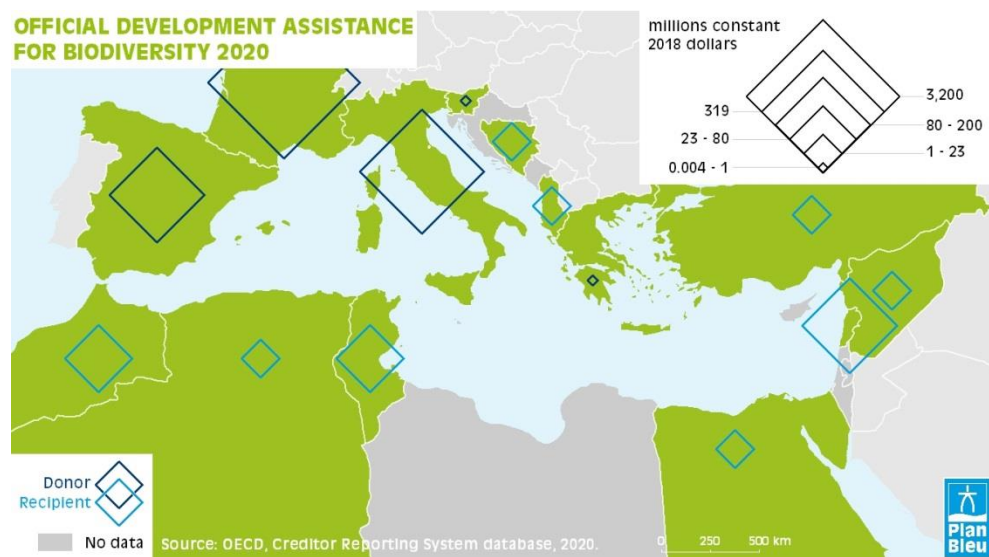
To integrate the Green List, sites have to demonstrate fair and transparent sharing of the costs and benefits of conservation, effective management and long-lasting conservation outcomes.

The « pilot phase » of the Green List Programme began in 2013, to test the Green List in 8 countries including France, Italy and Spain. The second phase of the Programme, called « Development phase » began in mid-2015.

### In 2019, 7 protected areas from North Africa were proposed for the Green List of Protected Areas:

- 2 in Morocco (National Park of Toubkal, National Park of Ifrane)
- 2 in Algeria (Habibas Island, Theniet El Had National Park)
- 3 in Tunisia (National Park of El Feija, National Park of Jebel Serj and Kuriat Islands).

In 2019, out of the 48 sites worldwide, 19 are in countries with a Mediterranean shore, 7 sites are located within the 100-km coastal strip and only 2 sites are located on the Mediterranean coast (Marine natural reserve of Cerbère – Banyuls and Côte Bleue Marine Park, both in France).



## Mediterranean countries lack sustainable and regular funding for biodiversity and ecosystem protection

### Definition:

SDG Indicator 15.a.1 deals with official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems. The goal is to mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.

### Precautions / Notes:

This indicator is available for recipient countries and for donor countries. The information shown in the factsheet refers to the "Total official development assistance for biodiversity".

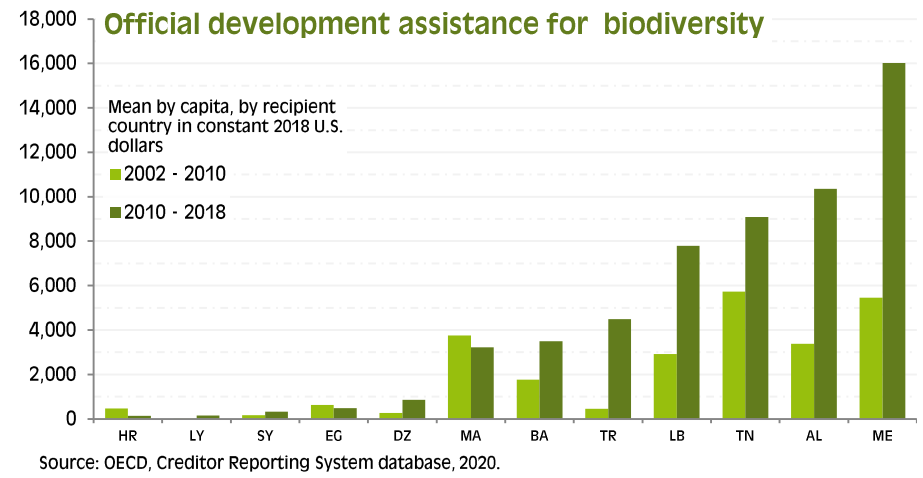
The official development assistance for biodiversity is covered by irregular time series and needs to be analyzed over a period of time.

The current data does also not allow to make an assessment of the spatial distribution of funds in comparison to the spatial distribution of pressures on biodiversity and ecosystems (are the funds allocated at the right places?).

This indicator should be further explored and improved with additional information in order to allow deducting indications about the effectiveness of the funds (what level of protection is achieved with the available amounts?) and to be able to assess the capacity of the available funding to safeguard Mediterranean ecosystems and biodiversity (are the amounts sufficient?).

Source: The Organisation for Economic Co-operation and Development (OECD), Creditor Reporting System database, 2020.

## FINANCIAL RESOURCES FOR BIODIVERSITY PROTECTION IN THE MEDITERRANEAN

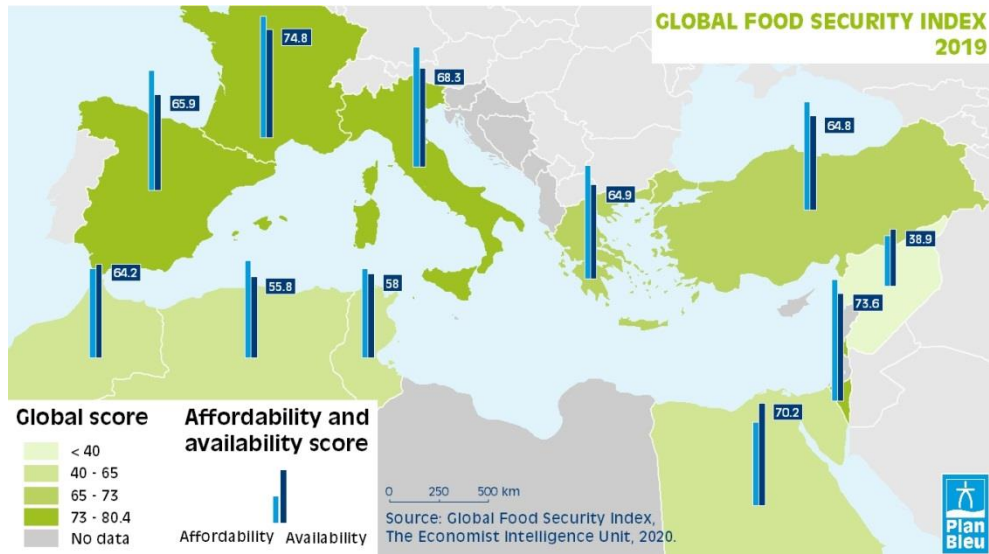


Development assistance and public expenditure for biodiversity and ecosystem protection vary largely across time and space. These variations can be explained by the fact that funding is made available mostly on a project basis which is limited in time. Thus, large budgets can be available for a country during a limited period of time but are usually not sustained in the long term.

In 2018, total official development assistance for biodiversity received in the Mediterranean region (9 countries) was about 350 million constant 2018 US dollars, equivalent to 1.1 dollars per capita.

Lebanon received more than half of this amount (166 million of dollars), equivalent to 24 dollars per capita, and Egypt received about 2 million dollars (0.02 dollars per capita).

5 EU Mediterranean countries are donors for about 3,700 million US dollars (average 2009-2016) and the amount for France accounts for 86 % (3,200 million dollars).



**Lack of adaptation and mitigation measures for natural disasters and strong external food dependency are still significant challenges for the region.**

**Definition:**

The 1996 World Food Summit defined food security as the state in which « all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life ».

The Global Food Security Index (GFSI) was developed by the experts of the Economist Intelligence Unit in order to measure food security considering 3 core issues: affordability, availability and quality of food:

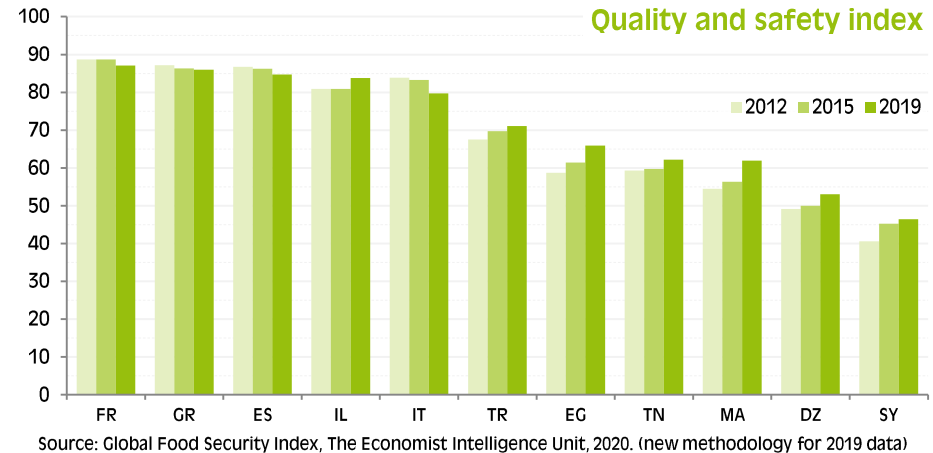
- Affordability measures « the ability of consumers to purchase food ».
- Availability measures « the sufficiency of the national food supply».
- Quality and safety measures « the variety and nutritional quality of average diets, as well as the safety of food ».

**Precautions / Notes:**

Across all indicators used for the construction of the Global Food Security Index, where data is missing, the Economist Intelligence Unit has estimated the scores. The global calculation methodology of the indexes changed from 2019, and comparison must be done with care.

Source: Global Food Security Index, The Economist Intelligence Unit, 2020.

**WHAT OPPORTUNITIES IN THE MEDITERRANEAN REGION FOR FOOD SECURITY?**



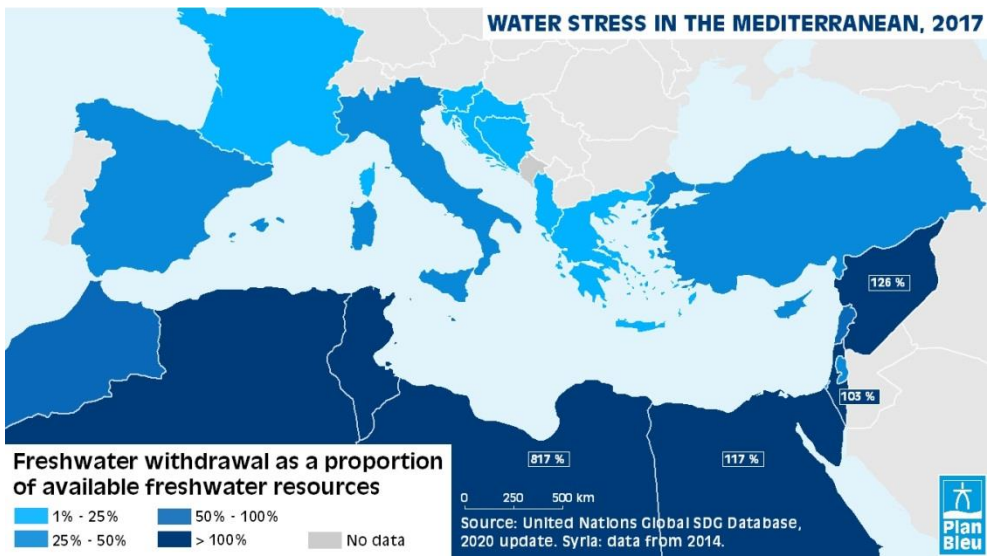
**Physical access to food products depends on their availability as well as their affordability. However physical access is not sufficient to guarantee food security, which also depends on the quality of people’s diet.**

Good or satisfactory levels of food security have been reached mainly in the North. Nevertheless, external food dependency is still important in the South and East. Limited natural resources (available water and soil resources), population growth and climate change pressures (more severe drought and storms) are preventing self-sufficiency. Moreover regional conflicts threaten national stability (internal production and international trades) and price volatility can harm vulnerable economy with limited public finances.

