

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







### **Authors**

Jean-Pierre Giraud: coordination

Rémy Ferrer and Charlotte Passerieux: writing and cartography

### **Graphic design**

Coteweb

### **Final layout and production**

Hélène Rousseaux

### **Copyright**

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. Plan Bleu would appreciate receiving a copy of any report that uses this publication as an information source. This publication cannot be used for resale or for any other commercial purpose whatsoever without permission in writing from Plan Bleu.

© Plan Bleu

### **For bibliographic purposes this volume may be cited as:**

UNEP/MAP/Plan Bleu (2017). *Monitoring the implementation of the Mediterranean Strategy for Sustainable Development 2016-2025. Draft version March 2017*. Valbonne, Plan Bleu.

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

ISO2 Code	Country or entity	Regions
AL	Albania	NMC
BA	Bosnia-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	Palestine	SEMC
SI	Slovenia	NMC
SY	Syria	SEMC
TN	Tunisia	SEMC
TR	Turkey	SEMC

The analysis can consider the groups of countries traditionally used 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 EU-15 Mediterranean countries include four countries (ES, FR, GR, IT). The UE-27 Mediterranean countries include also Cyprus and Malta, members of the European Union since 2004.

## ARE THE MEDITERRANEAN COUNTRIES PROGRESSING TOWARDS SUSTAINABLE DEVELOPMENT?

The “indicator” fact-sheets, carried out in the framework of the monitoring 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 SDG and to be presented as a Mediterranean Sustainability dashboard to be adopted by the Barcelona convention COP 20 by the end of 2017.*

The factsheets concern the priority indicators selected to monitor the progress made by the Mediterranean countries regarding the 6 objectives of the MSSD 2016-2025:

- 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

They also concern composite indicators such as the Human Development Index (HDI) and the 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 from international sources and Plan Bleu reports.

The indicators for the follow-up of the MSSD 2005 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 map in this work 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.*

Measuring the progress of the Mediterranean countries towards sustainable development needs the examination of the results on the three sustainable development pillars: Social, Economic and Environmental.

In the absence of a composite indicator, it is proposed to follow the trajectories taken by the Mediterranean countries on the social, economic and environmental axes using the Human Development Index (HDI) and the Ecological Footprint (EF).

In this graph, it is assumed that the situation of a country is compatible with sustainable development if its HDI is greater than 0.8 and its Ecological Footprint less than 1.8 hectares per capita.

**“ In 2012, none of the Mediterranean countries was situated in the area (HDI>0.8; EF<1.8), known as “Sustainability area”\*. ”**

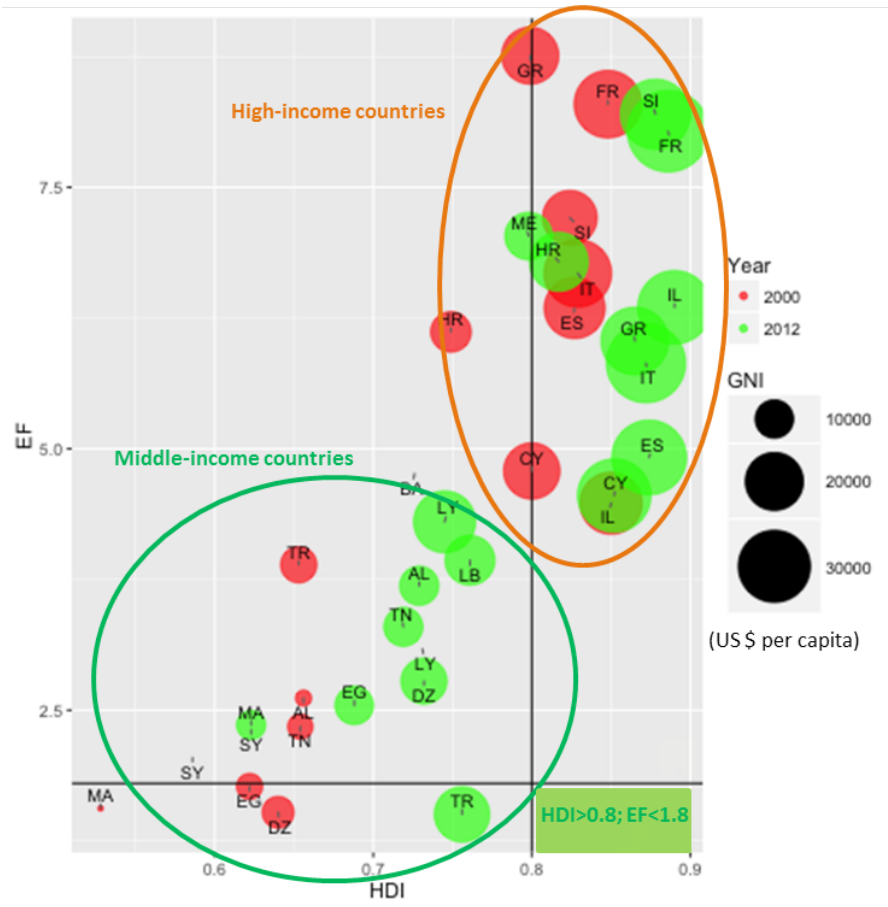
Only 1 Mediterranean country (Turkey) has an Ecological Footprint less than 1.8 global hectares per capita. Between 2000 and 2012, only 6 Mediterranean countries decreased their Ecological Footprint (Cyprus, France, Greece, Italy, Spain and Turkey). This is also applicable to all the countries on the planet. This is mostly due to the effects of the economic crisis, which slowed down resource consumption and, primarily, CO<sub>2</sub> emissions.

Two groups of countries stand out and correspond to the World Bank countries classification according to their income level:

- Middle-income countries, (Gross national income per capita between 1026 and 12 475 USD in 2011 with low HDI and Ecological Footprint, who have demonstrated a great progress in terms of HDI.
- High-income countries (Gross National Income per capita greater than or equal to 12 476 USD in 2011) with high HDI and Ecological Footprint.

\*This also applies for every country of the world.

## PROGRESS OF THE MEDITERRANEAN COUNTRIES TOWARDS SUSTAINABLE DEVELOPMENT



Human Development Index, Ecological Footprint per capita and income level of the Mediterranean countries.

Sources / References: UNDP, Global Footprint Network and World Bank.

## LIST OF INDICATORS

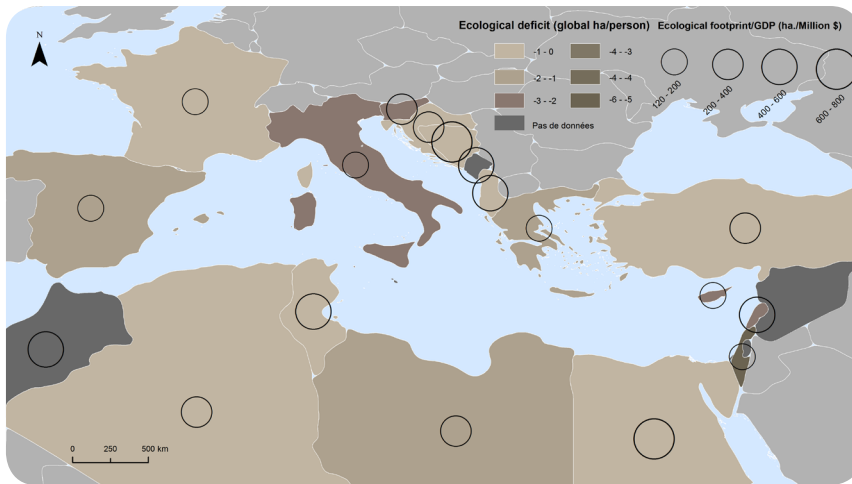
GOAL	INDICATOR
General indicators	* Ecological footprint
General indicators	* Human Development Index
General indicators	* Gross Domestic Product
General indicators	* Youth literacy rate
General indicators	* Girl/Boy primary and secondary school registration ratio
General indicators	* International tourism receipts
<b>1 - Sea and coast</b>	<b>* Number of ratifications and level of compliance as reported by Barcelona Convention Contracting Parties</b>
<b>1 - Sea and coast</b>	<b>Illegal, unregulated and unreported fisheries rates</b>
<b>1 - Sea and coast</b>	<b>Percentage of protected coastal and marine areas under national jurisdiction</b>
<b>1 - Sea and coast</b>	<b>Proportion of the coastal urban population connected to a sanitation network</b>
<b>2 - Rural &amp; Resources</b>	<b>Share of protected areas with management processes in place</b>
<b>2 - Rural &amp; Resources</b>	<b>* Water efficiency index</b>
<b>2 - Rural &amp; Resources</b>	<b>Energy use efficiency</b>
<b>2 - Rural &amp; Resources</b>	<b>Renewable energy rate</b>
<b>2 - Rural &amp; Resources</b>	<b>Percentage of wastewater treated</b>
<b>2 - Rural &amp; Resources</b>	<b>* Number of countries participating in the Green list initiative</b>
<b>2 - Rural &amp; Resources</b>	<b>Number of gene banks</b>
<b>2 - Rural &amp; Resources</b>	<b>* Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems</b>
<b>2 - Rural &amp; Resources</b>	<b>Rural poverty rates</b>
<b>2 - Rural &amp; Resources</b>	<b>* Global Food Security Index</b>
<b>2 - Rural &amp; Resources</b>	<b>*Water demand by sector</b>
<b>2 - Rural &amp; Resources</b>	<b>Exploitation index of renewable natural resources</b>

\* Only indicators marked with an asterisk in this list are present in this draft, other indicators are under development and may be modified, adapted or replaced as necessary. Some sheets can only be produced with the contribution of the countries.

## LIST OF INDICATORS

GOAL	INDICATOR
2 - Rural & Resources	* Share of population with access to an improved water source
2 - Rural & Resources	* Share of population with access to an improved sanitation system
2 - Rural & Resources	Ratio of agricultural population vs. rural population
2 - Rural & Resources	* Proportion of agriculture quality products and Share of the agricultural land area used by organic farming
3 - Cities	Urban public open space
3 - Cities	* People living in informal settlements (%)
3 - Cities	Urban poverty rates
3 - Cities	* Status of UNESCO world heritage sites
3 - Cities	Waste generated and treated by type of waste and treatment type
3 - Cities	Transport modal split in main cities
4 - Climate change	* Green House Gas emissions
4 - Climate change	* Energy consumption
5 - Green and blue economy	Share of green jobs
5 - Green and blue economy	Fuel subsidies/environmentally-harmful subsidies
5 - Green and blue economy	Share of green financial instruments
5 - Green and blue economy	Share of green or sustainable public procurement
5 - Green and blue economy	* Material intensity of the economy
6 - Governance	* Number of countries adopting the Aarhus Convention
6 - Governance	Number of countries with application of Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) in development policies
6 - Governance	* National Sustainable Development Strategies
6 - Governance	Number of countries that have launched national strategies on education for sustainable development
6 - Governance	* Proportion of bank credit allocated to the private sector
6 - Governance	* Public and private expenses for research and development in percentage of GDP

\* Only indicators marked with an asterisk in this list are present in this draft, other indicators are under development and may be modified, adapted or replaced as necessary. Some sheets can only be produced with the contribution of the countries.



Ecological Footprint / GDP and Ecological deficit (2012)

“ All the Mediterranean countries had an Ecological Deficit in 2012. This means that the environmental capacity of the region is used up faster than it is renewed. ”

**Definition:**

- **Ecological Footprint:** Amount of biologically productive land and water a country requires to produce all the resources it consumes and to absorb the carbon dioxide emissions it generates.
- **Biocapacity:** Capacity of ecosystems to produce useful biological materials used by the economy and to absorb carbon dioxide generated by human.
- **Ecological deficit / reserve:** The difference between the Biocapacity and Ecological Footprint of a region or country.

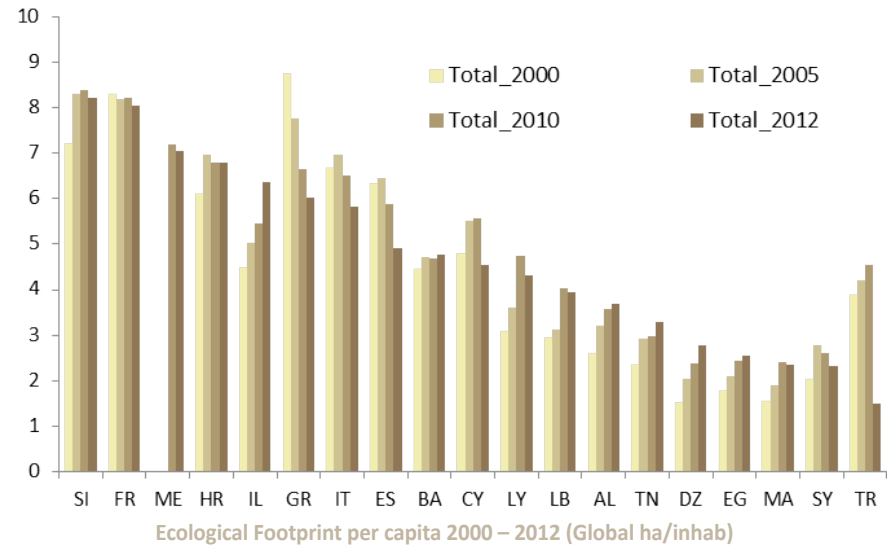
Ecological Footprint and Biocapacity are expressed in units of global hectares.

**Precautions / Notes:**

EF only measures one aspect of sustainability, that 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).

Sources / References: Global Footprint Network 2016. National Footprint Accounts, 2016 Edition.

