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The Mediterranean, a decade of military policies

Weapons and the militarisation of the Southern Mediterranean

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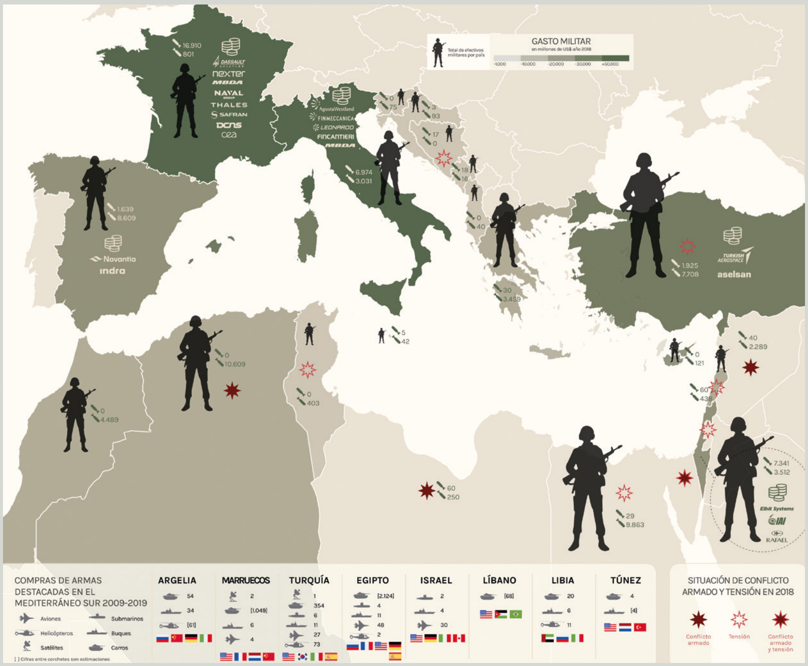
The Mediterranean is a highly militarised region in a state of conflict, it is one that possesses complex security situations, in which Europe has opted to increase its military control and surveillance capabilities, furthering a narrative of securitisation, in which the responsibility for the control of forced migrations has been transferred to the main countries of the Southern Mediterranean (Algeria, Morocco, Turkey, Egypt and Israel) that both arm and militarize their borders, bolstered and spurred on by the main arms-exporting powers in the Mediterranean region: France, Spain, Israel and Italy, and which Turkey has joined during this last decade. This reveals the permanence of high and increasing levels of militarisation.



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1. INTRODUCTION

The Mediterranean is a region with one of the highest alarm indicators with respect to armed conflicts, violence and human rights violations. According to data from the UNHCR, every day 6 migrants die at sea while trying to reach European territory, while the Syrian war alone accounts for 380,000 deaths that are directly related to the conflict, according to calculations made by the Syrian Observatory for Human Rights, and to which the victims of conflicts in Algeria, Libya, Sinai in Egypt, and the Israeli-Palestinian dispute must be added, as well as those of Turkey with respect to the Kurdish conflict, not to mention millions of refugees in situations of extreme vulnerability.

In this context, we consider the development of several security and defence indicators that may help us understand how countries in various parts of the Mediterranean have managed security in the region. To do so we have compared military spending, military personnel and arms transfers made over the last decade with the data available for the 2008-2018/19 period, provided by SIPRI, ENAAT and *Military Balance*. Finally, we will be paying special attention to arms renewal programmes undertaken by the main arms-buying countries in the southern and eastern basin of the region, which in this investigation has been referred to as the Southern Mediterranean, as opposed to the Northern Mediterranean, which includes only European countries.