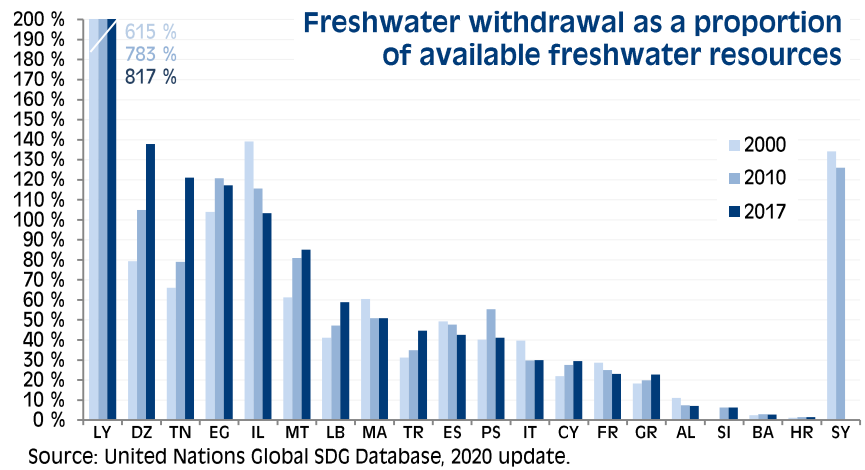
In most Mediterranean countries, food affordability rates are higher than availability rate. In these countries, improving food production and farmers income is necessary for a better food security. On the contrary, where food affordability is lower, improving employment and income should have a positive effect on food security.

Food quality is also an issue in the Mediterranean area, due to several factors, such as poor access to potable water, low diet diversification, progressive abandonment of the traditional Mediterranean diet, or lack of nutrients in people’s diet.





## IS WATER STRESS INCREASING IN THE MEDITERRANEAN?



**“Water stress will continue to increase”**

**Definition:**

SDG Indicator 6.42: The level of water stress: freshwater withdrawal as a proportion of available freshwater resources is the ratio between total freshwater withdrawn by all major sectors and total renewable freshwater resources, after taking into account environmental water requirements. Main sectors, as defined by International Standard Industrial Classification (ISIC) standards, include agriculture; forestry and fishing; manufacturing; electricity industry; and services. This indicator is also known as water withdrawal intensity.

**Precautions / Notes:**

Sources of discrepancies: Differences might occur due to the following, amongst others: For national estimates incoming water is counted as being part of the country’s available water resources, while global estimates can only be done by adding up the internal renewable water resources (water generated within the country) of all countries in order to avoid double counting.

**Non official withdrawals, especially for agriculture use which could represent a large part of the total withdrawals, are not considered.**

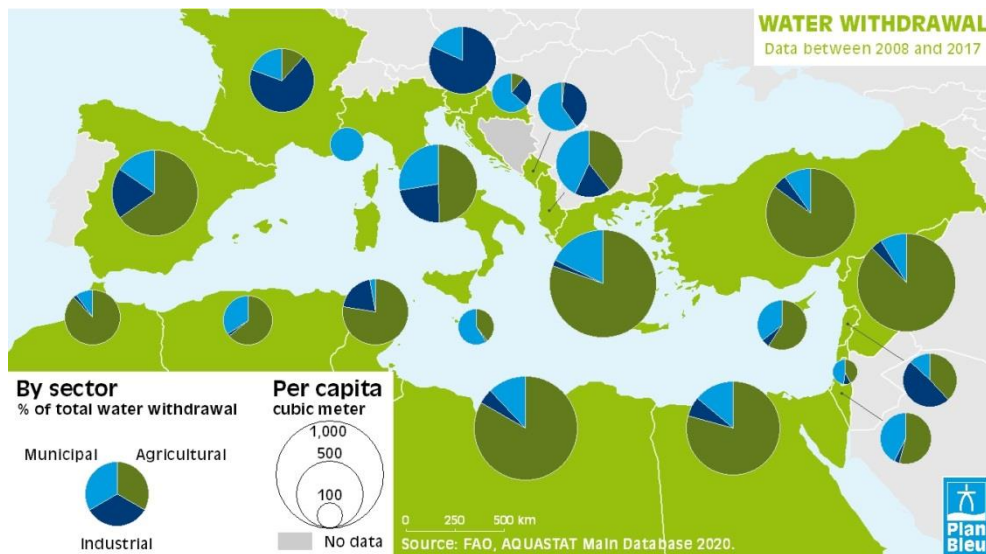
Sources: FAO. 2020. AQUASTAT Main Database - Food and Agriculture Organization of the United Nations (FAO), United Nations Global SDG Database, 2020 update.

**SDG Target 6.4:** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

The total renewable water resources in the Mediterranean region amount to 1,030.44 Km<sup>3</sup> (Aquastat database. FAO, 2016). The distribution and availability of these freshwater resources are uneven between the sub-regions of the Mediterranean, as 67% are located in the Northern sub-region, 10% in the South, and 23% in the East part of the Mediterranean, of which 20.5% in Turkey alone.

**The range of the water stress in the Mediterranean countries is wide: from less than 10% in the Balkans to 100% and more in the Southern countries. In Libya, the water stress is over 800% (8 times the available resources).**

The situations within countries are also very diverse, it is essential to provide a clear picture of the Mediterranean watersheds, which requires data from national institutions.



**“Overall, the evolution in water demand is alarming in the Mediterranean countries due to the scarcity of the resource”**

#### Definition:

Total water demand is defined as the sum of the volume of water mobilized to meet the various uses, including the quantities lost in production, transport and use of water. It corresponds to the sum of the water withdrawals, of non-conventional production (desalination, reuse of water, etc.) and of imports less exports.

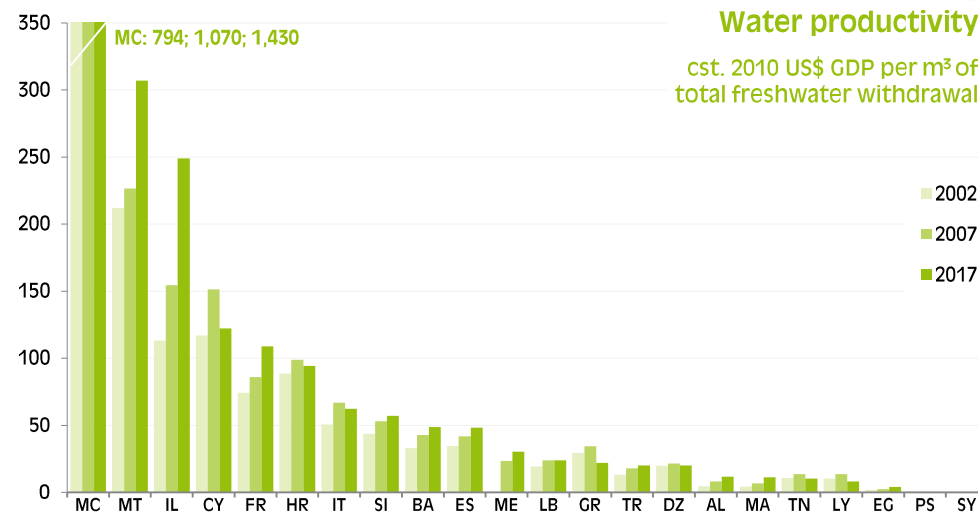
Water productivity is an indication only of the efficiency by which each country uses its water resources. Given the different economic structure of each country, this indicator should be used carefully, taking into account a country's sectorial activities and natural resource endowments.

#### Precautions / Notes:

The most recent year available for each country was kept. Water withdrawals are used as estimates of water demand when water demand data is not available in international sources. Support from national institutions dealing with water is required to improve data collection and allow refining the indicator for the Mediterranean watersheds.

For agriculture, the indicator could be refined by calculating the ratio between irrigation water demand and the value added of irrigated production.

Sources: Food and Agriculture Organization-Aquastat, Main Database, 2020; UN-WATER: UN World Water Development Report 2020: Water and climate change.



Source: Food and Agriculture Organization, AQUASTAT, World Bank and OECD, 2020 update.

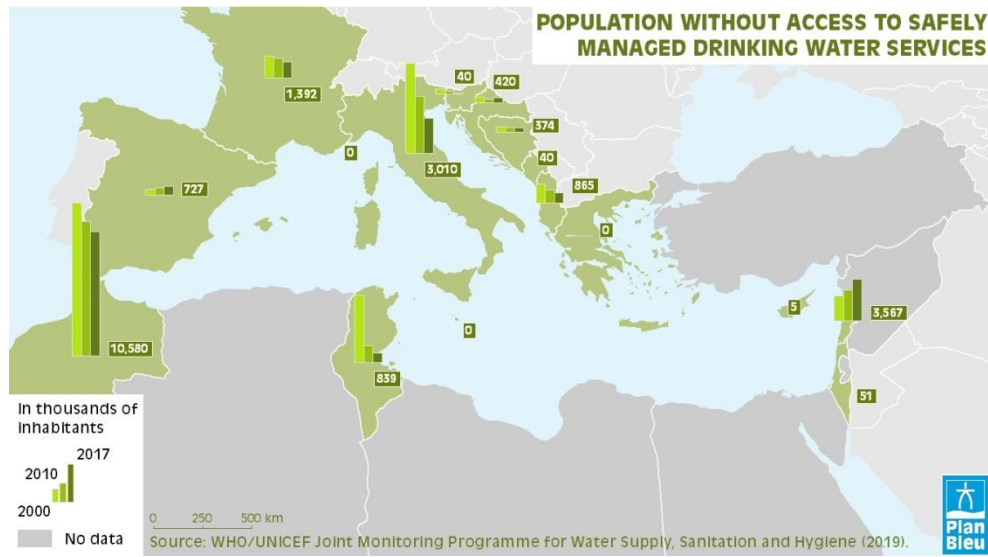
Water use has been increasing worldwide by about 1% per year since the 1980s and Agriculture (including irrigation, livestock and aquaculture) is by far the largest water consumer, accounting for around 70% of annual water withdrawals globally. Industry (including power generation) accounts for around 20% and households for around 10%.

Better water demand management, especially for agriculture, is one of the priority actions recommended by the Mediterranean Strategy for Sustainable Development. This means stabilizing water demand (decrease in the north and a controlled increase in the south and the east).

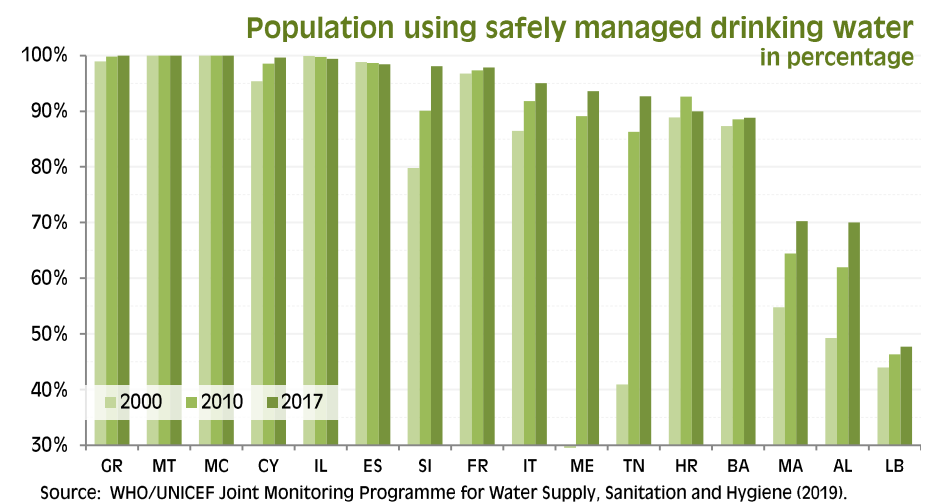
Moreover, the water demand and the growth in GDP should also be decoupled by increasing the water productivity. From 2002 to 2017, only half of the countries have increased their water productivity. In 2017, 5 countries were over 100 dollars per cubic meter whereas 12 countries remain under 50 dollars.