**WHAT IS THE IMPACT OF HUMAN ACTIVITIES ON THE ENVIRONMENT?**

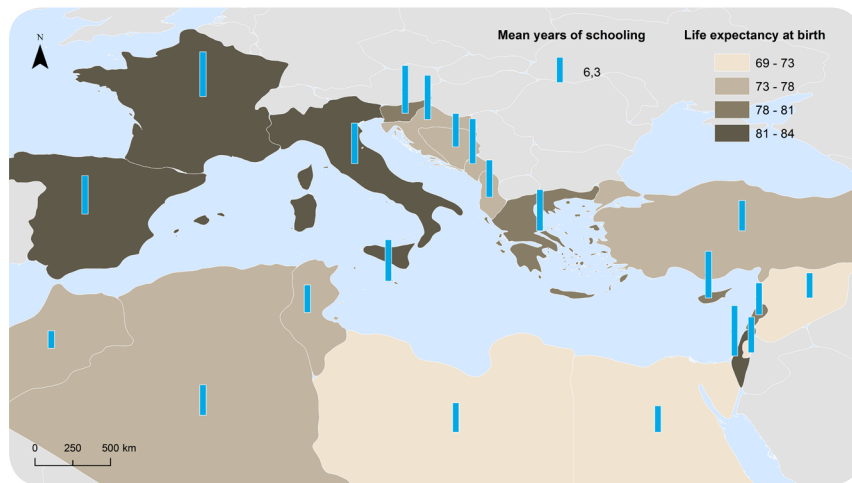


The Ecological Footprint is used to assess the level of the consumption of available resources connected to the human activities. Compared to the Biocapacity, this indicator offers the possibility to calculate the Ecological Deficit or Reserve in a region or country.

From 2000 to 2012, the Ecological Footprint per capita decreased in Greece, Spain, Italy, and Syria. For other countries, the Ecological Footprint remained stable or increased.

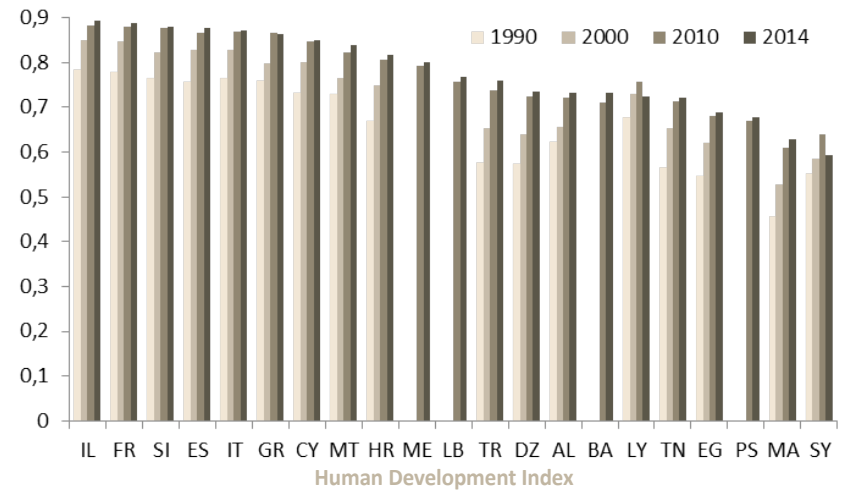
- Thus, the Mediterranean Ecological Footprint (3.32 gha/cap) is higher than the planet’s Ecological Footprint (2.8 gha/cap).
- The Mediterranean’s Ecological Deficit (2.05 gha/cap) is two times greater than the world’s Ecological Deficit (1.1 gha/cap).
- The Ecological Footprint of the northern Mediterranean countries decrease since few years (from 4.4 gha/cap in 2009 to 3.34 gha/cap in 2012). 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 200 gha per million dollars in most of northern countries except in the Balkan countries (695 in Bosnia-Herzegovina). In the southern countries the maximum values are for Algeria (390 gha per million of dollars) and Lebanon (413).





Life expectancy at birth and mean years of schooling (2014)

## IS SOCIAL WELFARE PROGRESSING IN THE MEDITERRANEAN COUNTRIES?



“The index of human development constantly progressed in the Mediterranean countries since 1990\*.”

### Definition:

The Human Development Index (HDI) is a composite index, developed by the 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 GNI per Capita (PPP US dollars).

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

### Precautions / Notes:

An HDI value greater than 0.8 is generally considered high. A value below 0.55 is considered low. The new methodology used in 2013 need to recalculate the time series and had the effect of decreasing the values of HDI (with a small impact on country rankings).

Sources / References: UNDP Human Development Report 2015

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 0.767 in 2014, the Mediterranean region was above the world value of 0.711.

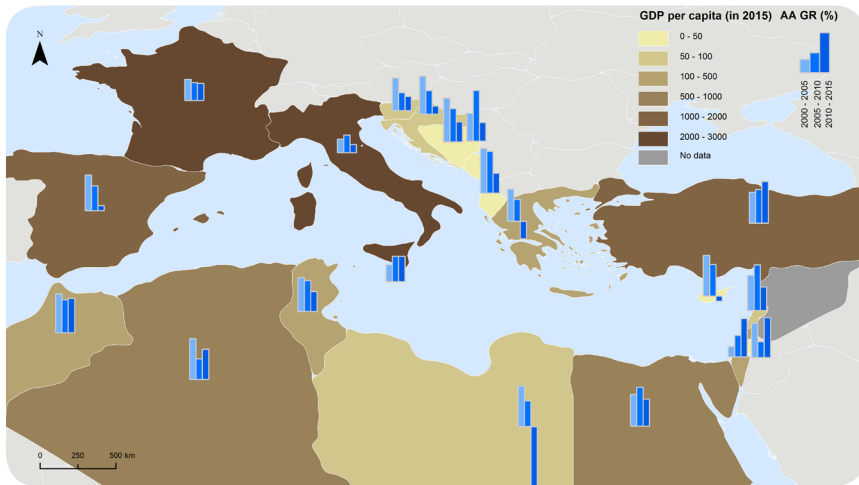
However, there are great differences between countries:

- 10 countries have high HDI, greater than 0.8: Israel (ranked 18<sup>th</sup> out of 186 worldwide), France, Slovenia, Spain, Italy, Greece, Cyprus, Malta, Croatia and Montenegro (49<sup>th</sup> worldwide).
- 7 countries have HDI between 0.7 and 0.8: Lebanon, Turkey, Algeria, Albania, Bosnia-Herzegovina, Libya and Tunisia (96<sup>th</sup> worldwide).
- 4 countries have HDI lower than 0.7: Egypt, Palestine, Morocco and Syria with 0.594 is 134<sup>th</sup> worldwide.

The life expectancy at birth, which accounts for one third of the HDI, shows a gap of 10 years between Israel (83) and Syria (70).

The average of the « Mean years of schooling » is about 9, but the Mediterranean range is very wide from 4.4 in Morocco to 12.9 in Israel.

\* Except in Libya and Syria



GDP in 2015 (US \$) and annual growth rate (1990-2015)

“ The EU Mediterranean countries count for 62% of the Mediterranean GDP. ”

**Definition:**

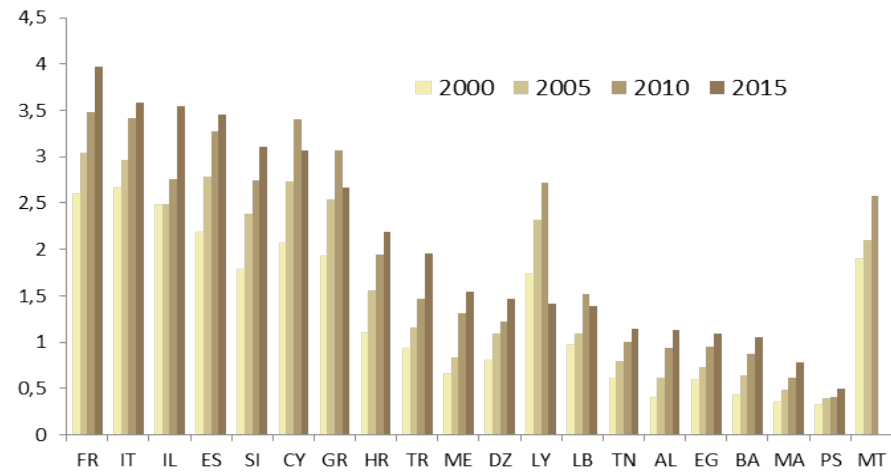
- The Gross Domestic Product (GDP) is the value of all the goods and services produced in a country in a year. The GDP can be calculated by adding up all the items of income – salaries, interests, profits and rents – or by calculating the expenditure – consumption, investment, public purchases, net exports, (exports less imports) – of an economy.
- Purchasing power parity (PPP): A conversion factor that indicates the number of units of a country’s currency required to buy in the local market what one dollar could buy in the USA.

**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).

Sources / References: World Bank, World Development Indicators (WDI).

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



GDP per capita 2000- 2015 (1000 US dollars PPP)

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

In 2015, the average income per capita in the South and East Mediterranean countries is 2.5 times lower than the average income in the EU Mediterranean countries.

The GDP growth rate in the south and east Mediterranean countries are much 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.

The share of the Mediterranean GDP in the world GDP is decreasing: from more than 13.5% in 1990 to 11.5% in 2010 and 9.7% in 2015. Meanwhile, the share of the Mediterranean population remains constant in the world population (about 7%).



Youth literacy rate (15 to 24 years old, in %) in 2015

“The Mediterranean average (98,6%) falls above the world average (91,4%).”

**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).

**Precautions / Notes:**

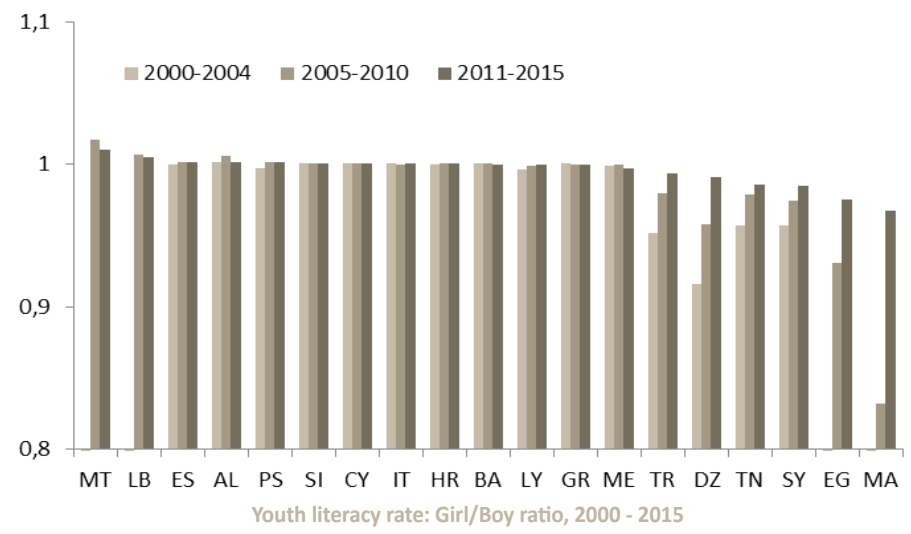
Across Measurement of literacy can vary from a simple question “Can you read and write?” to various evaluation tests to assess the levels of literacy. In some cases, literacy is roughly measured in censuses with self-report or by estimating the population not attending school or uneducated.

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.

**Sources / References:** UNESCO, Institute for Statistics ; The Millennium Development Goals Report 2015-United Nations , United Nations Statistics Division, The Millennium Indicators Database.

**IS THE LITERACY RATE OF YOUNG ADULTS IMPROVING?**



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

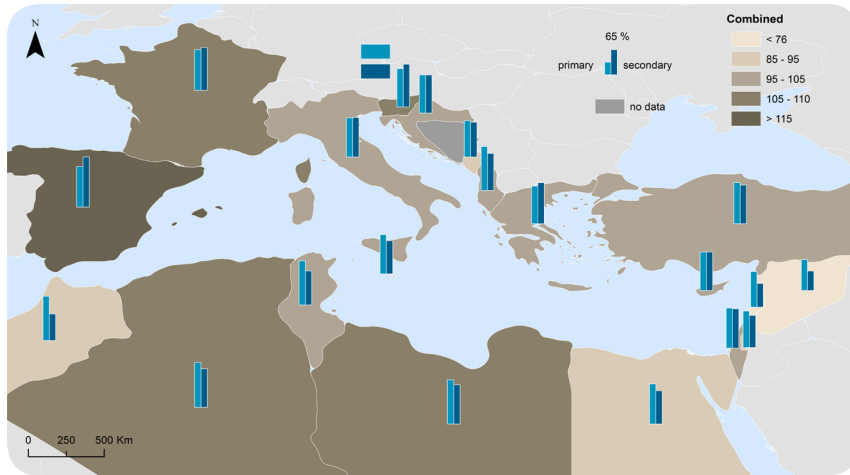
Access to primary education is a key issue for the Millennium development goals as well for the UNESCO « Education for All » programme.

The MSSD has taken up this objective in the Mediterranean for all the young adults, by insisting on 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. It 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.

This situation exists in 10 countries in 2011-2015: Bosnia and Herzegovina, Montenegro, Libya, Greece, Tunisia, Turkey, Syria, Algeria, Egypt and Morocco.



Gross rate of enrolment in primary, secondary and combined, 2015 (%)

“Girls’ education has improved: the parity index for the gross combined enrolment rate is over 99% in 12 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.