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2. THE MILITARISATION OF THE MEDITERRANEAN. MILITARY EXPENDITURE AND PERSONNEL

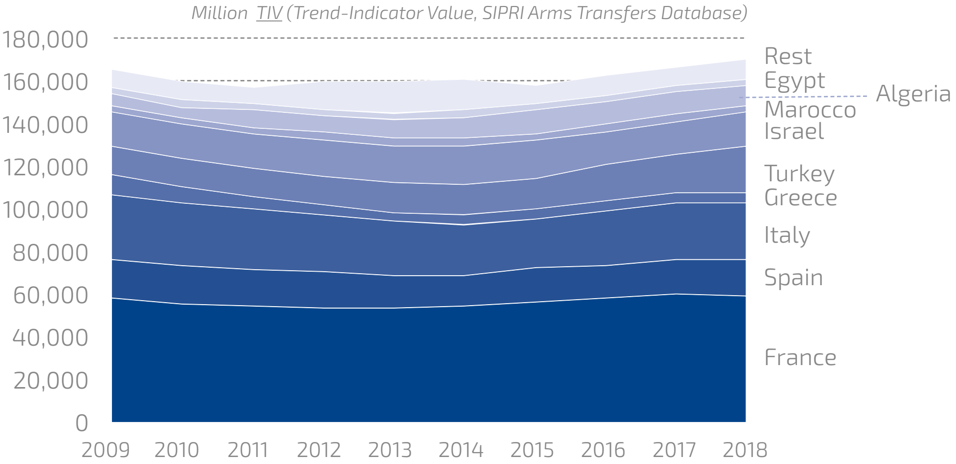
Military spending in those countries that comprise the Mediterranean region exceeded 170 billion dollars in 2018, accounting for approximately 9.7% of global military spending in a region that comprises 6.8% of the world's population. According to SIPRI data in constant 2017 values, Mediterranean military spending increased by 2% over the last decade. European countries have seen their budget items destined for military issues diminished by 7%, which is an example of the impact of the economic crisis that began in 2008 that also led to cuts in some military budgets, especially that of Greece (a 46% reduction) and even that of Italy, which is still 14% lower than its pre-crisis values. However, the countries of the southern and eastern Mediterranean basin increased their military expenses considerably, by 31%. This move has been led by Algeria and Turkey, with respective increases of 85% and 65%, in addition to logically more modest budgets, but with large increases, such as those of Tunisia (89%) and Lebanon (50%). The countries with high military budgets however, that reveal a minimum 5% approximate variation between the beginning and the end of the period are Spain and Israel. Figure 1 shows data for those countries that dedicate the greatest resources to their militarisation by means of military spending.

A second indicator of militarisation levels is the number of troops in the armed forces. The *Military Balance* yearbook offers updated data on the active members of the armed forces, including both reservists and paramilitary corps. Initially, the development of the armed forces has been ascertained in Table 1, by the calculation of their active forces. The first figure shows that the overall trend signals a reduction in the number of military personnel (25% of those who are active and 15% in para-

Military spending in those countries that comprise the Mediterranean region exceeded 170 billion dollars in 2018, accounting for approximately 9.7% of global military spending military forces). Altogether, available military forces have decreased by 21% in the region. Taking into account the relative importance of military personnel in the population of each country, it has been observed that by adding the three variables together, the most militarised country is Israel (75.2‰), followed by Cyprus (52.7‰) and Greece (34.1‰). The 4 giants of the Southern Mediterranean possess figures above 10‰ of the Mediterranean average of military or potential military personnel (including reservists and paramilitary bodies): Egypt1 2.9‰, Algeria 11‰, Morocco 11.4‰ and Turkey 10.9‰.

Taking into account the relative importance of military personnel in the population of each country, by adding the three variables together, the most militarised country is Israel (75.2‰), followed by Cyprus (52.7‰) and Greece (34.1‰)

Graph 1. Evolution of military expenditure in the Mediterranean 2009-2018



Source: Prepared internally based on the SIPRI Military Expenditure Database

Table 1. Evolution of military forces in the Mediterranean 2009 & 2019

Thousands

	2009			2019		
	Armed Forces	Reservists	Paramilitary	Armed Forces	Reservists	Paramilitary
Spain	149.4	319	73,6	120	15	76
France	250	70	103	204	36	103
Italy	186	42	250	171	18	176
Greece	157	238	4	142	221	4
Syria	293	314	108			
Lebanon	56	0	20	60	0	20
Israel	177	565	8	170	465	8
Morocco	196	150	50	196	150	50
Algeria	147	150	187	130	150	187
Egypt	469	479	397	439	479	397
Rest of countries	178	125,2	87,25	96	70	27
Total Mediterranean	**2,769.4**	**2,831.2**	**1,389.85**	**2,083**	**1,983**	**1,205**