The share of water for agriculture remains high, often higher than 50% in most of the countries and is even close to 90% in The Syrian Arab Republic and Morocco. In some Balkan countries and in France the relative water demand for agriculture is low. The share of water for industry stays low, less than 20% in most countries. On the opposite, Slovenia (81%) and France (69%, mainly for cooling water) have the highest rates.

Mediterranean water withdrawals will be increasingly affected by climate change in multiple ways. Sustainable management of water resources, already under severe pressure in the region, will be more challenging. That could lead to major threats for societies as risks for energy production, food security, economic development and social inequalities.



## IS ACCESS TO SAFE DRINKING WATER INCREASING?



**In 2017, the proportion of population using safely managed drinking water services was over 90% in 16 countries where data is available.**

### Definition:

SDG Indicator 6.1.1: Proportion of population using safely managed drinking water services is currently being measured by the proportion of population using an improved basic drinking water source which is located on premises, available when needed and free of fecal (and priority chemical) contamination. 'Improved' drinking water sources include: piped water into dwelling, yard or plot; public taps or standpipes; boreholes or tubewells; protected dug wells; protected springs; packaged water; delivered water and rainwater.

### Precautions / Notes:

In order to meet the standard for safely managed drinking water, a household must use an improved source type that meets three criteria:

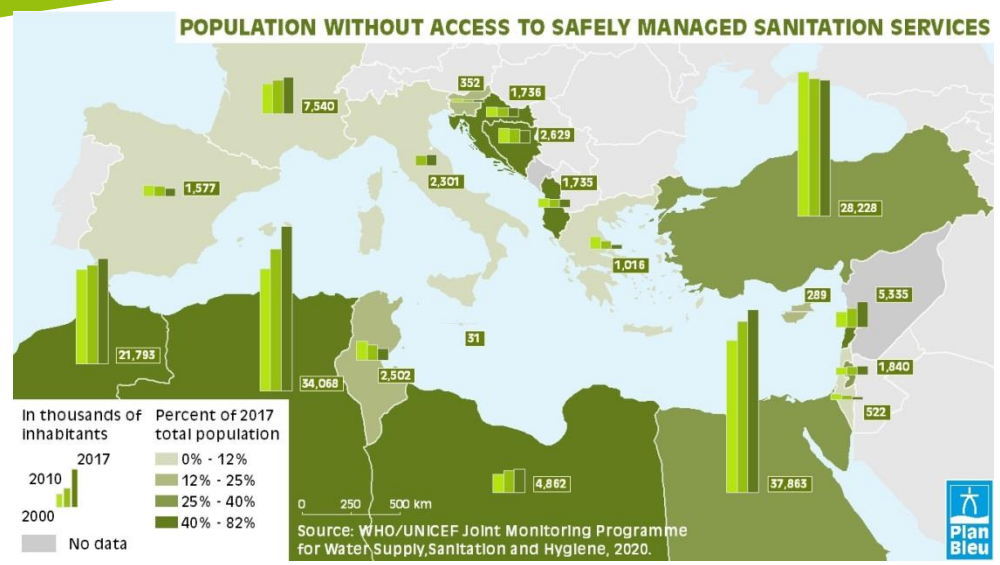
1. the facility should be accessible on premises (located within the dwelling, yard or plot);
2. Water should be available when needed (sufficient water in the last week or available for at least 12 hours per day);
3. Water supplied should be free from contamination (compliant with standards for fecal and priority chemical contamination).

Joint Monitoring Programme (JMP) updates have also highlighted inequalities between rural and urban areas, between rich and poor, and between other groups and the general population

Source: World Health Organization/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (2019).

- **SDG Target 6.1:** By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
- The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene is in charge of the data compilation for this indicator in continuation of the Millennium Development Goals.
- In 2017, 71% of the global population (5.2 billion people) used a safely managed drinking water service; that is, one located on premises, available when needed and free from contamination.
- Estimates for the proportion of population using safely managed drinking water are available for around 100 countries (representing 38 percent of the global population).

Estimates are available only for 16 countries in the Mediterranean region and there is no data for most of the Southern countries. In countries where data is available, the population without access to safely managed drinking water services decreased from 37 million in 2000 to 21.9 million in 2017.



**Wide disparities still exist in 2017. 6 countries have at least 90% of their population using safely managed sanitation services whereas 6 others have less than 50 %.**

**Definition:**

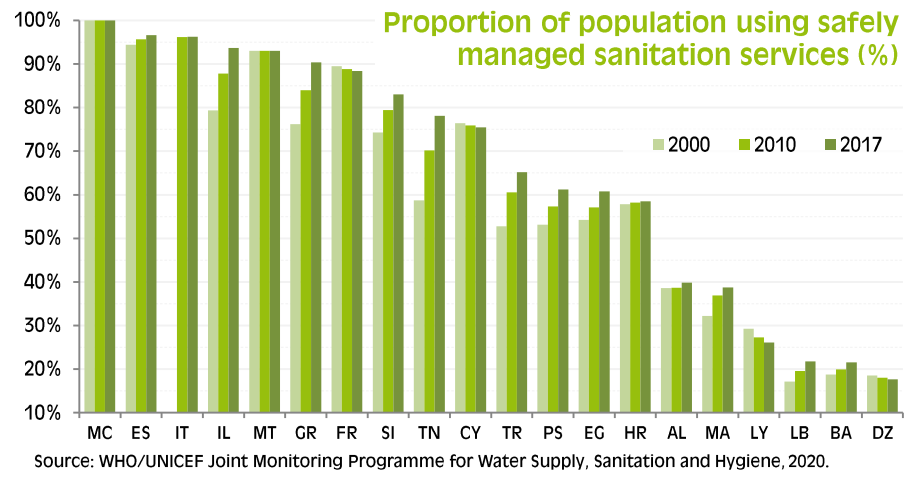
SDG Indicator 6.2.1: The Proportion of population using safely managed sanitation services is currently being measured by the proportion of the population using a basic sanitation facility which is not shared with other households and where excreta is safely disposed in situ or treated off-site. ‘Improved’ sanitation facilities include: flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets.

**Precautions / Notes:**

These data, however, may reflect installed treatment technology rather than actual performance, overestimating safe management. Furthermore, not all excreta from households with sewer connections actually connect with a sewer line and reach a wastewater treatment plant.

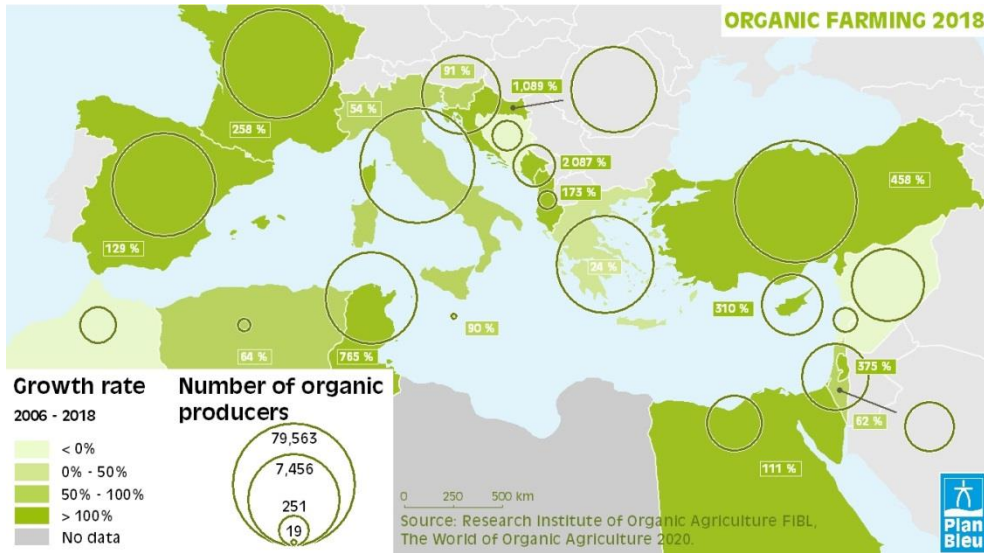
Source: World Health Organization/United Nations Children's Fund (UNICEF), Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, 2020.

**IS ACCESS TO SAFELY MANAGED SANITATION SERVICES IMPROVING?**



- SDG Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene is in charge of the compilation of this indicator in the continuation of the Millennium Development Goals. JMP will continue to track the proportion of the population with access to a basic sanitation system for disposal of human excrement of households or the immediate neighborhood (public wastewater network, septic tanks, etc.).
- In the JMP 2017 report, estimates for basic sanitation services were available for nearly all countries and estimates for safely managed sanitation services were made for 96 countries at national level.
- Worldwide, 45% of the global population (3.4 billion people) used a safely managed sanitation service and 2 billion people still lacked even a basic sanitation service
- In 2017, the population using safely managed sanitation services is lesser than 50% in Albania, Algeria, Bosnia and Herzegovina, Lebanon, Libya and Morocco.

Estimates are available for 20 countries in the Mediterranean region, the population without safely managed sanitation services increased from 139 million in 2000 to 156 million in 2017 (the proportion decreased from 33% to 31%).



**Organic farming area is unprecedentedly booming (more than x 4 time since 2000, in a majority of countries) but still only covers 3% of the agricultural land in 2018.**

**Definition:**

This indicator measures the evolution of the number of organic farms in the Mediterranean countries, as well as the share of agricultural land used by organic farming. Organic areas: certified organic land/areas that are fully converted as well as land under conversion.

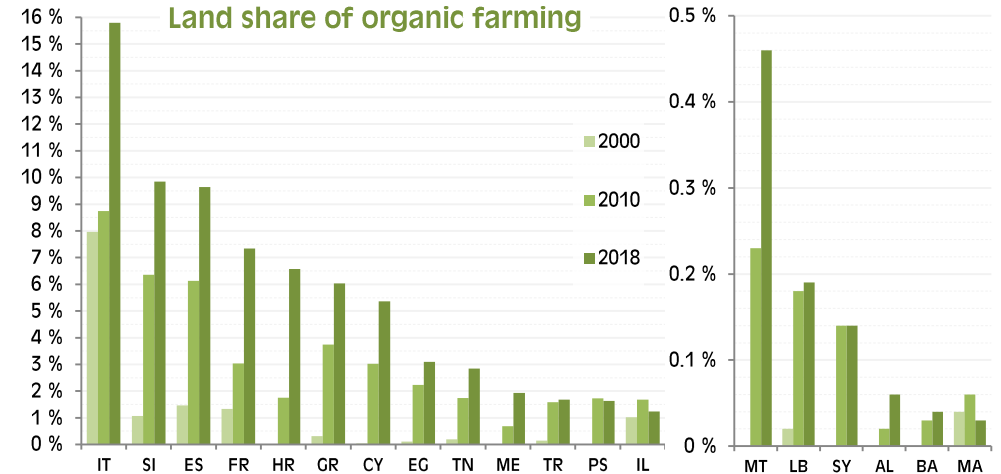
"Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved." (IFOAM).

**Precautions / Notes:**

The number of producers is probably higher than the published number because the number of small producers is not reported by some countries.

Source: Research Institute of Organic Agriculture FiBL, The World of Organic Agriculture 2020.

**WHAT IS THE SITUATION OF ORGANIC FARMING IN THE MEDITERRANEAN REGION?**



Source: Research Institute of Organic Agriculture (FiBL), 2020.