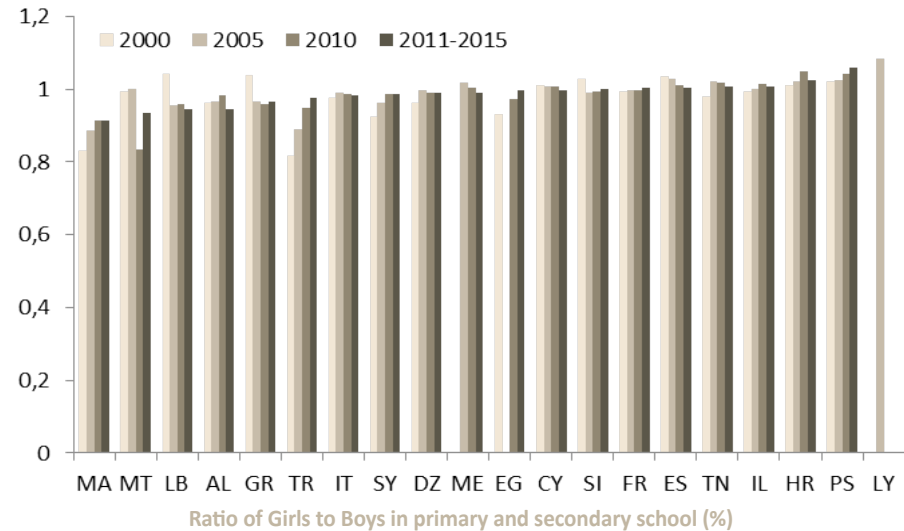
**Precautions / Notes:**

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 depletions.

Sources / References: UNESCO  
<http://gem-report-2016.unesco.org/fr/chapter/parite/>

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

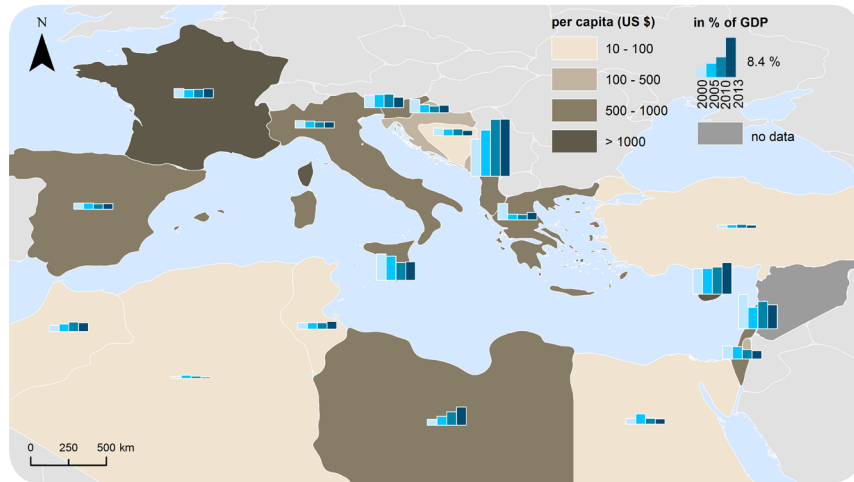


Education and gender equality are central concerns in the new sustainable development agenda. The Education 2030 Framework for Action, agreed by the global education community in November 2015 to accompany the SDG agenda, recognizes that gender equality is inextricably linked to the right to education 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 ».

The enrolment rate in primary education is over 95% in all of the Mediterranean countries except in Lebanon, Montenegro, Palestine and Syria.

As of 2014, 61 million children of primary school age were not enrolled in school, compared with 100 million in 2000. Girls make up 53% of the global population of children out of school, the same share as in 2000. New analyses for the 2016 GEM Report show that if past trends continue, not even the EEA goal of universal primary completion, also set in the Millennium Development Goals, is likely to be achieved by 2030.

The gross combined enrolment rate is over 97% in 13 countries, but efforts must be made for the secondary education because the gross enrolment rate at this level is over 97% in only 11 countries. In 7 countries the rate is less than 90% and under 95% in 6 countries if the combined rate is considered.



International tourism receipts, 2013

“Most of the Mediterranean countries experienced an overall increase in international tourism receipts.”

**Definition:**

Receipts from international tourism refer to the expenditure incurred in the host country by tourists and by non-resident visitors as defined in the tourism satellite accounts in conformity with the UN Statistics Commission.

In the host countries, the international tourism receipts are assimilated as exports including transactions made by tourists as well as by visitors who come for more than one day. However, they do not include the receipts from international transport services and purchased outside the host country.

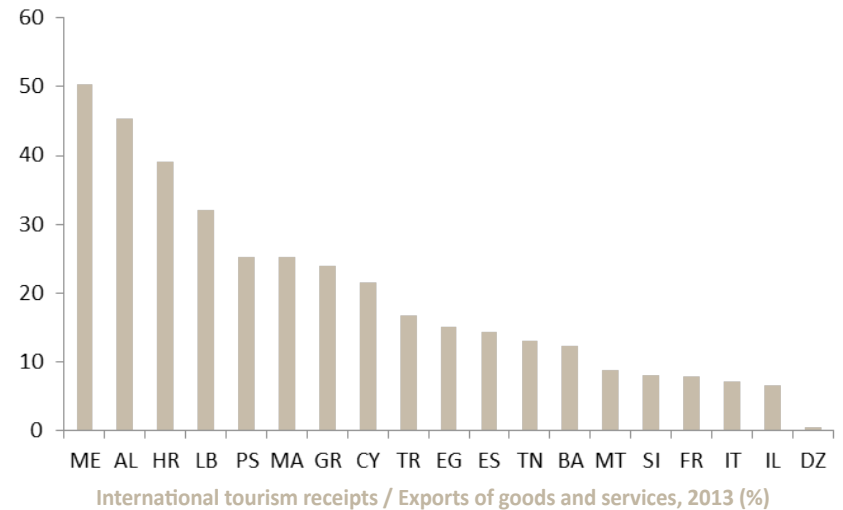
**Precautions / Notes:**

Low receipts as a percentage of GDP could indicate strong potential for the international tourism development. On the other hand, a high value is an indicator of mono-activity economy, often very sensitive to the international situation.

A rise in international tourism receipts does not presume the effective spin-off for the host countries and the local population. The spin-off should be focused on as a case which concerns the impact of tourism on the situation of the local population, such as the creation of new jobs and the increase in income.

Sources / References: UN-WTO (World Tourism Organisation), World Bank

**IS THE INTERNATIONAL TOURISM SUFFICIENTLY PROFITABLE?**

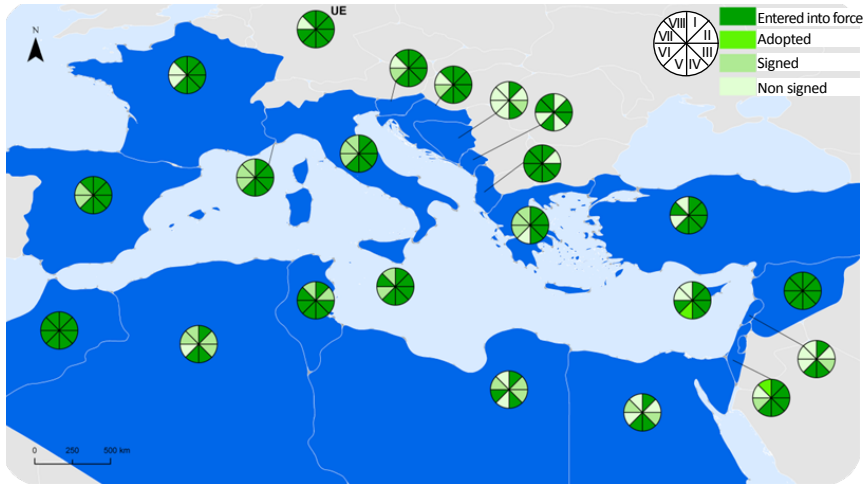


In four EU Mediterranean countries (ES, FR, IT and GR), the international tourism receipts are relatively stable, in percent of GDP. In Albania and Lebanon the share of tourism is the most important with respectively 12 and 11% of GDP. In contrast, the lowest percentages are in Algeria (0,3%) and Turkey (0,6%).

International tourism is an important sector of economic development in the Mediterranean region, classified as the 1<sup>st</sup> tourist region worldwide.

Receipts from international tourism represent about 6% of the total value of global exports of goods and services. In most of Mediterranean countries, the ratios are much higher: between 10 and 30%, over 30% in Lebanon, Croatia, Albania and almost 50% in Montenegro.

The receipts per capita cover a wide range: receipts could be over 1000 dollars, reaching 1418 dollars in Cyprus. On the other side, they are insignificant in Algeria and Egypt (under 40 dollars) and very low in Bosnia and Herzegovina and Morocco, however international tourism is important in these countries.



Status of the Barcelona Convention and protocols

“ The number of parties where the protocols are entered into force is from 7 to 21. ”

**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.

Entered into force : An international convention enter into force at a time 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 the details can be find in the official documents of the Convention.

It is possible for a State to implement a protocol without it being signed and taking more protective measures.

Sources / References: UNEP/MAP  
<http://www.unepmap.org/>

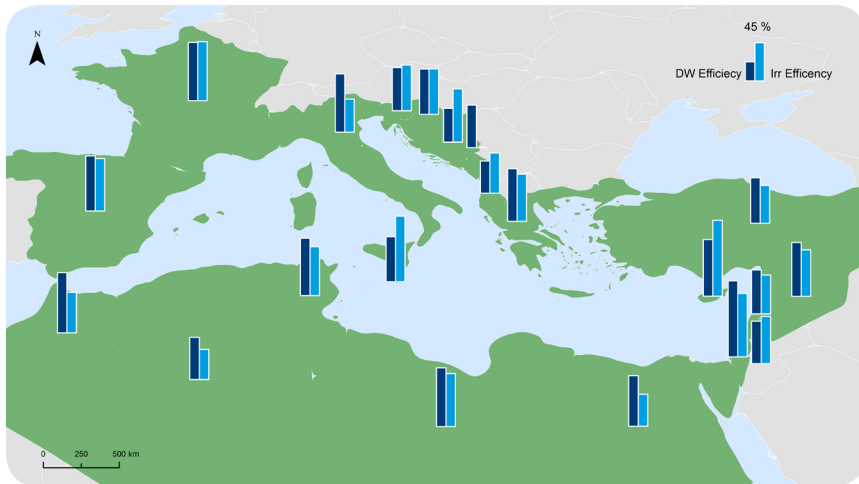
## WHAT IS THE LEVEL OF IMPLEMENTATION OF THE BARCELONA CONVENTION?

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

The Convention for the Protection of the Mediterranean Sea Against Pollution was adopted on 16 February 1976 then 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 then has entered into force on 9 July 2004.

**Major dates and Number of parties having decided to apply the Convention and the protocols**

Legal instruments	Date of Adoption	Entry into force date	Number of parties
<b>Barcelona Convention</b>	1976 (1995)	1978 (2004)	21
<b>Dumping Protocol</b>	1976	1978	16
<b>Emergency Protocol</b>	1976	1978	21
<b>Prevention and Emergency Protocol</b>	2002	2004	15
<b>LBS Protocol</b>	1980	1983	17
<b>SPA Protocol and SPA &amp; Biodiversity Protocol</b>	1982 (1995)	1999	21 and 18
<b>Offshore Protocol</b>	1994	2011	7
<b>Hazardous Wastes Protocol</b>	1996	2008	8
<b>ICZM Protocol</b>	2008	2011	9



Water use efficiency in two sectors (drinking water and irrigation) in 2010

**Definition:**

This index allows the monitoring of progress in terms of the water saved as a result of the demand to reduce the water loss and wastage during the process of both the transport and the use. It is subdivided into total and sectoral efficiency (drinking water, agriculture and industry).

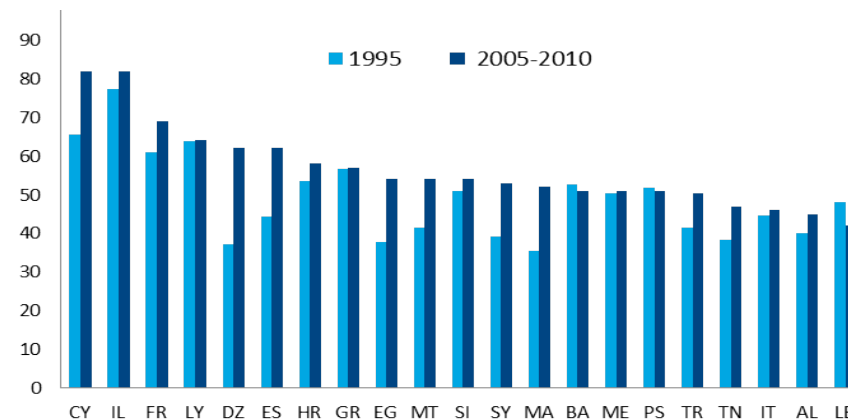
**Precautions / Notes:**

The economic efficiency of drinking water depends on invoicing mode (flat rate or metering) and may be distorted by metering malfunctions.

Real plot irrigation efficiency is awkward to measure in the field because of the difficulties in evaluating how much water the plants consume and the large number of plots. Each country has its own estimates of average efficiency for the various systems which are based on experimental pilot sites. This efficiency thus tends rather to reflect the distribution of irrigation water according to the main irrigation methods at national level (theoretical average efficiency is estimated at 40% for surface irrigation, 70% for sprinkler and 90% for localised irrigation systems).