Source: Prepared internally based on the Military Balance 2010 & 2020

While the main European countries of the Mediterranean - Italy, France and Spain - have followed similar models in terms of the drastic reduction of their reservists, they have maintained paramilitary forces of significant relevance. In Spain, for example the Civil Guard has increased by 3% in terms of personnel. Continuing with Europe, Greece deserves a special mention, as it is the European country of certain relevance with the least reduction in terms of its military forces (10%), and which together with Cyprus (the scenario of an unresolved armed conflict), maintain some of the highest levels of per capita militarisation in Europe. Other cases that deserve attention, due to their geopolitical relevance in the region, and because they are the scene of conflicts and tensions are Turkey, Israel, Morocco, Algeria and Egypt. Of these five countries, only Turkey has reduced its overall number of militarised troops at the same rate as other countries in the region, although it must be noted that the reduction originates from a cut in 132 thousand military personnel (31%), however it increased its paramilitary forces by 54%. These facts may be explained by both a purge in the army after the failed coup against the Erdogan regime and an increase in the number of troops destined for border control and the management of the millions of refugees fleeing the war in Syria. Israel, however, despite reducing the number of its reservists by 18%, still maintains the highest number of military personnel in the Mediterranean reserve, vying with Egypt, with nearly 500 thousand reservists, maintaining practically the same size army in 2019 as it did in 2009. This fact is undoubtedly influenced by the perpetuation of the armed conflict with Palestine and the country's insistent search for a military resolution to the latter. With regard to Morocco, Algeria and Egypt, the three maintain similar levels of militarisation, although with certain minor reductions in their regular armies, while retaining reservists and paramilitary bodies, a fact that reflects both a high level of social militarisation and the option of retaining those paramilitary bodies that are most-commonly used for migratory crises and border closures.

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3. THE MEDITERRANEAN, A DYNAMIC SECTOR FOR THE PRODUCTION AND TRANSFER OF ARMS

The next step in the analysis of the main indicators that reveal the militarisation of the Mediterranean relates to the import and export of arms. The limited information in this regard shows, on the one hand, the exports made by the EU Member States, in their annual report on the subject, which does not include the (important) data from the United Kingdom or from Germany, both of which do not provide this information. Despite the limitations that arise from the absence of information from the two main European arms exporters, the existing data is useful in identifying the main target countries for European armament in the Mediterranean. Figure 2 shows that the main destinations for arms exports in 2009-2018 from the EU to Mediterranean countries were Egypt, Morocco, Algeria and Turkey. Israel also appears as an important recipient of European weapons, although to a lesser extent. In this integrated overview of European exports in the Mediterranean, it is useful to observe divisions in weapons categories. The results shows that the main European arm transfers to the region comprise military airplanes and ships, with more than half of the total (52%), followed by military vehicles, which includes tanks and armoured vehicles; or explosives, arms, ammunition and small arms of all kinds that together account for 22% of the total.

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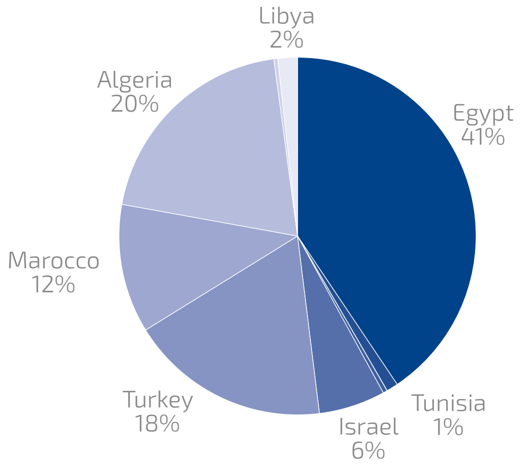
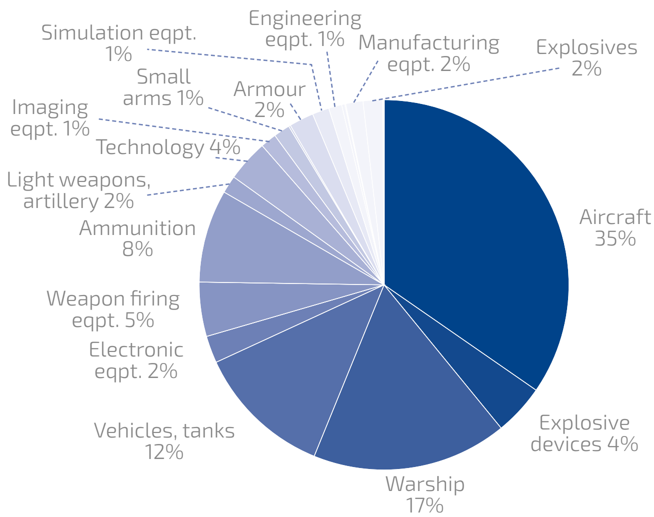
Graph 2. Arms exports from the EU to countries in the Mediterranean 2009-2018