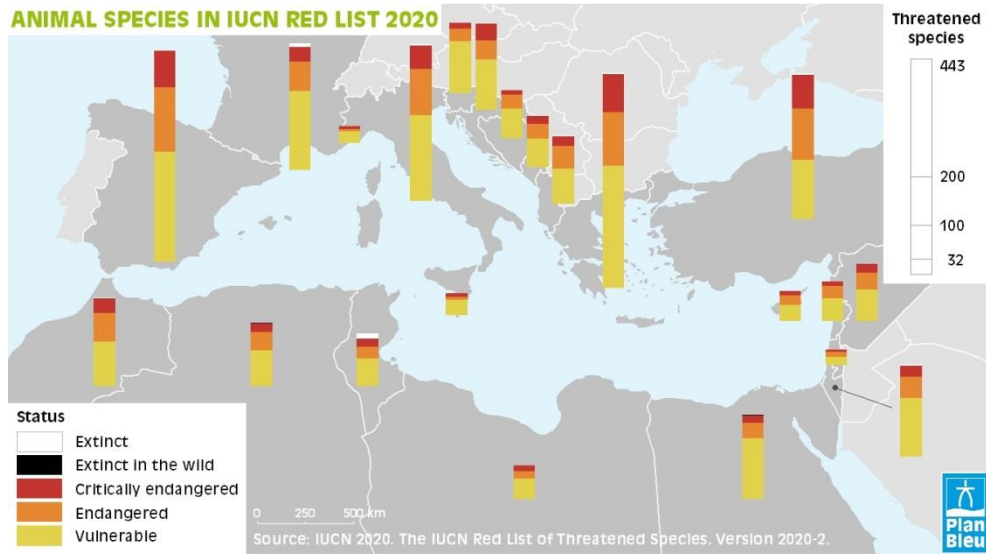
Sustainable agriculture allows guaranteeing food security, protecting human health and preserving ecosystems. Organic farming is an efficient way to assess the path of countries toward SDG Target 2.4 (sustainable food production systems, resilient agricultural practices, ecosystems maintained, adaptation to climate change, land and soil quality improved).

The share of agricultural land used by organic farming is rising in most Mediterranean countries. In Italy, this share reached up to 16% in 2018 while it is lower than 4% in 12 countries.

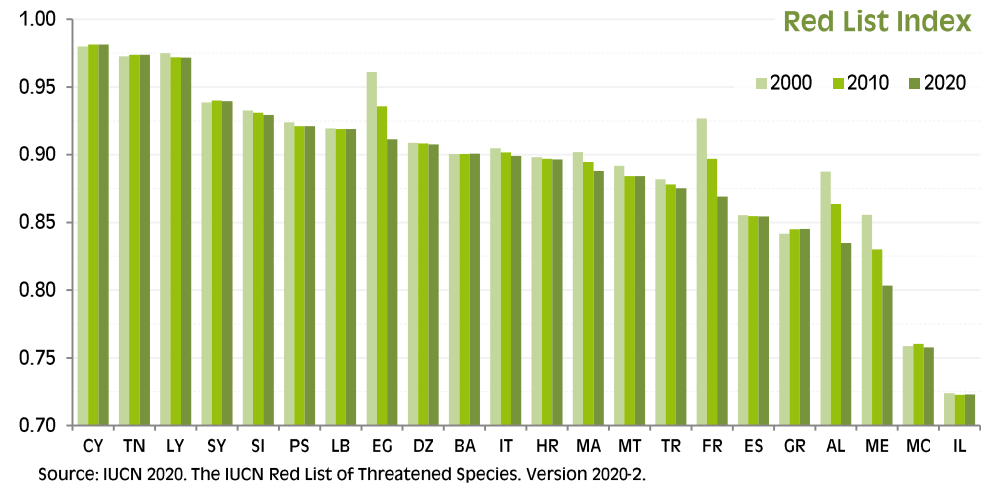
Besides, organic farming has become one of the most dynamic agricultural sectors in the European Union, with 13.8 million hectares in 2018, i.e. 7.7% of agricultural land and more than 320,000 organic producers.

Italy, Slovenia and Spain are in the first positions in the Mediterranean region for their share of organic farming, and ranked respectively 8<sup>th</sup>, 17<sup>th</sup> and 20<sup>th</sup> worldwide in terms of proportion of agricultural land used for organic farming. France, Spain and Turkey are among the world's top ten countries with the highest increase of organic land in 2018.

The number of organic farms has been multiplied by more than 2 from 2006 to 2018, reaching 283,000 producers. Turkey and Italy with 53% of the Mediterranean producers are in the worldwide top ten countries.



## ARE BIODIVERSITY LOSSES HALTED?



## The Mediterranean region is the second largest of 34 biodiversity hotspots in the world

### Definition:

SDG Indicator 15.5.1 Red List Index: It measures change in aggregate extinction risk across groups of species. It is based on genuine changes in the number of species in each category of extinction risk on The IUCN Red List of Threatened Species (IUCN 2015). It is expressed as changes in an index ranging from 0 to 1. A Red List Index value of 1 would indicate that biodiversity loss has been halted. A decreasing Red List Index value would indicate that extinction risk is increasing.

### Precautions / Notes:

The main limitation of the Red List Index is related to the fact that the Red List Categories are relatively broad measures of status, and thus the Red List Index for any individual taxonomic group can practically be updated at intervals of at least four years. As the overall index is aggregated across multiple taxonomic groups, it can be updated typically annually. In addition, the Red List Index does not capture particularly well the deteriorating status of common species that remain abundant and widespread but are declining slowly.

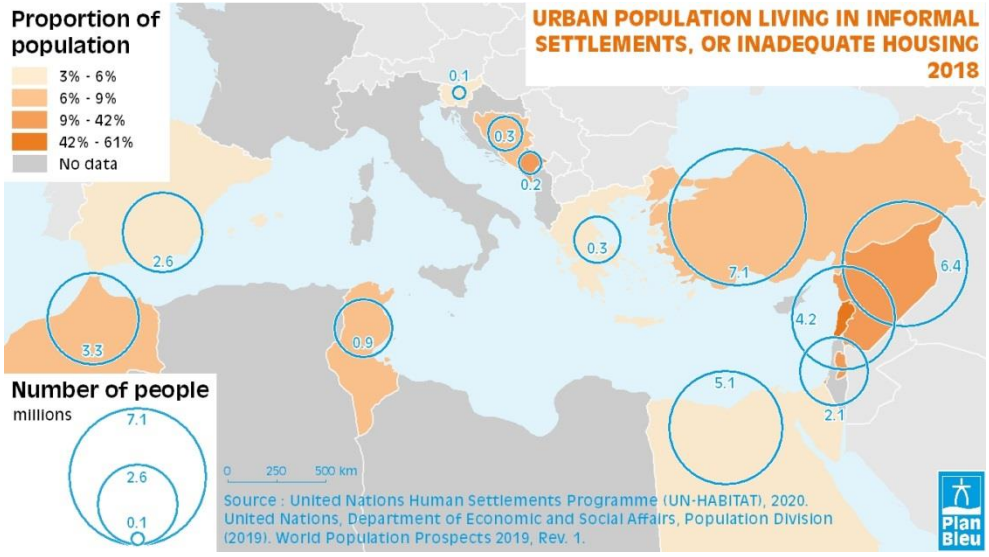
Source: International Union for Conservation of Nature ( [www.iucn.org](http://www.iucn.org) ), The IUCN Red List of Threatened Species. Version 2020-2, 2020.

**SDG Target 15.5:** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

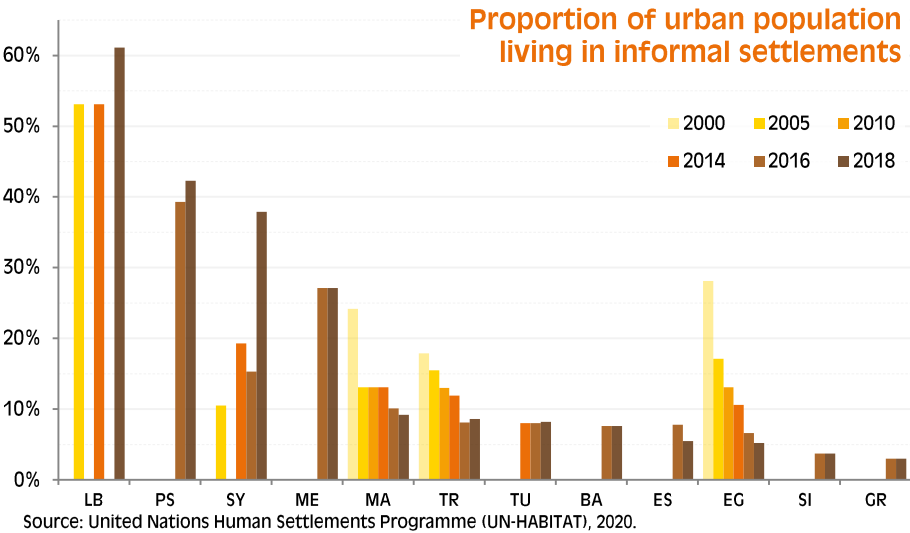
The Red List Index represents an index of aggregate survival probability (the inverse of extinction risk) for all birds, mammals, amphibians, corals and cycads occurring within the region, weighted by the fraction of each species' distribution occurring within the region. It shows how adequately species are conserved or not in the region relative to its potential contribution to global species conservation.

The value of the Red List Index in the Mediterranean countries is above the world value 0.732 except for Israel (0.722). The Red List Index is above 0.9 in 10 Mediterranean countries.

From 2010 to 2020, the Red List Index is decreasing mainly in 4 countries: Egypt, France, Albania and Montenegro.



## IS ACCESS TO DECENT DWELLING IMPROVING?



### In most countries with available data, the proportion of urban population living in slums is decreasing

**Definition:**

SDG Indicator 11.1.1: Proportion of urban population living in slums, informal settlements, or inadequate housing. This indicator measures the proportion of urban population living in informal settlements and deprived housing conditions (lack of access to improved water, access to improved sanitation, sufficient living area, and durability of housing). It takes into account slums, informal settlements and inadequate housing. It is a key indicator measuring the adequacy of the basic human need for shelter (housing). An increase of this indicator is sign for deteriorating living conditions in urban areas.

**Precautions / Notes:**

The Information needed for the computation of this indicator is not currently available for all Mediterranean countries. This indicator is approximated by the proportion of urban population living in slums. The data is collected in the framework of the United Nations Human Settlements Programme.

Source: United Nations Human Settlements Programme (UN-HABITAT), World Cities Report 2020, 2020.

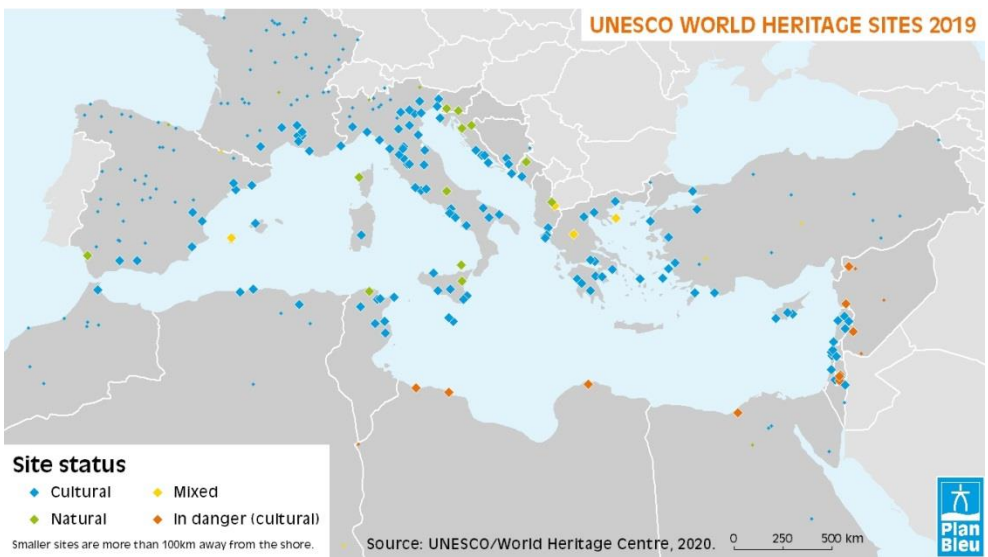
SDG Target 11.1 is about Adequate housing: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

The proportion of slum dwellers in urban areas across all developing regions has reduced since 1990, but the absolute numbers have increased gradually.