Sources / References: FAO-AQUASTAT, Plan Bleu and national reports 2008 & 2010

**IS WATER USE EFFICIENCY IMPROVING?**



Total water use efficiency in Mediterranean countries (1995, 2005-2010)

It is possible to improve efficiency in all the major sectors of water use (agriculture, industry and domestic). The Mediterranean Strategy for Sustainable Development stresses the need to reduce the amount of water currently being lost or wastage (representing sources for saving) and to increase the added value created per cubic meter of water used.

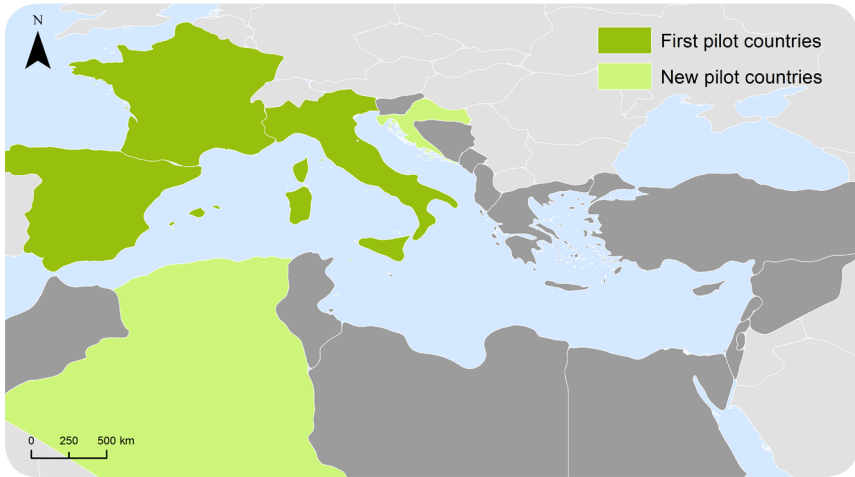
Some countries set their national targets regarding global and sectorial efficiency, the alternative policy scenario from Plan Bleu for 2025 (compared to 1995) is based on the achievement of the following physical efficiencies at a regional level:

- For drinking water in municipalities: reduce loss rates stemming from distribution to 15% and leakage from users to 10%;
- For irrigation: reduce loss rates stemming from transport and distribution to 10% and increase irrigation efficiency by plot to 80% ;
- For industry: extend recycling to 50%.

**Total water use efficiency from 2005-2010 lies between 40 and more than 80% in the Mediterranean countries.**

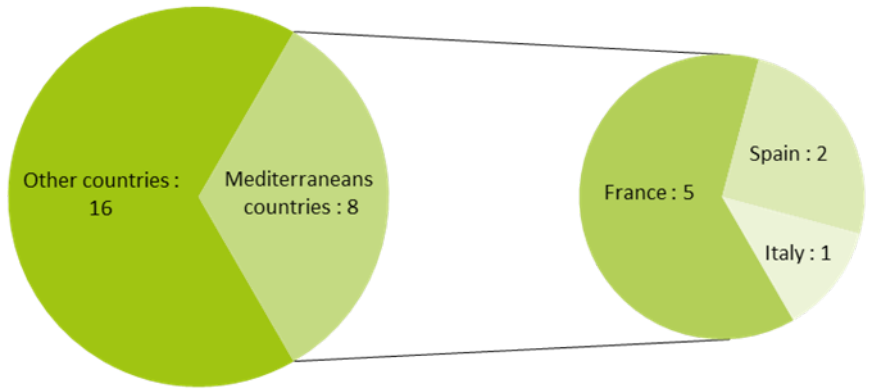
In Albania and Malta, efficiency performance is better for irrigation than for drinking water.

Between 1995 and 2005-2010, most of the countries achieved encouraging progress in terms of their efficiency in the various water use sectors. In Cyprus and Israel, the total water use efficiency today is higher than 80%.



Mediterranean countries and Green List initiative

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



Number of « Green-Listed » pilot sites per country

“ The development of IUCN Green List should provide an accurate framework for protected areas' management. ”

**Definition:**

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 recently. Some of the French, Italian and Spanish sites do not border the Mediterranean Sea (e.g. Natural Marine Park of Iroise and Guadeloupe National Park).

Sources / References: <https://www.iucn.org/fr/node/17069>

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 10 countries including France, Italy and Spain. The last IUCN World Park Congress took place in Sydney in November 2014:

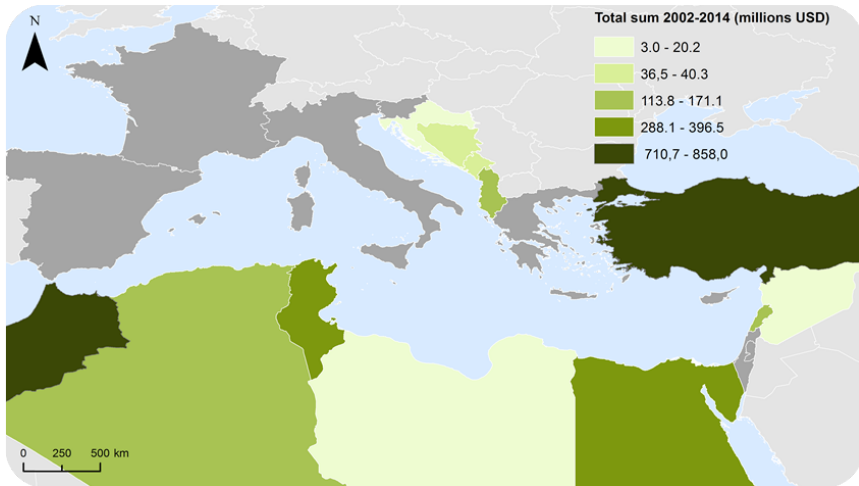
**24 of the tested sites obtained a GLPCA award, 8 of which were located in 3 of the Mediterranean countries.**

The Mediterranean pilot sites are the following: Natural Marine Park of Iroise (France); Pyrénées National Park (France); Marine natural reserve of Cerbère-Banyuls (France); Sensitive Natural Area « Marais d'Episy » (France); Guadeloupe National Park (France - Overseas territory); Gran Paradiso National Park (Italy); Doñana Natural Space (Spain); Espacio Natural de Sierra Nevada (Spain).

The second phase of the Programme, called « Development phase » began in mid 2015 and is expected to last until 2018. In the Mediterranean Basin, 2 new pilot countries joined the Green List Programme: Algeria and Croatia.

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 19<sup>th</sup> meeting of the Contracting Parties to the Barcelona Convention.





Average annual development assistance and public expenditure for biodiversity, millions USD (2002-2014)

“Mediterranean countries lack sustainable and regular funding for biodiversity and ecosystem protection.”

**Definition:**

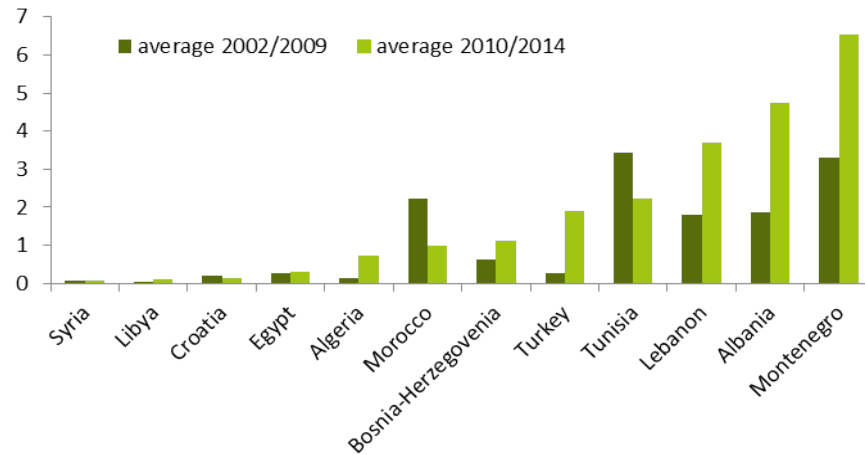
This indicator deals with official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems. The goal is to mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems. It's a Sustainable Development Goal indicator of the Agenda 2030.

**Precautions / Notes:**

This indicator is available for recipient countries and for donor countries. The information contained here refers to the “Total official development assistance for biodiversity” and to recipient countries only.

Sources / References: OECD  
 Extracted from: <http://unstats.un.org/sdgs/indicators/database/?indicator=15.a.1>

**FINANCIAL RESOURCES FOR BIODIVERSITY PROTECTION IN THE MEDITERRANEAN**



Average annual development assistance and public expenditure for biodiversity, USD per capita (2002-2014)

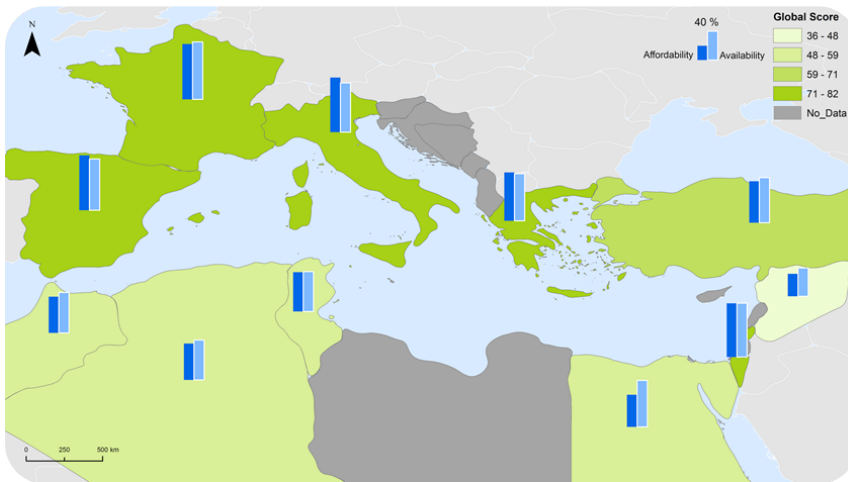
Development assistance and public expenditure for biodiversity and ecosystem protection vary largely across time and space.

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 sustainable in the long term.

This indicator should be further explored and augmented 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?).

The current data does also not allow to make a judgement on 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?).



Normalized Global Food Security Index (2016)

“ An adequate collaboration between countries should improve food security rates in the region. ”

**Definition:**

The 1996’s 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 ».

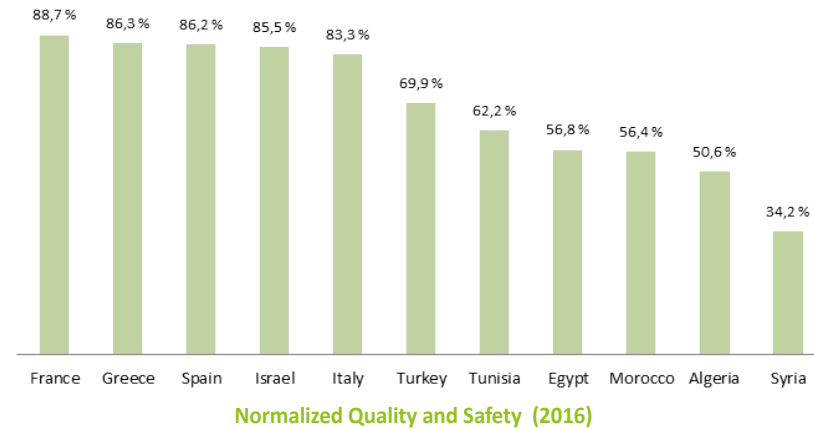
- Affordability measures « the ability of consumers to purchase food »,
- Availability measures « the sufficiency of the national food supply»,
- Quality and safety measures « the variety and nutritional quality of average diets, as well as the safety of food ».

**Precautions / Notes:**

Across all indicators used for the construction of the Global Food Security Index, where the data have missing values, the Economist Intelligence Unit has estimated the scores.

Sources / References: The Economist Intelligence Unit Limited 2016

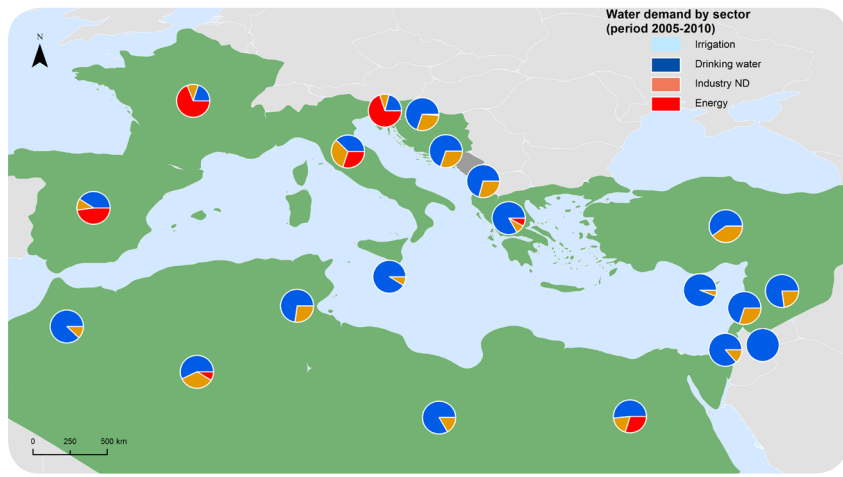
## WHAT OPPORTUNITIES IN THE MEDITERRANEAN REGION FOR FOOD SECURITY?