Source: Prepared internally based on the ENAAT European Arms Exports Database

Graph 3. Main arms exports from EU to the Mediterranean by category



Source: Prepared internally based on the ENAAT European Arms Exports Database

The analysis of arms transfers cannot be complete without the information provided on arms exports from the most reliable statistics source, SIPRI, which includes information from all the countries of the world, without exception, even if these figures do not include more than conventional weapons and with the country's own calculation of the value of its transfers. Thus, with respect to the main countries in terms of arms-transfer activities, it may be seen that the five largest exporters in the Mediterranean region are France, Spain, Israel, Italy and Turkey, which in 2019 accounted for 99.5%, as also applied to military spending. These are exports that accounted for 16.8% of the world total and that increased by 9.8% over the last decade in the region. Among these five arms-exporting countries, Turkey has increased its exports by 478%, showing a clear upward trend, and one that reduces distances with the main arms

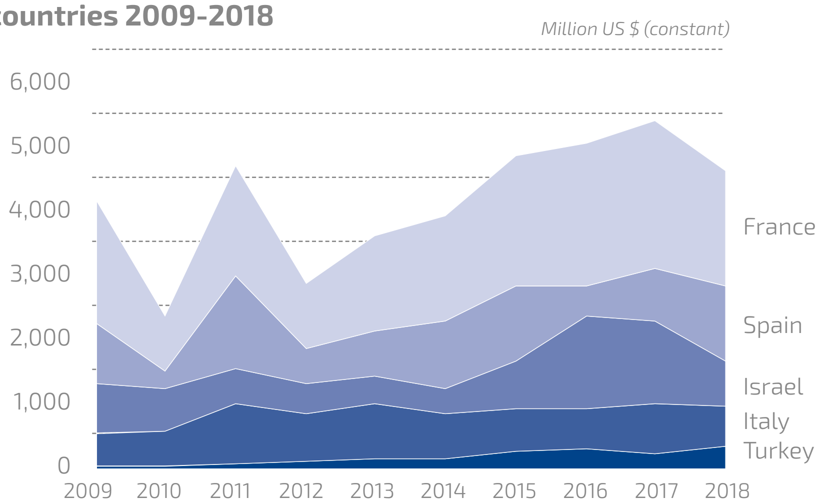
The five largest exporters in the Mediterranean region are France, Spain, Israel, Italy and Turkey, which in 2019 accounted for 99.5%. These are exports that accounted for 16.8% of the world total and that increased by 9.8% over the last decade in the region exporting powers in the region. France's leadership stands firm in this area, despite having reduced its total exports by 10%. In recent years, Spain and Israel alternated in occupying second place in these rankings, although they differed by showing divergent trends, while Spain increased its figures by 25%, Israel's numbers dropped by 7%.

Imports of conventional weapons in the Mediterranean region have however increased by 37%. The countries heading the list of conventional weapons importers in the Mediterranean are, in order of importance, Algeria, Egypt, Turkey, Morocco and Israel, which account for 74% of the total for the 2009-2018 period.