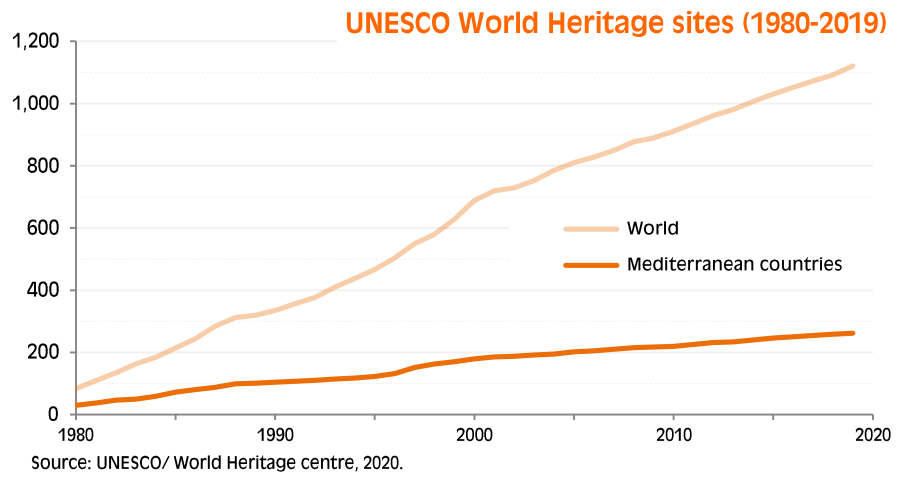
Worldwide the proportion of the urban population living in slums decreased from 28% in 2000 to 24% in 2018. Meanwhile, the global absolute number of slum dwellers is increasing and reached over 1 billion inhabitants in 2018 compared to around 800 million in 2000.

Some national social housing programs allowed reducing the part of the population without access to an adequate dwelling and living in districts without essential services: e.g. this part fell from 28.1% to 5.2% in Egypt between 2000 and 2018 (14.2 million persons concerned). In Turkey, the population living in slums in 2018 is approximately 6.9 million (8.6%), compared to 12 million in 2000 (17.9%). On the opposite, situation in Lebanon, The State of Palestine and The Syrian Arab Republic is getting worse with increasing rate of population living in inadequate housing.

Data needs to be completed in several countries including some EU countries.



## UNESCO WORLD HERITAGE SITES: SITUATION IN MEDITERRANEAN COUNTRIES



**“23% (262) of the sites inscribed on the List of World Heritage are located in Mediterranean countries and 15 of them are in danger”.**

**Definitions:**

The 1972 World Heritage Convention links together in a single document the concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The World Heritage Committee defined the criteria on the basis of which a property belonging to the cultural or natural heritage may be included in either of the lists:

- The World Heritage List: a list of properties forming part of the cultural heritage and natural heritage which it considers as having outstanding universal value.
- The List of World Heritage in Danger: the list may include only such property forming part of the cultural and natural heritage as is threatened by serious and specific danger.

Source: United Nations Educational, Scientific and Cultural Organization, World Heritage centre, 2020.

The heritage conservation is one of the objectives of UNESCO:

“Based on a strong appeal from national and local stakeholders, the 2030 Agenda adopted by the UN General Assembly integrates, for the first time, the role of culture, through cultural heritage and creativity, as an enabler of sustainable development across the Sustainable Development Goals” (UNESCO).

The List of World Heritage sites constantly progressed in the Mediterranean. The number of sites inscribed has increased from 29 in 1980 to 262 in 2019 (including 13 transboundary sites).

More than half of these 262 sites (139 sites) are located on the Mediterranean coast (within 100 km of the coastline)

In Mediterranean Countries: 90 % are cultural sites, 7 % are natural sites 3 % are mixed sites.

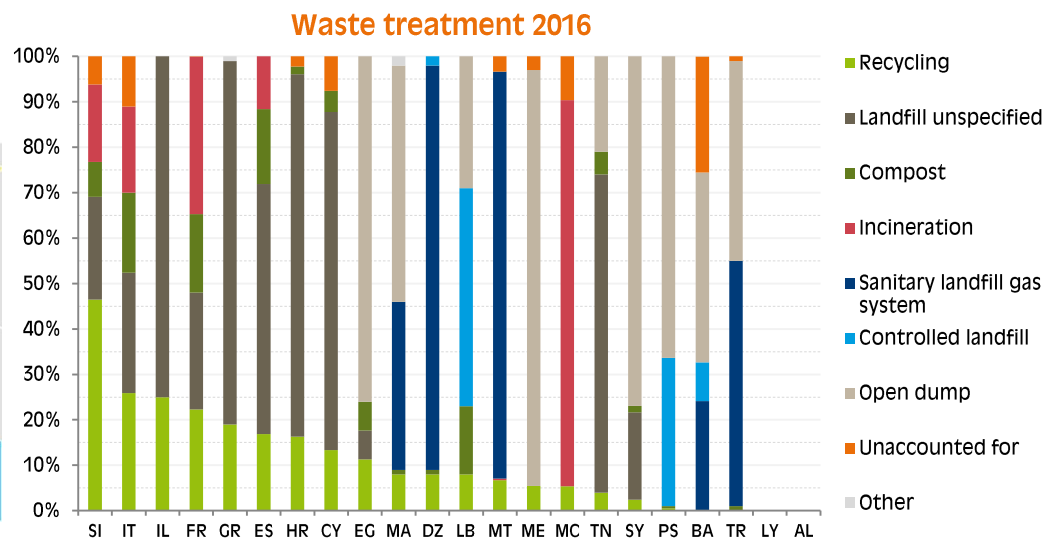
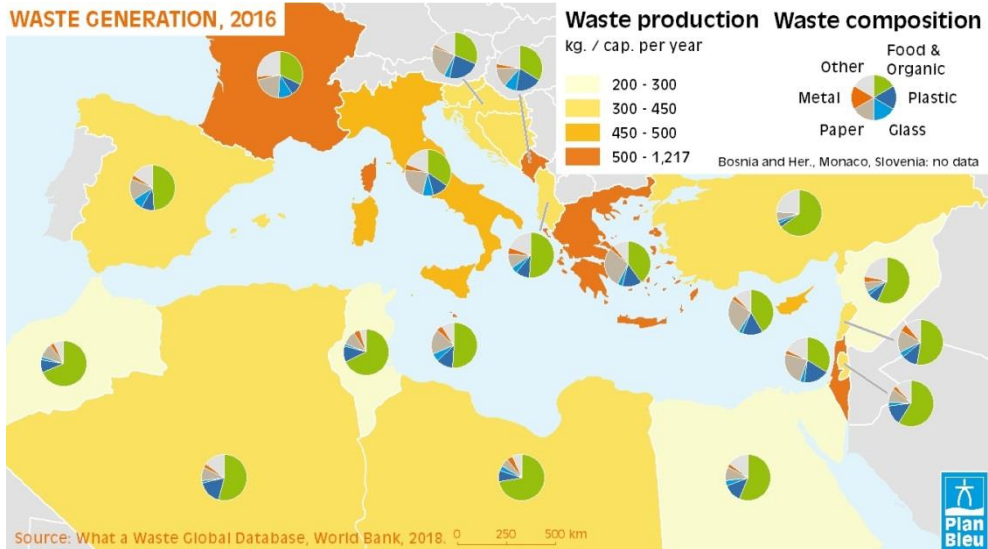
However, there are great differences among countries:

- 3 countries have many sites: Italy (49), Spain (44) and France (41). Greece and Turkey are lagging far behind with 18 sites each.
- The 12 other countries have less than 10 sites each and 4 countries have less than 3 sites each.

In the world, 53 sites are in danger and 28% (15) of these sites are in Mediterranean countries. All sites located in The Syrian Arab Republic, Libya and The State of Palestine are inscribed on the List of World Heritage in Danger.



## WASTE GENERATED AND TREATED BY TYPE OF WASTE AND TREATMENT TYPE



**“In 2016, the overall situation is mixed, high waste generation in the North, high food part in the South and a still low recycling rate”**

**Definitions:**

This indicator is one of the H2020/ ENI SEIS II South Support Mechanism project and it is also linked to the SDG Indicator 11.6.1 (Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities) and to SDG Indicator 12.5.1 (National recycling rate, tons of material recycled).

Municipal Solid Waste (MSW) is waste generated by households, and waste of a similar nature generated by commercial and industrial premises, by institutions and from public spaces.

Waste treatment and disposal includes the following categories: recycling, composting, anaerobic digestion, incineration, landfilling, open dumping.

**Precautions / Notes:**

Industrial, medical, hazardous, electronic, and construction and demolition waste is reported separately from total national waste generation to the extent possible.

The differences in data production methods between the countries can lead to distortions in the analysis.

Source: Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. World Bank.

Source: What a Waste Global Database, World Bank, 2018.

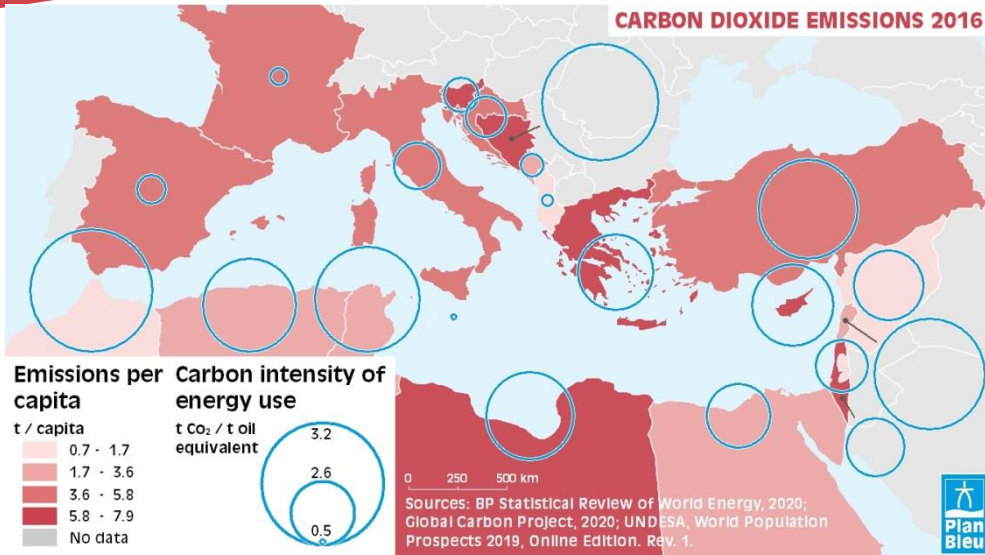
In the Mediterranean region, home to about 500 million inhabitants in 2016, the waste generation and management practices vary widely.

**The total amount of Municipal Solid Wastes is slightly greater than 183 million tons, i.e. an average of 370 kg per capita per year (about 1 kg/cap/day).**

In the Northern countries, the range of value is from 1.1 to 1.7 kg/cap/day and raised to more than 3 kg/cap/day in Monaco. In the southern countries, the amount generated is from 0.5 kg/cap/day in Morocco to 1.1 in Algeria (the value for Israel is similar to the EU countries).

In the Northern countries (inc. Israel), the percentage of Food & Organic waste is between 30% and 52% while this rate in the Southern countries is still higher (From 52 % in Lebanon to 70% in Libya).

The recycling rate is also widely varying. In the northern countries, the recycling rate is higher than 13% and raises to 46% in Slovenia, except in Bosnia and Herzegovina with a rate close to 0 (the rate for Israel is 25%). In the southern countries, Egypt has the highest recycling rate (12.5%) and the rate is especially low in the Syrian Arab Republic, the State of Palestine and Turkey.



**“CO<sub>2</sub> emissions from fossil fuel continue to rise in most Mediterranean countries.”**

**Definition:**

Greenhouse gases correspond to the aggregate annual national emissions of human origin of the main greenhouse gases: Carbon dioxide (CO<sub>2</sub>), Nitrogen dioxide (N<sub>2</sub>O), Methane (CH<sub>4</sub>), Hydrofluorocarbons (HFC), Fluorocarbon (PFC) and Sulfur hexafluoride (SF<sub>6</sub>).