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

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

- The state of good food security has been reached in many Northern Mediterranean countries, Turkey and Israel. However data is missing to evaluate food security rates in the Balkans, Cyprus, Lebanon, Libya, Malta and Palestine .
- In most countries food affordability and availability rates are very close.
- Improving food production and farmer’s income, especially in Southern and Eastern Mediterranean countries, is necessary for a better food security.
- On the contrary, in Egypt, food affordability is lower, meaning that improving employment and income in the country 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 or lack of nutrients in people’s diet.
- Syria’s food insecurity issue can possibly be related to the current political instability of the country.



Water demand by sector (period 2005-2010)

“ Overall, the evolution in water demand is alarming in the Mediterranean countries because this resource is often scarce. ”

**Definition:**

Total water demand is defined as the sum of the volume of water mobilised 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.

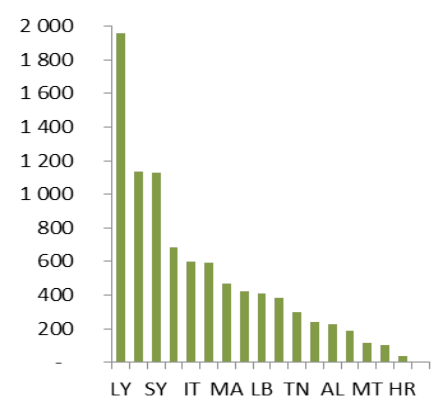
Water demand in relation to GDP of each activity sector corresponds to the demand for water used divided by the value added in the same sector (agriculture, industry).

**Precautions / Notes:**

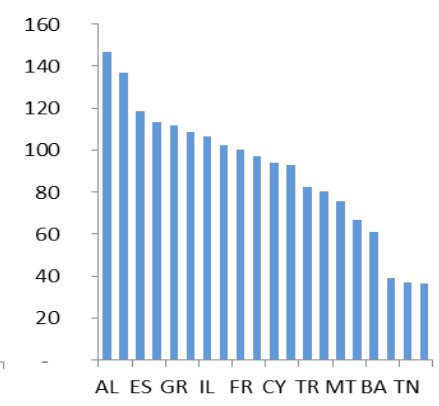
For agriculture, the indicator could be even more polished by calculating the ratio between irrigation water demand and the value added of the irrigated production.

Sources / References: FAO-Aquastat, World Resources Institute, Plan Bleu and national reports 2008 & 2010. World Bank for the agricultural value added and the population

**IS WATER DEMAND BECOMING MORE MODERATE?**



Water demand in agriculture / Added value in agriculture, 2005-2009 (m<sup>3</sup> / 1000 US\$)



Drinking water demand per capita, 2005-2009 (m<sup>3</sup>/year)

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). But the water demand and the growth in GDP should also be decoupled by increasing the value added for per cubic metre of water used.

Better demand management also allows the decoupling of the rise in irrigated production and the rise in the use of water for irrigation.

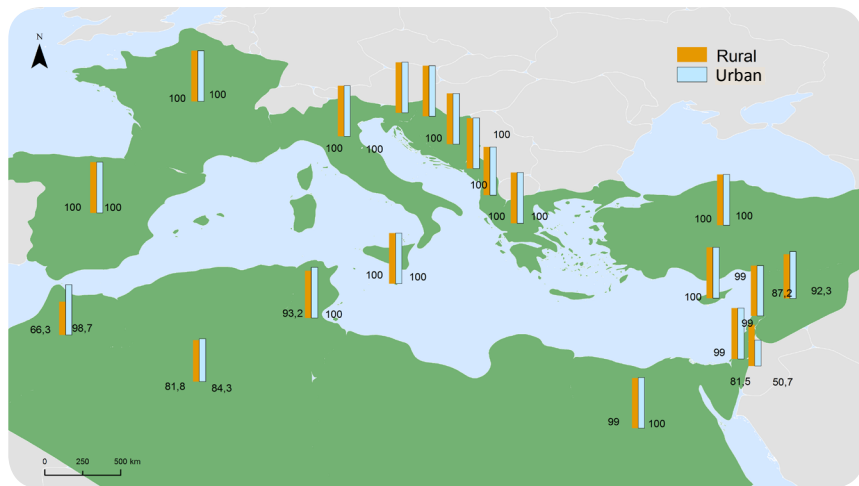
Overall, the evolution in water demand is alarming in the Mediterranean countries because this resource is often scarce.

The share of water for agriculture remains high, often higher than 50% in most of the countries and is even close to 90% in Syria and Morocco.

In the Balkan countries and France where the precipitations allow practising a major rain-fed agriculture, the water demand for irrigation is low.

The volume of water used to produce 1000 dollars of agricultural value added goes from about 7 m<sup>3</sup> in Slovenia to more than 1000 m<sup>3</sup> in Syria and Egypt, and close to 2000 m<sup>3</sup> in Libya.

Drinking water demand per capita varies greatly from one country to another, from around 36 m<sup>3</sup>/year/cap (100 litres/day) in Tunisia and Morocco to about 150 m<sup>3</sup>/year/cap (410 litres/day) in Albania.



Share of population with access to an improved water source, 2015 (Rural and Urban)

“ In 2015, the proportion of the population with access to a source of drinking water was over 80% in most Mediterranean countries. ”

**Definition:**

This indicator represents the population that is supplied with or has reasonable access to sufficient drinking water. “Access” here means a source that produces at least 20 liters per capita per day and located no more than 1000 meters away. (Millennium Development Goals Indicator n°30).

**Precautions / Notes:**

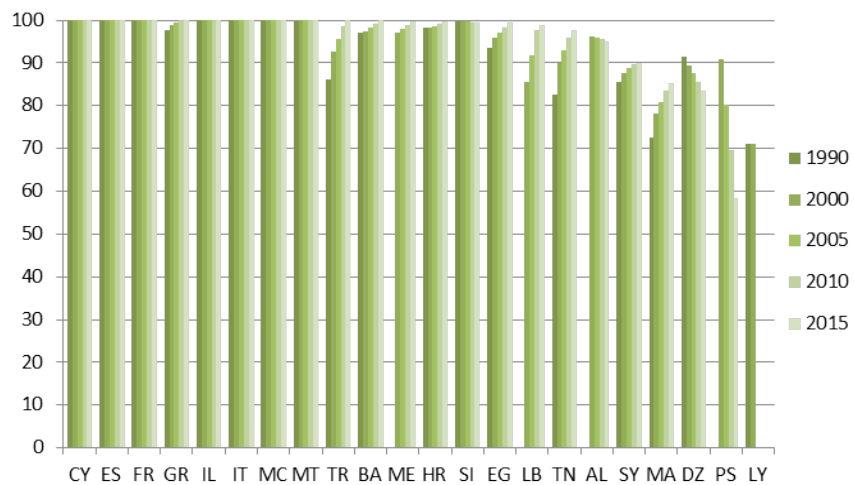
The distinction between “urban population” and “rural population” cannot easily be given one applicable definition to all the countries. The national definitions refer in general to the size of the built-up areas; the rural population thus is the rest of the population which is not considered as urban.

The problem of frequent water cut-offs in many Mediterranean countries is not taken into account in this indicator.

This indicator should be made more precise for Mediterranean countries in order to show the progress being made in direct access to domestic drinking water.

Sources / References: UN Data (<http://data.un.org/>) ; World Development Indicators (WDI)

**IS ACCESS TO DRINKING WATER INCREASING?**



Share of population with access to an improved water source, 1990-2015 (%)

Sustainable access to an improved water source, in other terms, drinking water, is an indicator of Millennium Development goals and Sustainable Development goals.

This means reducing by half, by 2015 (compared to 1990), the proportion of people without access to drinking water.

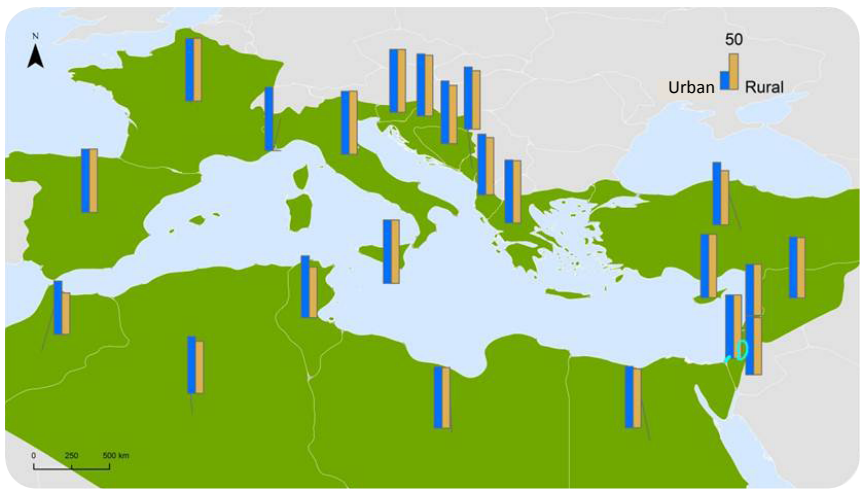
**In the overall Mediterranean region, this goal is achieved!**

The proportion of people without access to drinking water decreased from 7% in 1990 to 3.25% in 2015.

Many countries have already reached 100% access to drinking water. Between 1990 and 2015, most of the countries made encouraging progress.

The access to drinking water in urban areas is in generally higher (about 99%). The rate is between 50% and 95% in Albania, Algeria, Palestine and Syria.

The situation is not as good in rural area. In four countries (Morocco, Algeria, Palestine and Syria) the rates are between 63 and 87%.



Share of population with access to an improved sanitation system (Rural and Urban) 2015

“ In 2015, the proportion of the population with access to an improved sanitation system is greater than 75% in all Mediterranean countries. ”

**Definition:**

This indicator represents the population with access to a basic sanitation system for disposal of human excrement of households or the immediate neighbourhood (public wastewater network, septic tanks, etc.). It is one of the Millennium Development Goals Indicators (n°31) and was proposed for the Horizon 2020 initiative.

**Precautions / Notes:**

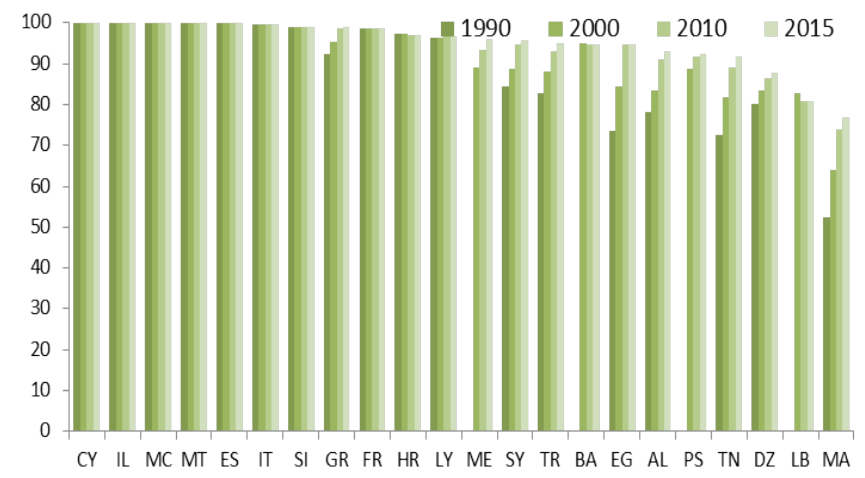
The fact that facilities are available does not mean that they are used. A town sanitation network should allow for the collection and evacuation of wastewater of all types (cess-water, household water, industrial water, etc.) while ensuring transporting it, the fastest way possible, to the place where it is treated (wastewater treatment plant).

Because of differences in the definition of urban population from one country to another, international comparisons can be biased. This indicator should be made more precise in the Mediterranean region in order to show the progress being made according to the type of wastewater collection (individual or collective) and the treatment methods.

**Sources / References:**

United Nations Statistics Division, The Millennium Indicators Database.  
 The Millennium Development Goals Report 2012, United Nations.  
 WHO/UNICEF Joint Monitoring Programme (JMP) for the water supply and sanitation

**IS ACCESS TO SANITATION SYSTEM IMPROVING?**



Share of population with access to an improved sanitation system, 1990 – 2015 (%)

Access to an improved sanitation system (not necessarily including waste water treatment) is important, especially in urban areas where the contact possibility of wastewater of the population is higher.

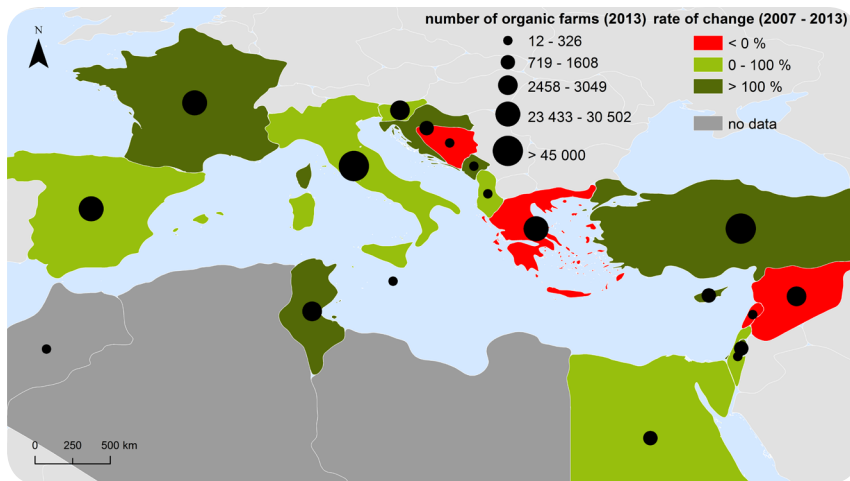
**In the Mediterranean, about 27 million people do not have access to an adequate sanitation system.**

In 2015, the proportion of the population with access to a sanitation system is about 77% in Morocco and 100% in most of the northern Mediterranean countries.