Finally, it is worth taking a look at those arms companies that have been the main players in the militarisation of the Mediterranean. To this end, companies from the Mediterranean that appear in the annual SIPRI rankings (which includes the world's top 100 armament companies) between 2009 and 2018 have been taken as reference. The first relevant fact is that they all account for 11% of worldwide totals in the period studied. The most important companies in the Mediterranean, taking into account their evolution and permanence in the rankings table, are those from France; Thales, DCNS, CEA and Nexter the trans-European companies MBDA and Airbus Defense and Space, in addition to Italy's Leonardo Finmecanica, Selex and Fincantieri, to which the giants of Israeli armament must be added: IAI, Rafael and Elbit. Spain's Navantia and Indra and the expanding Turkish companies, Aselsan and Turkish Aerospace Industries also figure as important players. These are companies that manufacture military aircraft, warships, technological military simulation, control and surveillance equipment, as well as explosives, bombs and missile companies.

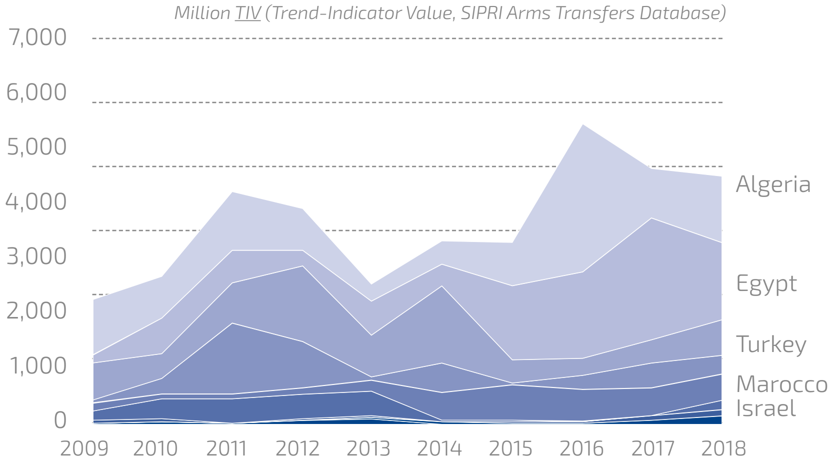
The most important companies in the Mediterranean are French Thales, DCNS, CEA and Nexter; the trans-European MBDA and Airbus Defence and Space; the Italian Leonardo Finmecanica, Selex and Fincantieri; to which the giants of Israeli armament must be added: IAI, Rafael and Elbit. Also Spain's Navantia and Indra and the expanding Turkish companies, Aselsan and Turkish Aerospace Industries

Graph 4. Evolution of arms exports from the Mediterranean countries 2009-2018



Source: Prepared internally based on the SIPRI Arms Transfers Database

Graph 5. Arms imports from Southern Mediterranean countries 2009-2018



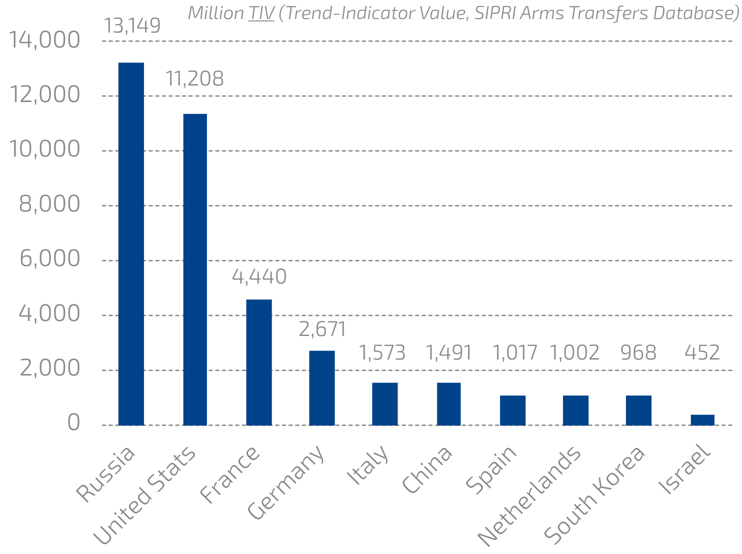
Source: Prepared internally based on the SIPRI Arms Transfers Database