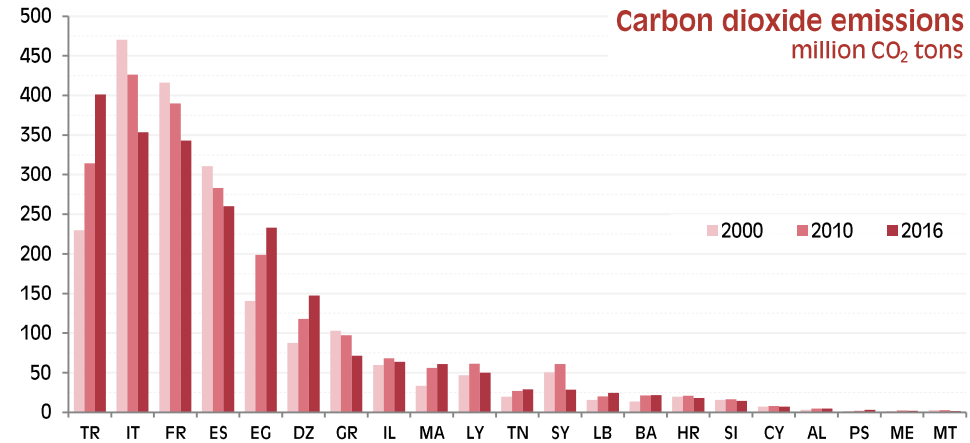
**Precautions / Notes:**

In this factsheet, only carbon dioxide emissions from solid fuels, cement and the gas flaring are taken into account. This is explained by their good data availability and the fact that those emissions, on average, count for 80% of the emissions of greenhouse gases of human origin.

Only national emissions are taken into account. For example, those due to the manufacture of imported products are not shown. National carbon dioxide emissions do not cover the full responsibility of a country.

Source: British Petroleum Statistical Review of World Energy, 2020; Global Carbon Project, 2020; United Nations Framework Convention on Climate Change, 2020; Carbon Dioxide Information Analysis Center, 2020.

**ARE THE MEDITERRANEAN COUNTRIES CONTROLLING THEIR CO<sub>2</sub> EMISSIONS?**



Source: Global Carbon Project, 2020; UNFCCC, 2020; CDIAC, 2020.

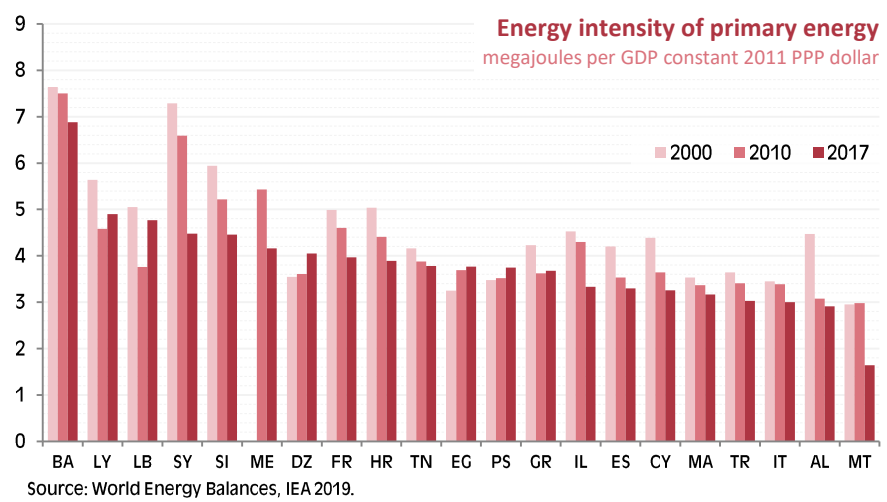
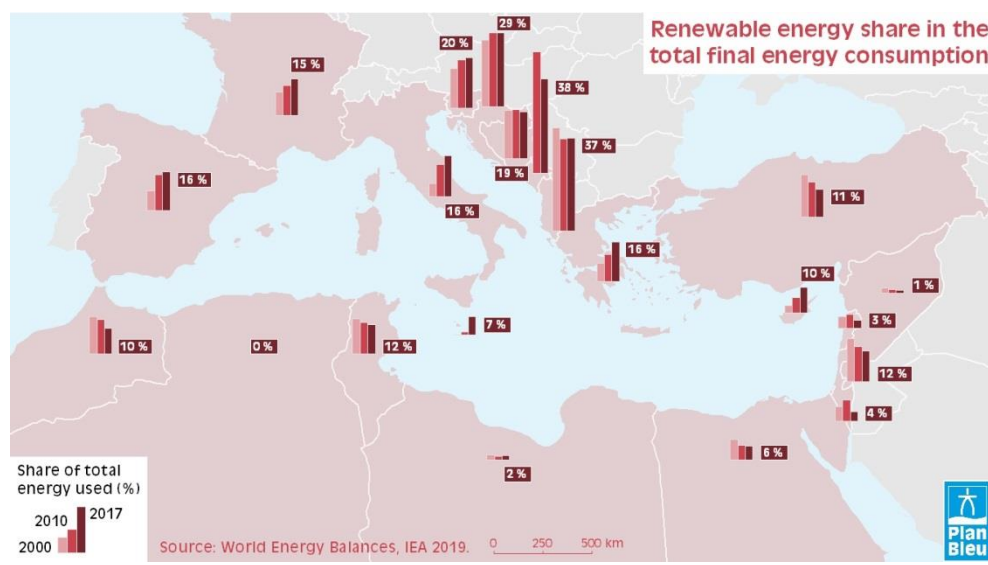
20 of the Contracting Parties to the Barcelona Convention have already ratified the Paris Agreement (Libya and Turkey did not). These countries are officially committed to achieve global peaking and ‘climate neutrality’ by the second half of the century.

The rise in CO<sub>2</sub> emissions from 2000 to 2016 was higher than the national objectives in most countries except in France. From 2000 to 2016, CO<sub>2</sub> emissions from energy have decreased mainly in Italy, France, and the Syrian Arab Republic and increased mainly in Turkey, Egypt, and Algeria.

In 2016, average per capita emission were at 4.3 tons of CO<sub>2</sub> per year: 9/10 of the World average (4.8 tons), 3/4 of EU (5.7 tons) and 3.5 times less than in USA (14.5 tons).

In the North, the CO<sub>2</sub> emissions per capita are extremely diverse: from 1.6 tons per capita in Albania to above 6.4 in Slovenia and Bosnia and Herzegovina, in 2016. The differences in CO<sub>2</sub> emissions per capita are also significant in the southern and eastern Mediterranean countries: from 1.7 tons in Morocco to 7.7 tons in Libya.

## HAS PROGRESS BEEN MADE IN ENERGY USE?



### In Mediterranean countries, the energy intensity and the share of renewable energy are improving at different speeds.

#### Definition

SDG 7.3.1 Indicator: Energy intensity is defined as the energy supplied to the economy per unit value of economic output.

Total energy supply, as defined by the International Recommendations for Energy Statistics (IRES), is made up of production plus net imports minus international marine and aviation bunkers plus stock changes.

SDG 7.2.1 Indicator: The renewable energy share in total final consumption is the percentage of final consumption of energy that is derived from renewable resources.

Renewable energy consumption includes consumption of energy derived from: hydro, solid biofuels, wind, solar, liquid biofuels, biogas, geothermal, marine and waste. Total final energy consumption is calculated from national balances and statistics as total final consumption minus non-energy use.

#### Precautions / Notes:

The very high values should be interpreted with caution for the countries in economic crisis (with low GDP). PPP: Purchasing Power Parity, MJ: megajoules.

SDG Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all:

- SDG Target 7.3: By 2030, double the global rate of improvement in energy efficiency
- SDG Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix

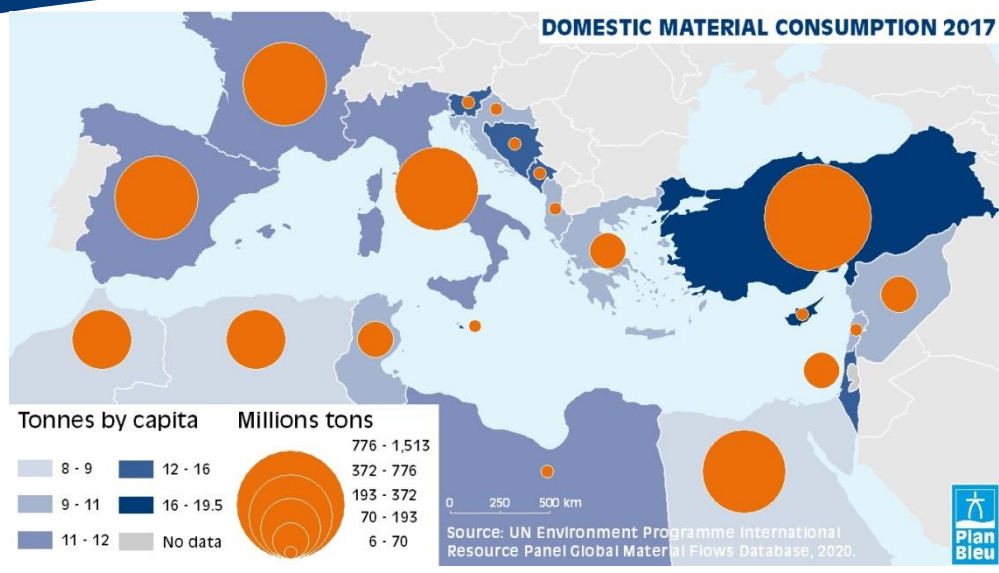
In 2017, the average energy intensity of the Mediterranean countries (3.8 MJ megajoules per GDP constant 2011 PPP dollar) was below the European average (4.39 MJ) and the world average (5.01 MJ).

However, disparities among countries remain significant, even among countries with equivalent income levels. Energy intensity in Bosnia and Herzegovina, Slovenia and Montenegro is over 4 MJ while it is lower than 1.7 MJ in Malta.

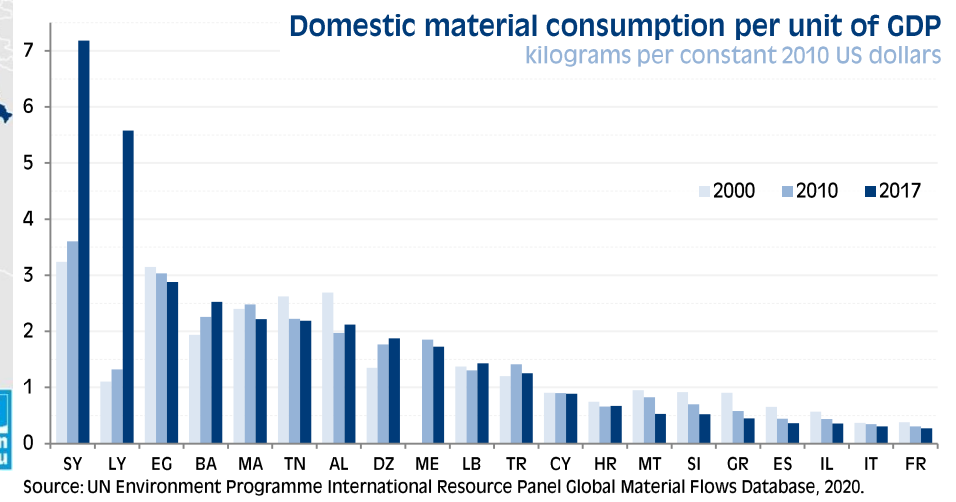
In Mediterranean countries, the share of renewable energy in total final consumption varies widely: from 0.14 % in Algeria to 38% in Montenegro.

In the Balkan countries, the share is between 18% and 38% while it is low in the Southern countries, especially in the Oil & Gas producing countries.

Sources: International Energy Agency (2019), World Energy Balances; Energy



## DECOUPLING ECONOMIC GROWTH FROM MATERIAL CONSUMPTION IN THE MEDITERRANEAN REGION?



### Despite the diversity of their DMC, the Mediterranean countries start a relative decoupling of their economic growth

**Definition:**  
SDG 8.4.2 Indicator: Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP.  
Domestic Material Consumption (DMC) is a standard material flow accounting (MFA) indicator and reports the apparent consumption of materials in a national economy. It is measured for several types of materials.  
In this factsheet, the DMC is shown for raw materials. The DMC is measured in kg per constant 2010 US dollars.

**Precautions / Notes:**  
The indicator does not take into account the consequences of outsourced material-intensive extraction and production which dislocates environmental pressures. Water and air consumption are, apart from the water content of materials, not included. DMC cannot be disaggregated to economic sectors which limits its potential to become a satellite account to the System of National Accounts (SNA).  
The UN Environment International Resource Panel Global Material Flows and Resource Productivity working group compiles data from countries and from other sources.