The percentage of the urban population with access to a sanitation system is higher than 90%, with the exception of Morocco (84%) and Lebanon (81%).

The disparities between urban and rural areas are still great and the access rate in rural areas can be lower than 80% (Morocco, Tunisia).

The rate of the access to an improved sanitation system in the south and east Mediterranean countries (95%) is higher than the world average (about 78%). It is the same situation for the access rate in urban (96%) and rural areas (88%).



Number of organic farms

“ Organic farming is unprecedentedly booming but still only covers 2,3% of the agricultural land in 2013. ”

**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.

**Precautions / Notes:**

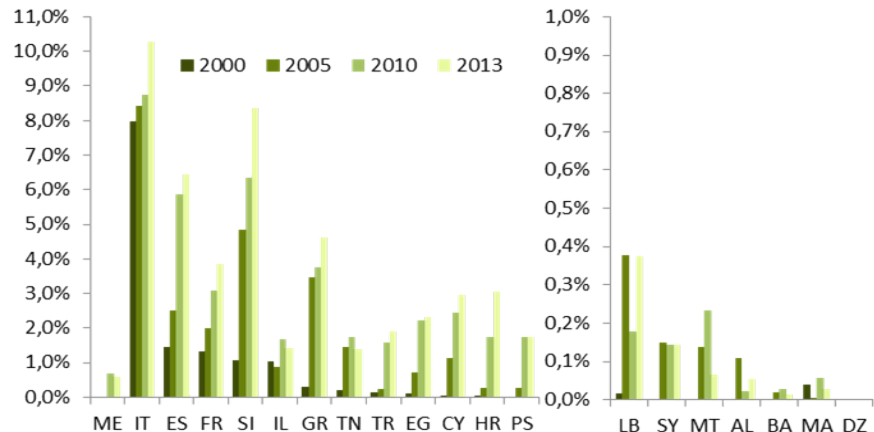
Organic systems and products are not always guaranteed.

The farming systems that do not use synthetic inputs by default, for example, the farming practices of organic production methods aim to maintain the quality of the soil, are excluded from the appellation/certification organic farming.

The land used by organic farming is not an indication of the quality of the product associated, nor of the economic and social lifespan of this type of agriculture. In European countries, the data on high quality products is available because the European Union has created protection and valorisation systems for agricultural products and foodstuffs.

Sources / References: FiBL & IFOAM (2015): The World of Organic Agriculture, 2015

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



Organic agricultural land and share of total agricultural land (2000-2013)

The rise in agricultural added value from the development, acknowledgement and marketing of top quality Mediterranean products is a real challenge for agriculture in the region. The agriculture quality product is not sufficiently referenced in the Mediterranean countries, but the proportion of agricultural land used by organic farming is at least an indicator of the high quality development production.

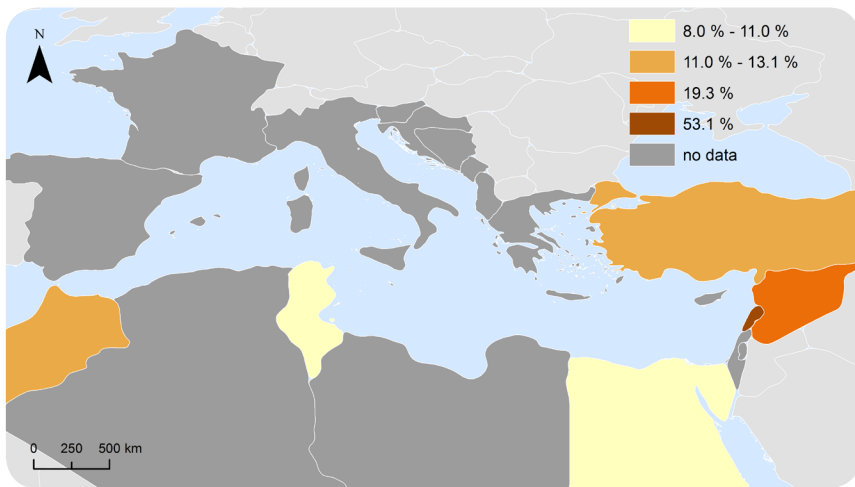
Except in Italy, Slovenia and Spain where organic farming represents respectively 10.3, 8.4 and 6.4% of agricultural land, it concerns less than 5% of agricultural land in other Mediterranean countries.

The number of organic farms has been evolving between 2007 and 2013. In fact, three categories of countries can be distinguished :

- Countries where the number of organic farms has decreased (five countries, e.g. Bosnia and Herzegovina and Greece);
- Countries where the number of organic farms has increased (six countries, e.g. Israel and Egypt);
- Countries in which the number of farms has more than doubled (seven countries, e.g. Cyprus and Turkey).

Besides, organic farming has become one of the most dynamic agricultural sectors in the European Union, with 10.2 million hectares in 2013 , i.e. 5.7% of agricultural land and about 260 000 farms.

Italy, Slovenia and Spain are situated in the first positions in Europe for their organic farming, and ranked respectively 11<sup>th</sup>, 15<sup>th</sup> and 20<sup>th</sup> worldwide in terms of proportion of land used for organic farming.



Proportion of Urban Population living in Slums (2014)

“ The number of people living in precarious housing is still growing. ”

**Definition:**

This indicator measures the proportion of urban dwellers living in informal settlements and deprived housing conditions (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 a sign for deteriorating living conditions in urban areas.

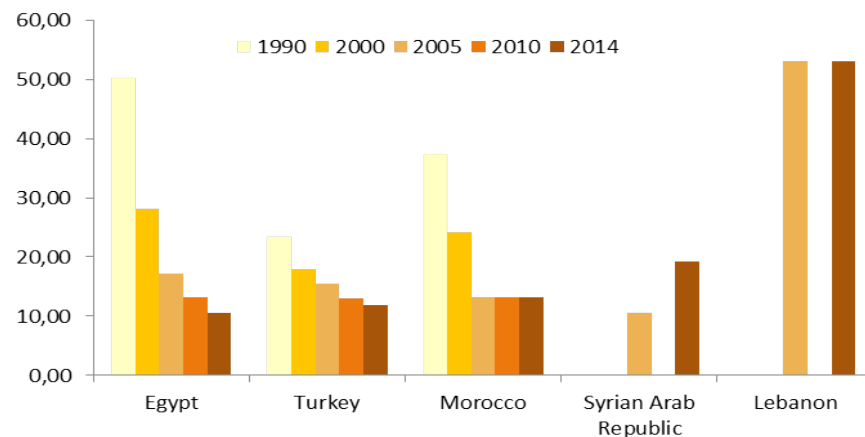
It is a Sustainable Development Goal indicator from the Agenda 2030, with the following target: by 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

**Precautions / Notes:**

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

Sources / References: World Cities Report 2016 ; UN HABITAT

**IS ACCESS TO DECENT DWELLING IMPROVING?**



Proportion of Urban Population living in Slums (%)

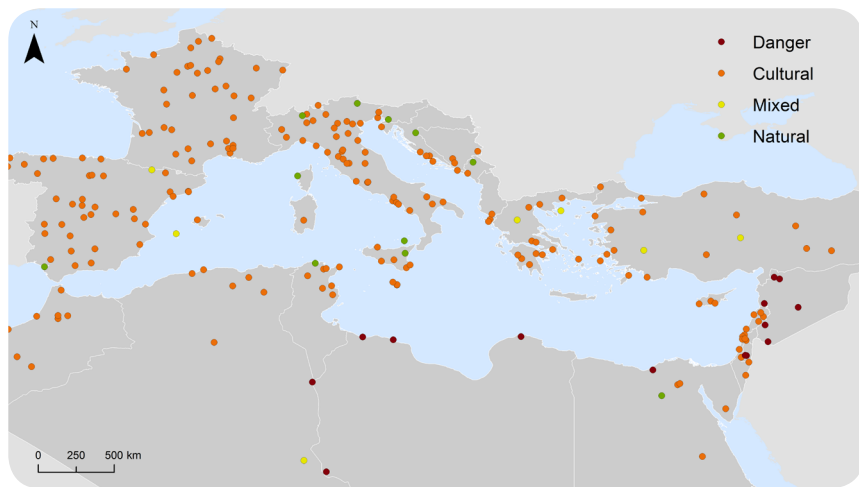
The informal settlement is the result of a galloping urbanization fed by the rural exodus, a gap between the supply and demand of decent housing, the low solvency of poor households to find accommodation (in home-ownership or in the rental stock), and of a gap between the territorial planning and the reality of the urban sprawl.

Recent estimates provided by UN-Habitat show that the proportion of the urban population living in slums in the developing world decreased from 46.2 per cent in 1990, 39.4 per cent in 2000, to 32.6 per cent in 2010 and to 29.7 per cent in 2014. However, estimates also show that the number of slum dwellers in the developing world is on the increase given that over 880 million residents lived in slums in 2014, compared to 791 million in 2000, and 689 million in 1990.

This indicator clearly progressed during the 90s and in the 2000s, in particular further to Habitat II (Istanbul, 1996) which focused on the restructuring, the regularization and the urban integration of the non-statutory districts.

So, the national programs of social housing allowed to lower the part of the population having no access to a decent dwelling and living in districts without essential services : from 12,6% to 3,8% in Egypt between 1990 and 2014 (8.8 million persons concerned). In Turkey, the population living in slums in 2014 is approximately 6.6 million (11.9%), compared to 7.7 million in 1990 (23.4%).

However, the reduction of the unhealthy housing is not achieved (order of magnitude): stable in Morocco around 13%, increase in countries and areas in conflict (Syria). That requests to pursue the efforts undertaken by public authorities and the housing operators.



World Heritage List and the List in Danger

“ 23% of the sites inscribed on the List of World Heritage are located in Mediterranean countries. ”

**Definition:**

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:

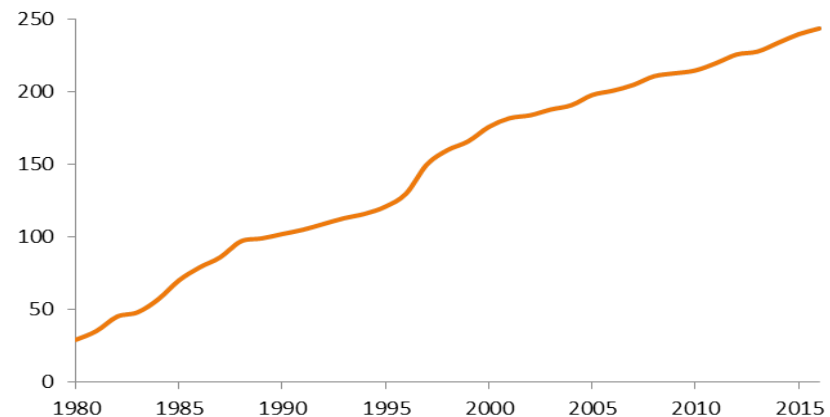
- The World Heritage List: a list of properties forming part of the cultural heritage and natural heritage which it considers as having outstanding universal value.
- The List of world Heritage in Danger: the list may include only such property forming part of the cultural and natural heritage as is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

**Precautions / Notes:**

The Committee may decide to remove a site from the World Heritage List and the List of World Heritage in Danger.

Sources / References: <http://whc.unesco.org/fr/list>

**UNESCO WORLD HERITAGE SITES: SITUATION IN MEDITERRANEAN COUNTRIES**



Number of Unesco World Heritage sites (1980-2016)

The heritage conservation is one of the objectives of UNESCO. The List of World Heritage constantly progressed in the Mediterranean countries. The number of sites inscribed has increased from 29 in 1980 to 244 in 2016.

Among these sites, 133 are located on the Mediterranean coast (within 100 km of the coastline).

In Mediterranean Countries: 91 % are cultural sites, 6 % are natural sites, 3 % are mixed sites.

However, there are great differences between countries :

- 3 countries have many sites: Italy (49), Spain (42) and France (39). Greece and Turkey are lagging far behind 18 and 16 sites.
- 5 countries have few sites: Albania, Montenegro, Palestine and Slovenia each have 2 sites inscribed.

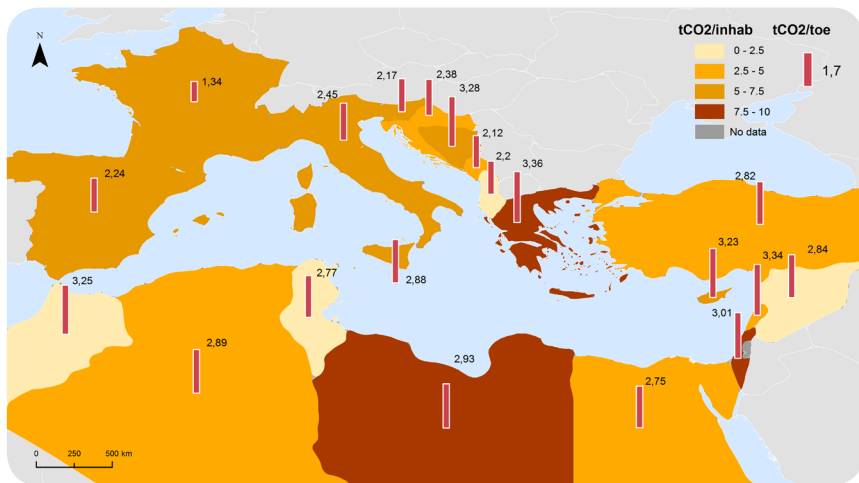
In the world, 55 sites are in danger and 26% of these sites are in Mediterranean countries.