4. THE NEW ARMS OF THE SOUTH MEDITERRANEAN

In this section we have used data from *Military Balance* for the years 2009 and 2019, in order to gather information on the military arsenals of all countries in the Mediterranean region. This investigation reflects the changes made to the arsenals that involve an increase in stocks. With respect to our import analysis, we have focused on those exports made by the countries of the European Union to those of the Southern Mediterranean. However, prior mention should be made of the main powers that export arms to the Mediterranean region and, especially to the Southern Mediterranean. Figure 6 clearly shows that the largest volumes of arms transfers to the countries of the southern and eastern Mediterranean basin were between 2009 and 2018. Those of Russia went to Algeria and Egypt. Those from the United States were destined to Turkey, Morocco, Israel and Egypt. Those from France to Egypt and Morocco, from Germany to Israel, Algeria and Egypt, and from China to Algeria. In all events, as can be seen in Figure 7, Russia, the USA and the EU share the bulk of the budget for arms purchases from countries in the Southern Mediterranean region.

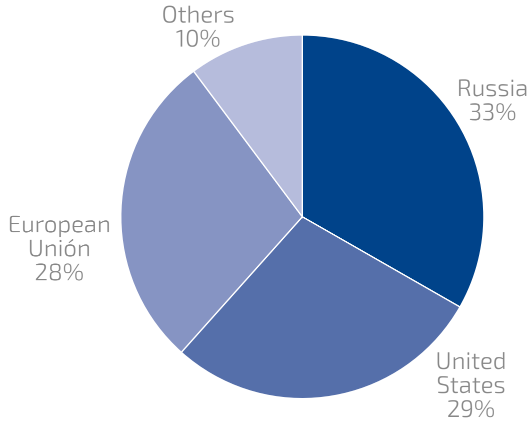
Russia, the USA and the EU share the bulk of the budget for arms purchases from countries in the Southern Mediterranean region

Graph 6. Main arms exporting countries in the Southern Mediterranean 2009-2018



Source: prepared internally based on the SIPRI Arms Transfers Database

Graph 7. Arms exporting countries in the Southern Mediterranean



Source: prepared internally based on the SIPRI Arms Transfers Database

We will now analyse, category by category, highlighting the exports made by the countries of the European Union to countries of the Southern Mediterranean with whom we share the Mediterranean, in order to verify and demonstrate the role of Europe in the perpetuation of conflicts in this region.

The role of Europe in the perpetuation of conflicts in this region

The enormous lack of transparency that exists in everything related to the military field must be first taken into account. Governments do not always publicise the real data on their military arsenals. Starting from this premise, together with the conflicts and humanitarian crises that have been occurring in recent years, it is not surprising that the data we have does not align with the real situation, either because this data is not available, or because of the aforementioned lack of clear information.

There are however important ambiguities when it comes to analysing those arms related to variable cataloguing, especially with respect to vehicles - cars, planes, helicopters and ships – given that broad categories of headings are available such as "Training" or "Utilitarian", which may embrace highly different uses for the materials concerned, from combat to transport, (and including patrol, intelligence or rescue use) as well as the "Transport" category, which in some cases also contains types of ships that may be used for other purposes. To give just one example, as the idea is not to document the cases but to reveal the information gap, the A109K light helicopter, which was bought from Italy in 2010 and 2011 by Algeria appears to be used for border and police purposes in the SIPRI report, yet in the *Military Balance* it is detailed as a transport helicopter. This example leads us to consider the final use given to vehicle fleets with diversified applications, while remaining aware that the information we are working with does possess biases.

Within the group of countries comprising the Southern Mediterranean, we must assume that the data from Libya, Syria and the occupied territories of Palestine are not significant, simply because it does not exist, and because the limited data obtained is usually estimated. The data from these three countries must therefore be applied with caution. Regarding the remaining countries: Morocco, Tunisia, Egypt, Turkey, Israel, Lebanon and Algeria we will be analysing how their reported military arsenal has evolved, paying special attention to Algeria, Egypt and Morocco which, despite the general regional downward trend, report significant upturns in the acquirement of some armaments.