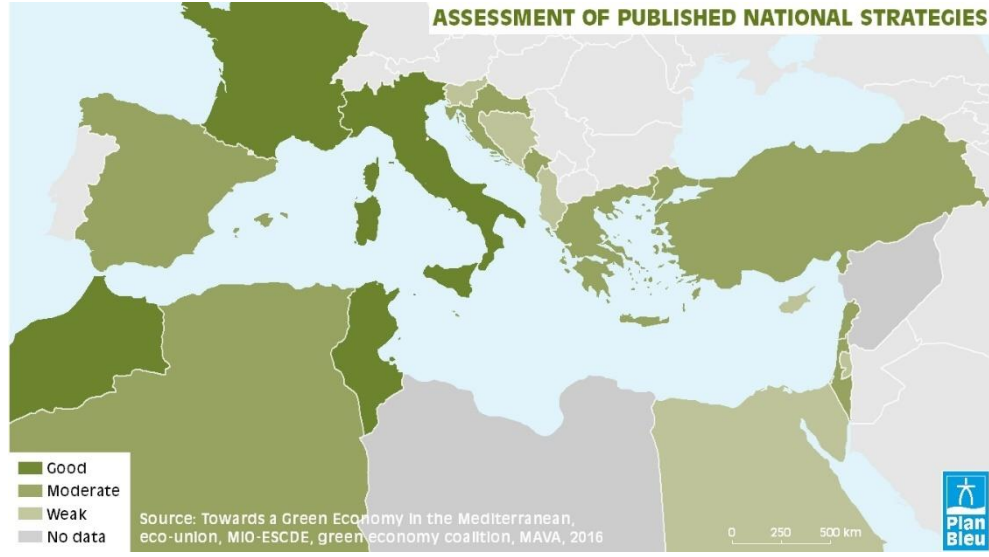
The comparison of material consumption with economic performance provides an insight in trends of material intensity and material productivity (the reciprocal value of material intensity) as well as of decoupling of the global economic system over time. For instance, in the EU Roadmap to a Resource-Efficient Europe the main indicator used is GDP divided by Direct Material Consumption (DMC). Despite the decline in domestic material consumption since 2007, GDP has nevertheless continued to grow.

In the period 2000–2017, the Mediterranean economy achieved a “relative decoupling” of economic growth from resource use (fossil fuels, metal ores, industrial and construction minerals, biomass): income or GDP of most Mediterranean countries increased faster than the amount of materials used in the Mediterranean countries.

In the EU Med countries in 2017, the DMC per constant 2010 US dollars is lower than 1. It is between 1 and 3 in most of Southern countries and reached 7.2 and 5.6 respectively in The Syrian Arab Republic and Libya.

Source: UN Environment Programme International Resource Panel Global Material Flows Database, 2020. Available at: [www.materialflows.net](http://www.materialflows.net)

**ASSESSMENT OF PUBLISHED NATIONAL STRATEGIES**



**The majority of countries have outdated or incomplete national GE or SD strategies. However most of the countries have launched VNRs.**

**Definition:**

The proposed indicator is “Number of National Strategies for Sustainable Development (NSSD) adopted or updated [and number of updates since first edition]”

Waiting for updated data directly provided by the national institutions, this factsheet shows an Assessment of National Green Economy (GE) and Sustainable Development (SD) Strategies published in Mediterranean Countries issued from the report referenced hereafter.

The Simplified Peer Review Mechanism (SIMPEER) is a framework promoting dialogue and experience sharing on NSSD. It supports the preparation and follow-up of the Voluntary National Reviews (VNRs) presented to the UN High-level Political Forum (HLPF). The SIMPEER pilot edition was carried out by Plan Bleu in 2016-2017 with the voluntary participation of France, Montenegro and Morocco. Albania, Egypt and Tunisia joined the second edition in 2018-2019.

**Precautions / Notes:**

This report includes data up to June 2016, published by national governments and public publicly available. It reviews only written documents, not the implementation of it.. Updated information needs to be provided by the countries.

Sources: Eco-union, MIO-ESCDE & GEC, *Towards a Green Economy in the Mediterranean, 2016.*

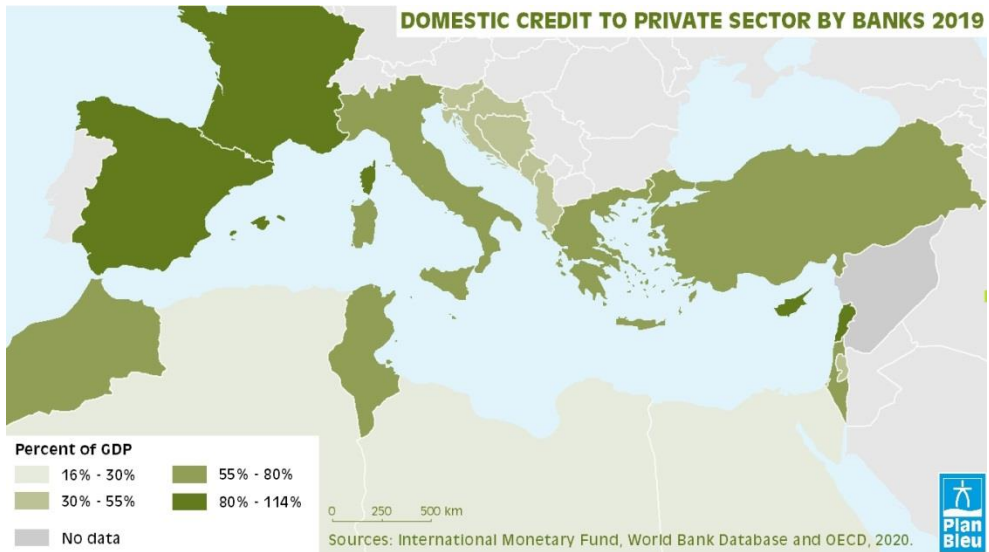
**HOW MANY COUNTRIES HAVE GREEN ECONOMY AND SUSTAINABLE DEVELOPMENT STRATEGIES?**

Countries	Strategies	Voluntary National Review of 2030 Agenda
Albania	Several plans and strategies	2018
Algeria	NSSD	2019
Bosnia and Herzegovina	Several plans and strategies	2019
Croatia	NSSD	2019
Cyprus	NSSD	2017
Egypt	Several plans and strategies	2016, 2018
France	NSSD	2016
Greece	Several plans and strategies	2018
Israel	SCP	2019
Italy	Green Economy	2017
Lebanon	SCP	2018
Libya	-	2020
Malta	Green Economy	2018
Monaco	-	2017
Montenegro	NSSD	2016
Morocco	NSSD	2016, 2020
the State of Palestine	Several plans and strategies	-
Slovenia	CC	2017, 2020
Spain	NSSD	2018
Tunisia	NSSD	2019
Turkey	CC	2016, 2019

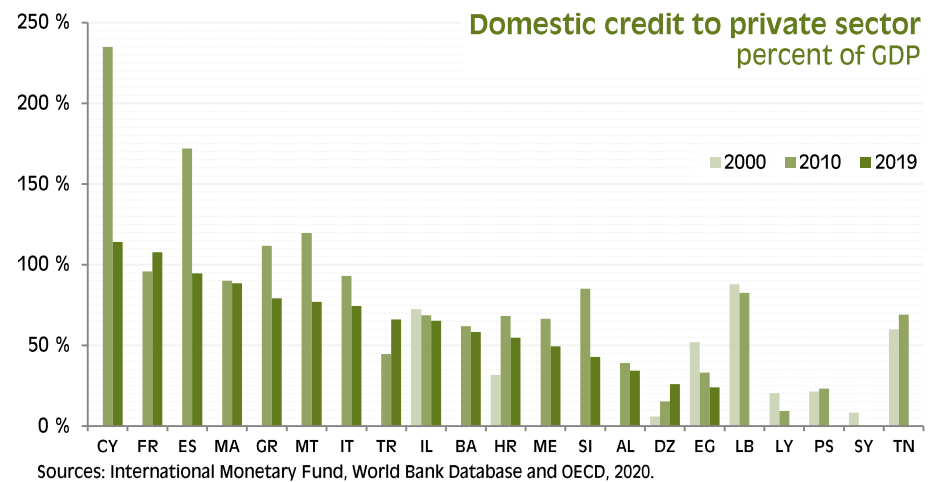
The majority of countries have outdated or incomplete national GE or SD strategies. Moreover, they could be more precise with clearer objectives, budgets and indicators. Only four countries (France, Italy, Morocco and Tunisia) can claim to have up to-date and detailed strategies with a concrete roadmap, or – in the case of Italy – supporting legislation in place. Seven countries (Albania, Bosnia-Herzegovina, Cyprus, Egypt, the State of Palestine, Slovenia and Spain) have outdated or no GE or SD strategies. The other Mediterranean countries (Algeria, Croatia, Greece, Israel, Lebanon, Malta, Montenegro and Turkey) are somewhere in between these two groups of countries.

Some recommendations to catalyze and to support GE or SD:

- Design ambitious, coherent and consistent national Strategies that mainstream Sustainability concepts; formulate clear objectives, actions and indicators; and integrate new international commitments (Paris Agreements, SDGs, etc.).
- Improve awareness, commitment and involvement of all stakeholders through awareness raising campaigns; dialogues with key actors; and support to local or sectoral initiatives.
- Phase out Brown Economy incentives, commit the financial sector and enhance GE or SD implementation through regional cooperation and peer learning activities.



## CAN PRIVATE ENTERPRISES BENEFIT FROM CREDIT TO FINANCE THEIR INVESTMENTS?



“The domestic credit allocated to the private sector in percentage of GDP is varying across time and countries without any obvious trend.”

### Definition:

Multiple indicator:

- Share of bank credit allocated to the private sector
- Existence of alternative credit systems other than bank credit

Domestic credit for the private sector refers to the financial resources provided for the private sector, such as credits, purchase of non-participating securities, trade credits and other accounts that establish a repayment obligation. Public credit is included in some countries.

The alternative finance systems of bank credit may concern investments in venture capital and micro-credit allocated to those that are excluded from the conventional banking system.

### Precautions / Notes:

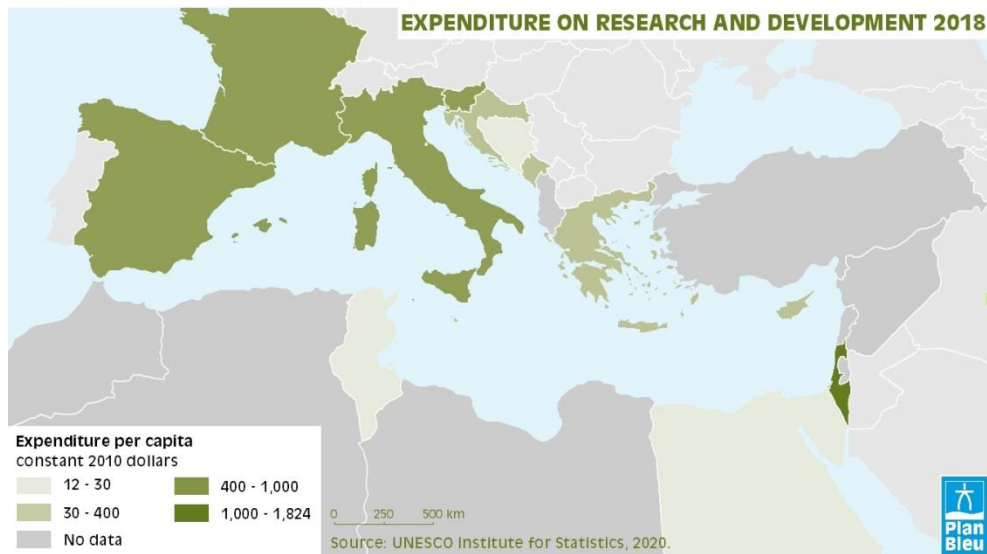
Alternative finance is not well defined and it could be financing from external sources other than banks or stock and bond markets. It can include fundraising via online platforms.