All sites in Syria, Libya and Palestine are Inscribed on the List of World Heritage in Danger.

The 22 Mediterranean countries are States Parties of the World Heritage Convention.

Currently, 371 sites in Mediterranean countries are on a Tentative List (22% of world sites). A Tentative List is an inventory of those sites which each State Party intends to consider for nomination.





CO<sub>2</sub> emissions from energy, per energy use (2011) and per inhabitant (tCO<sub>2</sub>/inhab) (2012)

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

**Definition:**

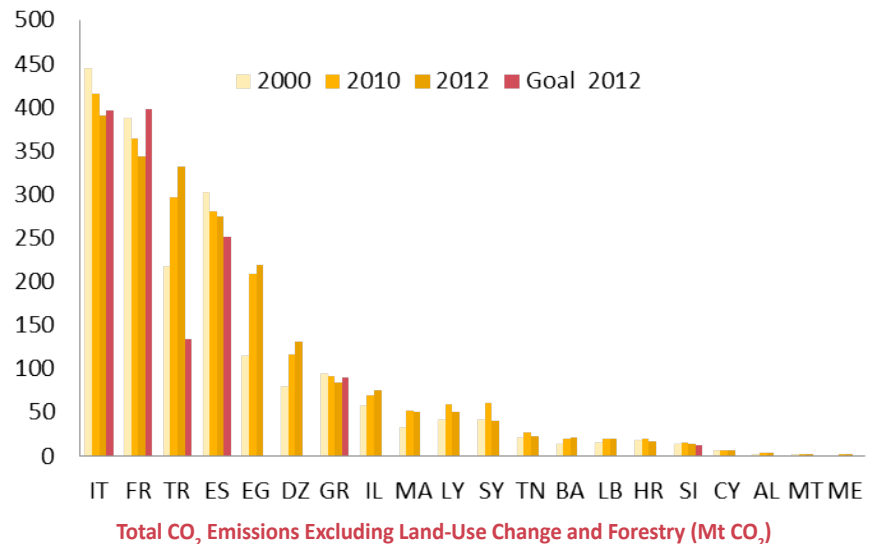
This indicator corresponds to the aggregate annual national emissions of human origin the main greenhouse gases: Carbon dioxide (CO<sub>2</sub>), Nitrogen dioxide (N<sub>2</sub>O), Methane (CH<sub>4</sub>), Hydrofluorocarbons (HFC), Fluorocarbon (PFC) and Sulfur hexafluoride (SF<sub>6</sub>).

**Precautions / Notes:**

In this fact sheet, only CO<sub>2</sub> emissions from solid fuels, cement and the gas flaring are taken into account. On average, they count for 80% of the emissions of human origin greenhouse gases.

Sources / References: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute. Available online at: <http://cait.wri.org>

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



Not all the Mediterranean countries have the same commitments under the Kyoto Protocol. These 7 countries are officially committed to reduce or control their emissions by 2012, compared to 1990 emissions: Croatia, Monaco and Slovenia (-8%), Italy (-6.5%), France (stabilisation), Spain (+15%) and Greece (+25%). The EU-27 committed to reduce 20% of its CO<sub>2</sub> emissions by 2020.

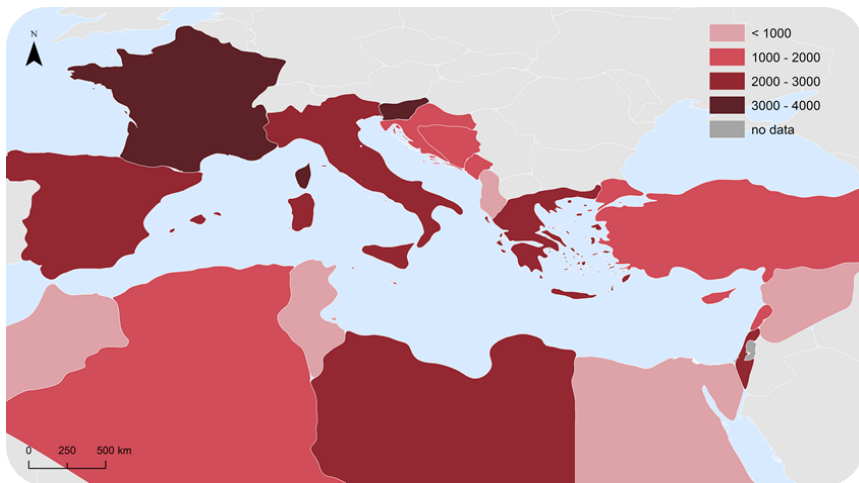
The Mediterranean countries with no quantified commitment under the Kyoto Protocol nevertheless committed themselves to control their GHG emissions with respect to the Climate Convention and Kyoto Protocol. They can use eligible projects under the Clean Development Mechanism or specific funding as those of the Global Environment Facility.

The rise in CO<sub>2</sub> emissions between 1990 and 2012 was higher than the national objectives in all of the countries except in France.

The CO<sub>2</sub> emissions from energy have decreased in 2 countries (France, Albania) and have doubled in Turkey, Egypt, Israel and Morocco.

In 2012, one Mediterranean citizen emitted an average of 5 tons of CO<sub>2</sub> per year, that is, equivalent to the world average, but two-thirds of the emission of a EU-27 inhabitant (7.4 tons) and almost 3.7 times less than a USA inhabitant (16.4 tons of CO<sub>2</sub> per annum).

In the North, the CO<sub>2</sub> emissions per capita are extremely diverse: from 1.3 tons per capita in Albania to 7.6 in Greece in 2012. The differences in CO<sub>2</sub> emissions per capita are also significant in the southern and eastern Mediterranean countries: from 1.6 tons in Morocco to 8.3 tons in Libya.



Energy use per capita, 2013  
(Kg of oil equivalent per capita)

“ In most countries the energy intensity is improving. ”

**Definition:**

Energy intensity is a measure of the energy efficiency of a nation's economy. It is calculated as units of energy per unit of GDP. (kilo oil equivalent per 1000 \$)

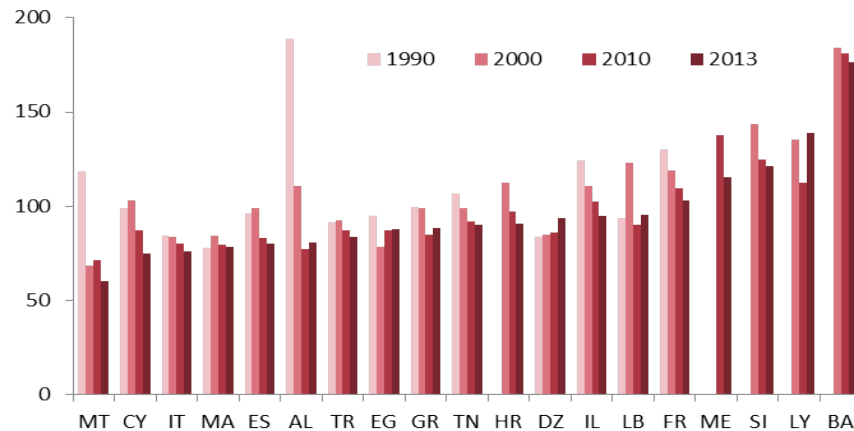
Energy consumption refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport.

**Precautions / Notes:**

The very high values should be interpreted with caution for the countries in economic crisis (with low GDP growth). Koe : kilo oil equivalent.

Sources / References: IEA Statistics © OECD/IEA 2014. Available at [iea.org/stats/index.asp](http://iea.org/stats/index.asp)

**HAS PROGRESS BEEN MADE IN ENERGY USE?**



Energy intensity (kg oil equivalent per \$1,000 GDP (Constant 2011 PPP \$))

\* PPP : Purchasing Power Parity

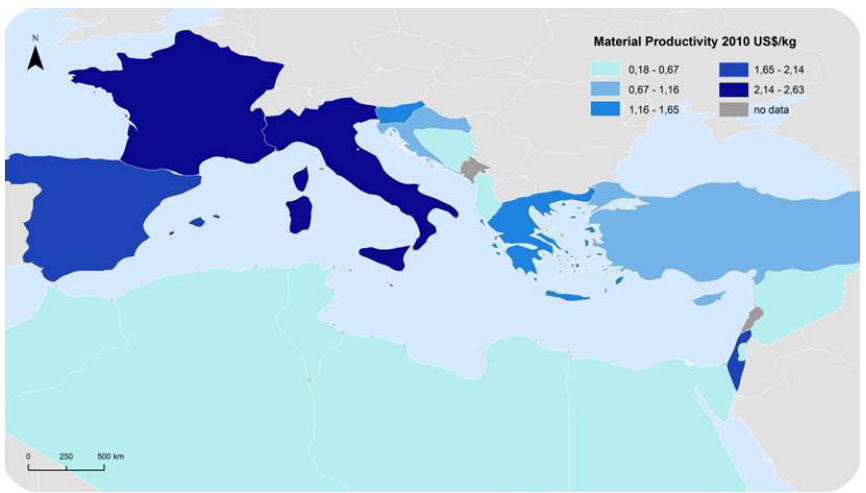
Mediterranean countries account for 7% of world population and consume about 8% of the world's primary energy. More efficient energy use (energy necessary to produce 1000 dollars of GDP) should help to decouple energy consumption and economic development.

The Mediterranean region is endowed with high potential for energy efficiency, particularly in the South because of expected high economic and population growth with its consequent increase in energy demand. Today the per capita level of energy consumption is lower in the South and will remain so even if there will be a convergence.

Consumption is still high in the European Mediterranean countries (2453 koe/cap) and even 3840 koe/cap in France. Energy consumption per capita in the South and East Mediterranean Countries is below 1700 koe/cap (world average is about 1900 koe/cap), but growth rates are very different depending on the countries.

In 2013, the energy intensity of the Mediterranean countries (96 koe/1000 dollars) was higher than the European average (93) and below the world average (131).

However, disparities between the countries remain great, even between some countries with equivalent income levels. Energy intensity in Libya and Bosnia-Herzegovina is over 100 while it is lower than 100 in Morocco and Malta.



Material Productivity 2010 (US\$/kg)

“ The Mediterranean region relies less and less on material input for economic growth but material productivity remains highly variable across countries. ”

**Definition:**

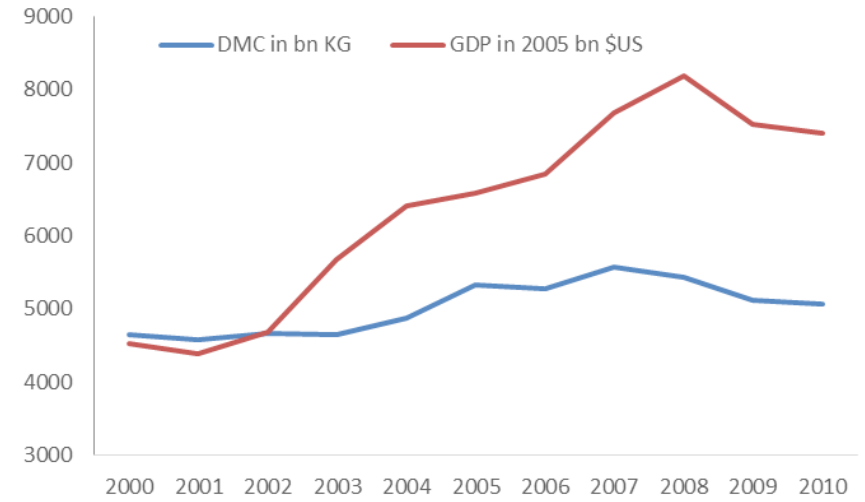
Material productivity of a country measures economic output (measured in monetary units) generated per material input (in physical units), for example Gross Domestic Product/Domestic Material Consumption. Material productivity can also be called resource efficiency. Material productivity indicators are suitable tools to monitor processes of de-coupling resource use from economic growth as a key strategy towards a more sustainable use of natural resources via a reduction of environmental degradation resulting from primary production, material processing, manufacturing and waste disposal.

**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.

Sources / References: WU (2014): Global Material Flows Database. Available at: [www.materialflows.net](http://www.materialflows.net)

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



Domestic Material Consumption (DMC) in billion kg and Gross Domestic Product (GDP) in billion current US\$ in Mediterranean countries, 2000-2010\*

\*Excluding Malta, Monaco and Montenegro and GDP excluding Syria after 2007

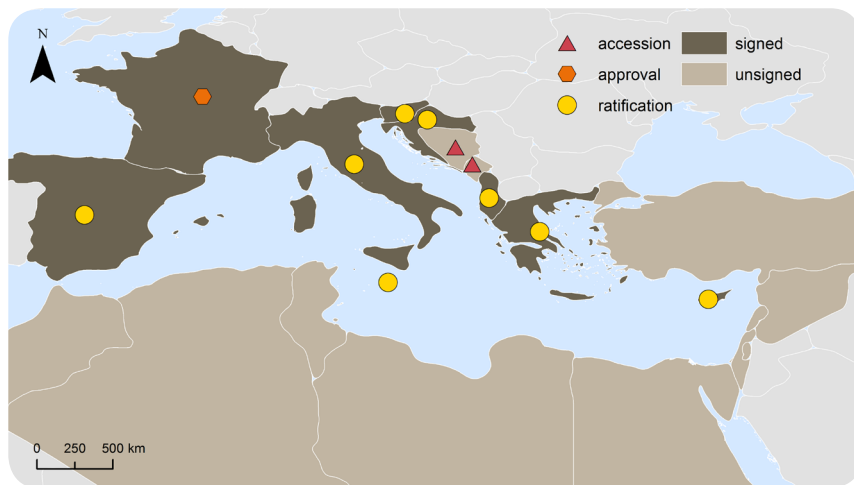
For most societies economic growth is still a fundamental goal, as it is seen as the precondition for further development.