Algeria, Egypt and Morocco which, despite the general regional downward trend, report significant upturns in the acquirement of some armaments

Next, using Table 2, we analyse the militarisation of the Southern Mediterranean in terms of armament acquisitions that have been made in the last decade, identifying how the countries of the southern and eastern Mediterranean basin have been armed in order to deal with the numerous conflicts and tensions that have occurred there throughout the period, in order to determine if this militarisation process has followed the traditional parameters of militarisation. However, as the data studied so far seem to show, it seems to follow a strategy that focuses on curbing migratory flows as a consequence, not only of the wars in the Mediterranean, Africa and the Middle East, but also due to poverty, political instability, repression or even the effects of the climate crisis in these regions.

Table 2. Main arms purchases in the Southern Mediterranean 2009-2019

	CATEGORY	MATERIAL	PURCHASED	MODEL	SELLER	YEAR DELIVERY
Algeria	Vehicles	armoured	54	APC, Fuchs-2	Germany	2013-2014
	Ships	Warships	2	MEKO-A200	Germany	2016
		Patrollers and coastguard	31	FPB-98	France	2008-2018
		Amphibious	1	BDSL	Italy	2014
	Helicopters	Combat	4	Super Lynx-300	United Kingdom	2010-2012
			6	Super Lynx-100	United Kingdom	2015-2016
		Intelligence, Patrol and Rescue	[15]	A-109K	Italy	2010-2011
			[14]	AW139	Italy	2013-2015
			[8]	W-3 Sokol	Poland	2014
		support	[8]	AW119 Koala	Italy	2013
			6	EH-101-400	United Kingdom	2010-2011
Morocco	Satellites	Intelligence, surveillance and reconnaissance	2	Helios-2	France	2017-2018
	Vehicles	Combat	90	IFV (not specify)	Belgium	2009
		armoured	[20]	AIFV, APC	Belgium	2009
			[13]	M-113	Belgium	2009
			926	APC, Fuchs-2	Germany	2015-2025
	Ships	Warships	1	SIGMA-105	Netherlands	2012
			2	SIGMA-90	Netherlands	2011-2012
			1	FREMM	France	2014
		Amphibious	1	LCT 50m	France	2016
		Patrollers and coastguard	1	OPV-70	France	2011
	Aircraft	support	4	C-27J Spartan	Italy	2011-2012
Turkey	Satellites	Intelligence, surveillance and reconnaissance	1	Göktürk-1	Italy	2016
	Vehicles	Combat	[298]	Leopard 2A4	Germany	2006-2010
			56	Leopard 2A4	Germany	2010-2014
	Submarines		6	Type-214	Germany	2019-2024
	Ships	Patrollers and coastguard	1	BPE	Spain	2021
			4	Comandante	Italy	2012
			6	Kiliç	Germany	2005-2010
	Aircraft	Combat	6	CN-235MP	Spain	2013-2014
		Intelligence, Patrol and Rescue	6	ATR-72MP	Italy	2019-2020
			3	CN-235MP	Spain	2013
		support	2	ATR-72	Italy	2013
			10	A400M Atlas	Spain	2014-2019
	Helicopters	Combat	68	A-129C Mangusta	Italy	2014-2018
		Intelligence, Patrol and Rescue	5	Bell-412	Italy	2008