Sources: International Monetary Fund, World Bank Database and OECD, 2020. International Finance Statistics, Global Findex database, 2017.

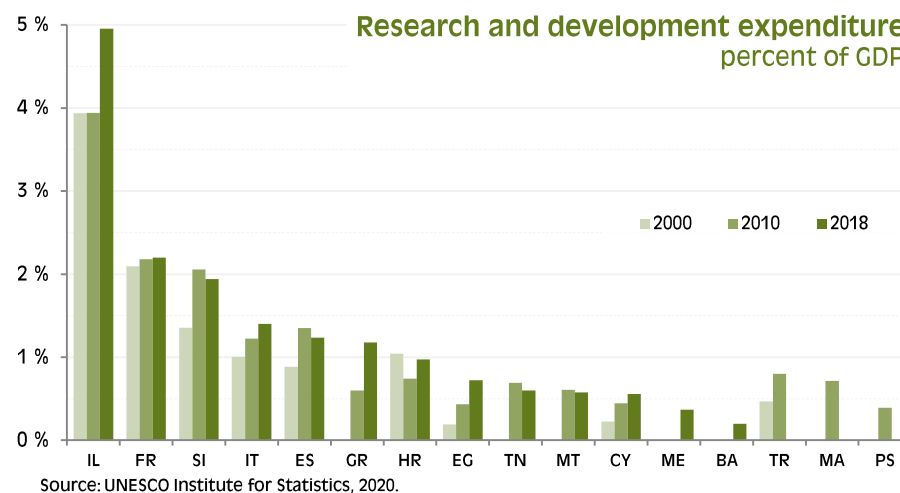
The development of Small and Medium Enterprise finance systems for productive and innovative activities (micro-credit, venture capital, incentives, etc.) is one of the objectives for setting up efficient banking services.

In the Mediterranean region, the share of domestic credit allocated to the private sector in 2019 and trends over time varied across countries, from 24 % in Egypt to 107% in France and reaches about 114% in Cyprus.

In 2017, in the Mediterranean Southern countries, an average of 39% of the adult population(30% of women) held a formal bank account in a financial institution or used a credit card (Global Findex database). An average of 9 % of the adult population had a credit in the past years from a financial institution or used a credit card.



## IS THE FINANCIAL EFFORT FOR RESEARCH AND DEVELOPMENT IMPROVING?



Since the beginning of the XXI century, the amount of national public expenditures on R&D expressed as a percentage of GDP is increasing in most Mediterranean countries

### Definition:

SDG Indicator 9.5.1: Research and development expenditure as a proportion of GDP.

Research and development expenditures include the operating expenditures and investments (including overheads) for creative and system-based activities dedicated to increase knowledge. This amount includes both fundamental and applied research as well as experimental development work leading to new devices, products or processes

### Precaution/Notes:

Research and development expenditures are not necessarily oriented to the sectors supporting sustainable development or contributing to SDGs and MSSD goals.

This indicator could be refined to focus on sustainable development aspects and include resource mobilization by the private sector for Research and development as well as innovation.

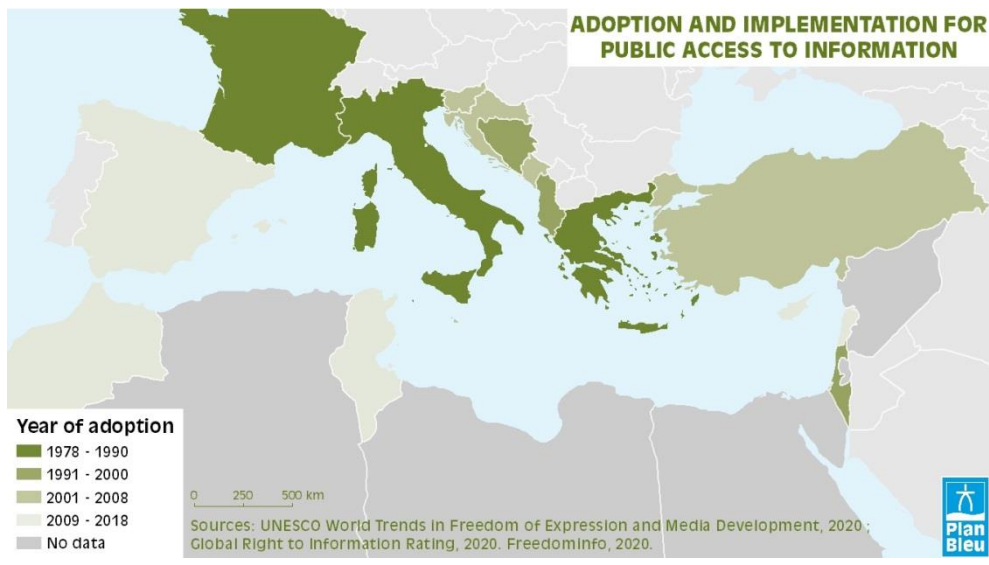
Sources: UNESCO Institute for Statistics, 2020. World Bank national accounts data. United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition. Rev. 1.

**SDG Target 9.5:** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

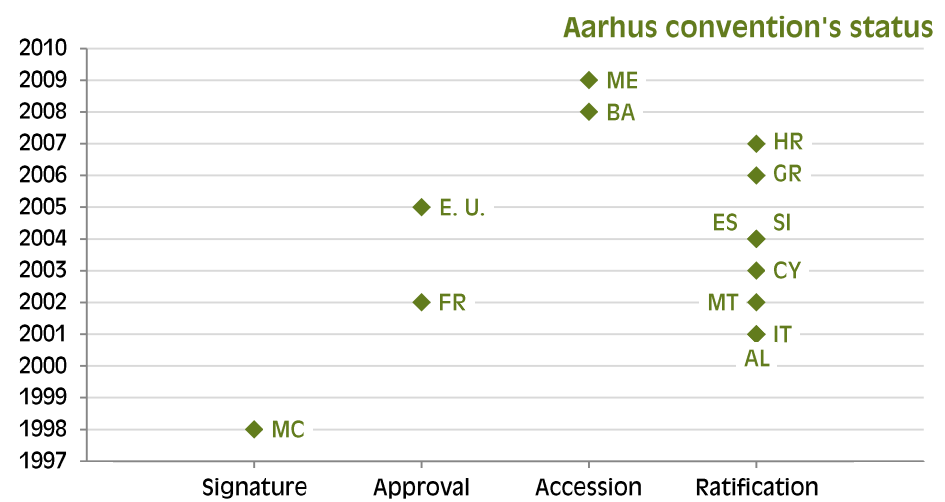
The Mediterranean Strategy for Sustainable Development 2016-2025 promotes education and research for sustainable development (strategic direction 6.4) and in particular to strengthen research capabilities in the area of sustainable development, as well as the science - policy interface.

In average, Mediterranean countries spent 1.3% of their GDP on research and development in 2018 and these expenditures are increasing. The expenditure in EU-27 countries is stabilized around 2.1% of GDP.

Except in Israel, where Research and Development expenditure was 4.95% of GDP in 2018, this percentage is between 1.18% and 2.2% in Greece, Spain, Italy, Slovenia, and France. In the others Mediterranean countries it is less than 1%.



## ACCESS TO THE INFORMATION, A STAKE IN THE MEDITERRANEAN REGION?



Source: The United Nations Economic Commission for Europe (UNECE), 2020.

**Definition:**

SDG Indicator 16.10.2. Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information. The focus of this indicator is thus on the status of adoption and implementation of constitutional, statutory and/or policy guarantees for public access to information. The definition relates directly to “public access to information”, which is wider than, but is also very much based upon, the established fundamental freedoms of expression and association. Conversely, these freedoms also both impact the environment for public access to information.

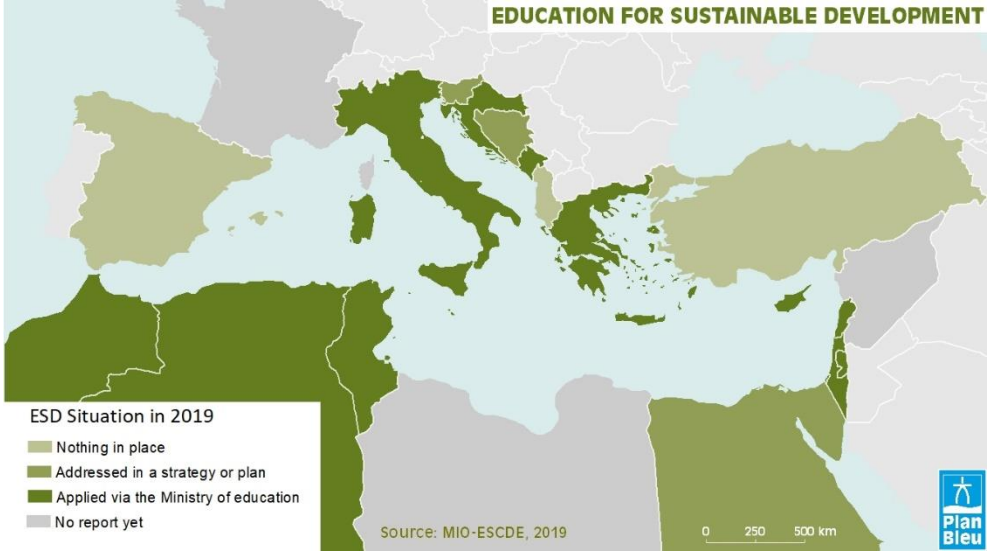
**Precaution / Notes:**

This indicator does not assess the totality of “public access to information” component of the SDG Target 16.10. Nevertheless, it focusses on a key determinant of the wider information environment. This indicator is still classified as Tier II Indicator: conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.

Source: UNESCO World Trends in Freedom of Expression and Media Development (raw research records); Global Right to Information Rating (Access Info & Center for Law and Democracy) <http://www.rti-rating.org/by-section/>; FreedomInfo; Article24.

- SDG Target 16.10: Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.
- UNESCO’s reports to the UN on global monitoring of 16.10.2 have accordingly been compiled and submitted by the International Programme for the Development of Communication secretariat
- According to UNESCO’s preliminary assessment, Indicator 16.10.2 seeks to establish the state of public access to information in terms of three key variables:
  1. Whether a country (or at the global level, the number of countries) has constitutional, statutory and/or policy guarantees for public access to information.
  2. The extent to which such national guarantees reflect ‘international agreements’ (such as the Universal Declaration of Human Rights).
  3. The implementation mechanisms in place for such guarantees, including the following variables:
    - Government efforts to publicly promote the right to information.
    - The capacity of public bodies to provide information upon request by the public





## IS EDUCATION FOR SUSTAINABLE DEVELOPMENT IN PLACE IN THE MEDITERRANEAN?

In June 2019, 15 Mediterranean countries (68%) have a legal framework for Education for Sustainable Development

**Definition:**

Number of countries that have National Strategies/Action Plans on Education for Sustainable Development in place.  
 The Mediterranean Strategy on Education for Sustainable Development (MSESD) was unanimously endorsed on 13 May 2014 by the UfM Ministers of Environment & Climate Change and accepted as an integral part of the “Mediterranean Strategy for Sustainable Development” (2016-2025) in the Barcelona Convention’s COP19 (Athens, February 2016). Then, the Action Plan of the MSESD was developed, and endorsed in December by Mediterranean Ministers of Education, in Cyprus. The overall aim is to encourage the countries to develop and incorporate ESD into formal, non-formal and informal education.

**Precaution / Notes:**

The existence of a strategy or a plan does not automatically imply efficient Education for Sustainable Development in the country.  
 Other indicators are necessary to monitor Education for Sustainable Development.

Source: Mediterranean Information Office for Environment, Culture and Sustainable Development, (MIO-ECSDE) and Mediterranean Education Initiative for Environment and Sustainability (MEDIES), 2019 Unesco.

- UNESCO’s reports to the UN on global monitoring of SDG 4 indicators.
- SDG Target 4.7: “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development.”
- The global indicator proposed for monitoring this Target: Indicator 4.7.1: Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment.
- No data for this indicator is currently available and its methodology is still under development (Tier III).
- Most countries have already or are in the process of elaborating National Strategies or Plans on ESD in accordance to the provisions of the Action Plan of the MSESD.



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