Analyses show that economic growth is directly linked to raw material use ([www.materialflows.net](http://www.materialflows.net)).

In the period 2000–2010, 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 Mediterranean countries increased faster than the amount of used materials.

However, severe events, such as the economic and financial crisis or political instability can negatively influence the development of resource-decoupling and « green growth».

Mediterranean countries should continue efforts towards an « absolute decoupling » of material consumption from economic growth, meaning a stagnation or decrease of material use; the latter being inevitable to safe-guard our natural assets and satisfy future needs of the Mediterranean region.



Aarhus Convention parties

“ A convention extended to the southern countries? ”

**Definition:**

The United Nations Economic Commission for Europe (UNECE) Convention on access to information, public participation in decision-making and access to justice in environmental matters was adopted on 25 June 1998 in the Danish city of Aarhus at the Fourth Ministerial Conference as part of the “Environment for Europe” process.

The Aarhus Convention is a new kind of environmental agreement, that:

- Links environmental rights and human rights,
- Acknowledges that we owe an obligation to future generations,
- Establishes that sustainable development can be achieved only through the involvement of all stakeholders,
- Links government accountability and environmental protection,
- Focuses on interactions between the public and public authorities in a democratic context.

The terms “accession”, “approval” and “ratification” correspond to procedures which vary from State to State. By these procedures, the countries make commitments to respect the convention.

Sources / References: <http://www.unece.org/env/pp/ratification.html>

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

STATUS OF RATIFICATION

As of 27 July 2016, there were 47 Parties to the Convention, 35 Parties to the Protocol on Pollutant Release and Transfer Registers (PRTRs) and 30 Parties to the amendment on public participation in decisions on the deliberate release into the environment and placing on the market of genetically modified organisms (GMOs). The Convention entered into force on 30 October 2001. The Protocol entered into force on 8 October 2009.

« Three-fourths of these Parties » refers to those States which were Parties to the Convention at the time of adoption of the GMO amendment – 27 May 2005. Twenty-seven (27) ratifications by these Parties are needed to trigger the amendment’s entry into force. This means a further 3 ratifications are required from the following Parties were party to the Convention at the time the amendment was adopted but are yet to ratify the amendment: Albania, Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Malta, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine.

Extracted from <http://www.unece.org/env/pp/ratification.html>

**Precautions / Notes :**

Each State that ratifies the Aarhus Convention must send a report every two to three years to the Convention’s International Secretariat regarding implementation of the Convention’s provisions in the State. This report is completed using a questionnaire which is identical for each State. When the report is written, a national public participation procedure on the report must be organised.



Assessment of published national strategies (2016)

“ Only four Mediterranean countries have “good” national strategies on green economy and sustainable development. ”

**Definition:**

This Indicator presents an Assessment of National Green Economy (GE) and Sustainable Development (SD) Strategies published in Mediterranean Countries.

The United Nations Environmental Programme (UNEP) has been leading the development and dissemination of the Green Economy concept at the global level. According to UNEP, green economy aims “to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcity”.

**Precautions / Notes:**

The study includes data up till June 2016, published by national governments and available through public search. It reviews only written documents, not the implementation of it.

Sources / References: report “Towards a Green Economy in the Mediterranean” (eco-union, MIO-ESUDE & GEC, 2016)  
<http://www.medgreeneconomy.org/assets/downloads/greeneconomy-med-web.pdf>

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

Countries	Initiatives
Albania	Several plans and strategies
Algeria	NSSD
Bosnia-Herzegovina	Several plans and strategies
Croatia	NSSD
Cyprus	NSSD
Egypt	Several plans and strategies
France	NSSD
Greece	Several plans and strategies
Israel	SCP
Italy	Green Economy
Lebanon	SCP
Malta	Green Economy
Montenegro	NSSD
Morocco	NSSD
Palestine	Several plans and strategies
Slovenia	CC
Spain	NSSD
Tunisia	NSSD
Turkey	CC

The large majority of the countries have outdated or incomplete national GE/SD strategies. Often they are vague, not giving clear definitions, objectives, budgets or indicators.

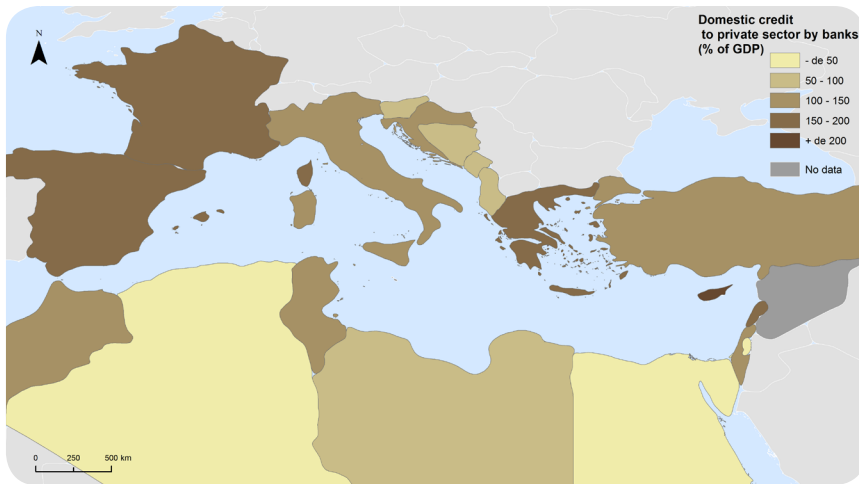
Only four countries (France, Italy, Morocco and Tunisia) can claim to have good, up to-date and detailed strategies with concrete roadmap, or – in the case of Italy – supporting legislation in place.

Seven countries (Albania, Bosnia-Herzegovina, Cyprus, Egypt, Palestine, Slovenia and Spain) have outdated GE/SD strategies or none at all.

The rest of the Mediterranean countries (Algeria, Croatia, Greece, Israel, Lebanon, Malta, Montenegro and Turkey) are somewhere in between these two groups of countries.

The main recommendations to catalyze GE/SD in Mediterranean countries are:

- 1 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.);
- 2 Improve awareness, commitment and involvement of all stakeholders through awareness raising campaigns; dialogues with key actors; and support to local or sectorial initiatives;
- 3 Phase out Brown Economy incentives, commit the financial sector and enhance GE/SD implementation through regional cooperation and peer learning activities.



Domestic credit to private sector by banks in 2015 (% of GDP)

“ The domestic credit allocated to the private sector is being increasing in most of the Mediterranean countries. ”

**Definition:**

Multiple indicator :

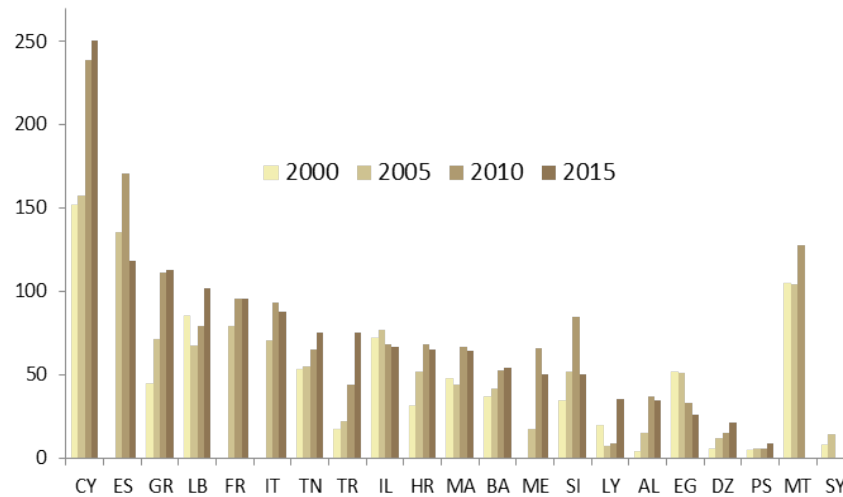
- Share of bank credit allocated to the private sector
- Existence of alternative credit systems other than bank credit

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 the case of 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.

Sources / References: World Bank, World Development Indicators. International Finance Statistics

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



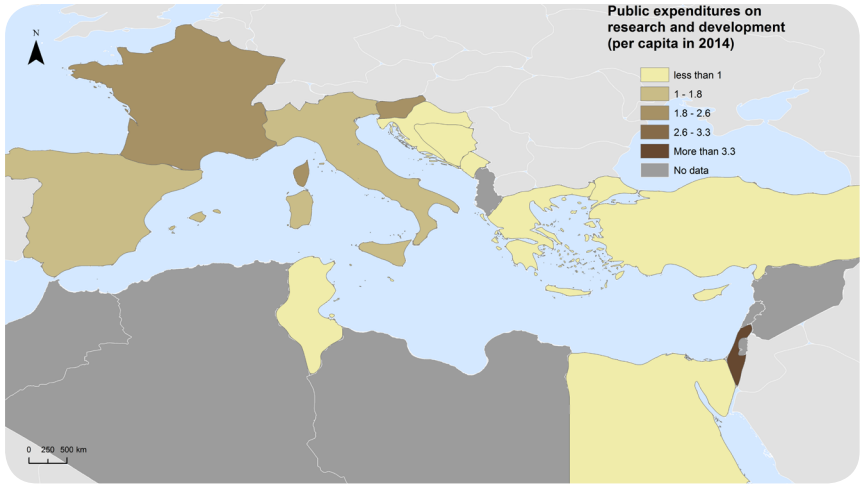
Domestic credit to private sector 2000-2015 (% of GDP)

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

Since 2000, the domestic credit allocated to the private sector has been increasing in most of the Mediterranean countries; except in Italy and Egypt (no data in 2015 for Malta and Syria).

In the Mediterranean region, the share of domestic credit allocated to the private sector in 2015 was relatively low; This share is lower than 50% in 5 countries of which Libya (35%) and Algeria (21%)

While the use of the micro-credit is very wide in Asia, it is little used in the Mediterranean countries, excepted in Morocco where the sector of the micro-finances was one of the most active and of more successful to the world. In several countries of the south and eastern Mediterranean, the public sector takes up a large share of the domestic credit.



Public expenditures on research and development per capita (2014)

“ The amount of national public expenditures on R&D expressed as a percentage of GDP is increasing in all Mediterranean countries except in Croatia and Tunisia but remains low overall. ”

**Definition:**

This indicator is made up of two sub-indicators that are defined as:

- The share allocated for R&D of the operational budget of the public sector;
- The share of the R&D expenditures in the GDP of private sector.

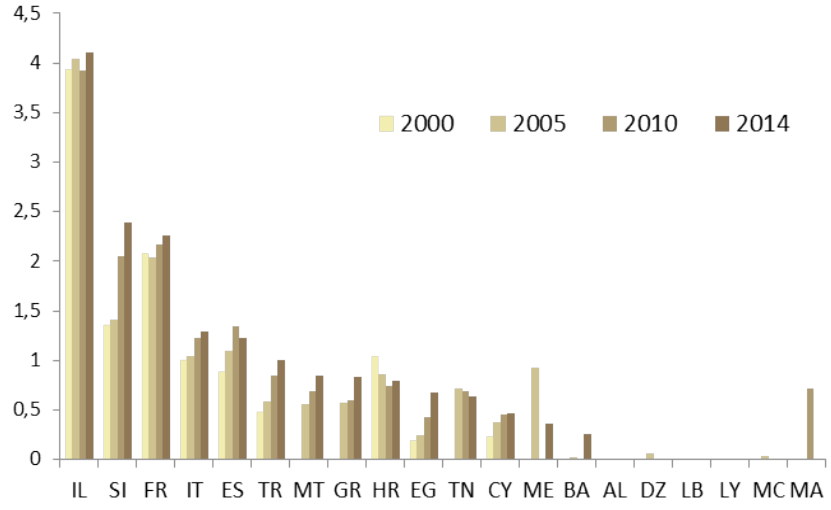
The expenses on R&D include the operating expenditures and investments (including overheads) for creative and system-based activities dedicated to increase knowledge. This amount includes both fundamental and applied research as well as experimental development work leading to new devices, products or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

**Precaution/Notes:**

Expenses on R&D are not necessarily oriented to the sectors supporting sustainable development or contributing to MSSD goals.

Sources / References: UNESCO, PNUD

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



Public expenditures on research and development (in percentage of GDP)

Among the MSSD objectives concerning the rational use of natural resources, the development of environmentally friendly techniques, as well as promoting the economic, social know-how and the diversity of the Mediterranean are essential.

This means increasing expenses, in synergy with the private sector, on research and development (R&D) in order to approach the average level of the countries with equivalent incomes by 2015.

Globally, most countries spend 1.17% of their GDP on research and development (R&D). The expense in EU-27 countries is about 2% of the GDP in 2014.

Except in Israel where national public expenditures on research and development is about 4% of its GDP, the percentages are between 1 and 2,3% in France, Slovenia, Spain, Italy, and Turkey less than 1% in other Mediterranean countries.

The share of expenditures on research and development in GDP of private sector is significant in many countries but it cannot be analysed for the whole Mediterranean region.



**Plan Bleu - Regional Activity Centre**  
15, rue Beethoven - Sophia Antipolis  
06560 Valbonne - France  
Tél : +33 (0)492 387 130 - [planbleu@planbleu.org](mailto:planbleu@planbleu.org)  
[www.planbleu.org](http://www.planbleu.org)