	CATEGORY	MATERIAL	PURCHASED	MODEL	SELLER	YEAR DELIVERY
Egypt	Vehicles	Combat	[237]	AIFV	Netherlands	2006-2008
		Armoured	[18]	Sherpa	France	2012
			[2]	MT-LB	Bulgaria	2014
			[173]	Sherpa	France	2013-2014
			1280	APC, Fahd	Germany	1986-2015
			60	APV, Terrier LAU	Germany	2002-2013
	Submarines		4	Type-209/1400	Germany	2016-2021
	Ships	Warships	4	Gowind-2500	France	2017
			1	FREMM	France	2015
			2	MEKO-A200	Germany	¿?
		Patrollers and coastguard	2	EDAR	France	2016
		Amphibious	2	Mistral	France	2016
	Aircraft	Combat	24	Rafale	France	2015-2018
		support	24	C-295	Spain	2011-2016
	Helicopters	Intelligence, Patrol and Rescue	2	AW139	Italy	2012
Israel	Submarines		2	Dolphin/Type-800	Germany	2014-2015
	Ships	Warships	4	MEKO PC-IN,	Germany	2019/2022
	Aircraft	support	30	M-346 Master	Italy	2014-2016
Lebanon	Vehicles	Combat	22	IFV (not specify)	Belgium	2009-2010
			9	Sherpa, APV	France	2013
			25	LMV, APV	Italy	2016-2017
		armoured	8	VAB-VTT	France	2011
			[4]	VAB-VTT	Italy	2013
Libya	Vehicles	armoured	20	Puma	Italy	2013
	Ships	Patrollers and coastguard	6	Bigliani	Italy	2009-2010
	Helicopters	Intelligence, Patrol and Rescue	10	A-109K	Italy	2006-2010
		Utilitarian	1	AW139	Italy	2011
Tunisia	Vehicles	armoured	4	Bastion APC	France	2016
	Ships	Patrollers and coastguard	[4]	OPV-1400	Netherlands	2018

Source: Prepared internally based on the Military Balance 2010 & 2020 Databases and SIPRI
Note: [X] Estimated figures

a) Satellites

Intelligence, surveillance and reconnaissance satellites were purchased by Egypt (1), Morocco (2), Israel (6) and Turkey (2), plus three communication satellites by Israel. Note that France supplied the two satellites for Morocco, and Italy sold one to Turkey, all three being for intelligence, surveillance and recognition - ISR.

b) Armoured Cars and Other Armoured Vehicles

As the table shows, we have made a distinction between vehicles specifically designed for combat: the Main Battle Tank – MBT -, the Reconnaissance and Combat Tank – RECCE -, the Infantry Fighting Vehicle – IFV-, the Assault Tank - ASLT-, the Light Tank -LT TK-,and the others that range from cars specifically for transport, to other more versatile ones with capacities that make them adaptable to different missions, including intelligence, surveillance and reconnaissance: Armoured Personnel Carriers -APCs-, Amphibious Assault Vehicles -AAVs- , vehicles capable of responding to nuclear, biological and chemical situations –NBCs- and Armoured Utility Vehicles –AUV.

An analysis of this armament reveals significant increases in the two subcategories, both in the case of Algeria - which in 2019 had 735 vehicles more than in 2009 - and in that of Morocco, which added 630 vehicles during the same period. In the category of non-combat armoured vehicles, increases also occurred in the arsenal of Turkey, Lebanon and, above all, in Tunisia, which increased its armoured fleet by 69%. Also noteworthy was the purchase by Turkey of 354 second-hand *Leopard-2A4* tanks from Germany, despite 2019 data showing a decrease in the arsenal of tanks in comparison with 2009. Turkey also reflected an increase of over 2,400 non-combat armoured vehicles, amounting to a total of over 6,600, and which included at least 1,560 patrol vehicles, categorised as PPVs,[1] although there may be many more used for this purpose. This data could account for Turkey's growing interest in maintaining border control patrols across its frontiers, and especially those of Syria. The purchase of *Fuchs-2* armoured vehicles by Morocco could be explained in the same way, as these are versatile vehicles that fulfil several functions, including transport, the installation of explosives and electronic warfare.

During this 10-year period, vehicle fleet modernisation has been a trend in several countries through the purchase of diesel engines: Israel is responsible for the most significant case of engine renewal, with the purchase of 790 units during the 2002-2017 period, followed by Turkey, which bought 240 units between 2004 and 2018. In both cases the supplier country was Germany.

Nor should the four diesel engines sold by Sweden to Tunisia for their PPV Bastion patrol vehicles be overlooked.

c) Anti-tank and Anti-infrastructure/Artillery Missiles

This section includes direct fire missiles, that is, those that are used against targets that are visible at launch, and artillery, which is considered as an 'indirect fire' military resource, as artillery targets need not

1. Protect Patrol Vehicle – PPV.

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be visible at launch. The data revealed by the study is not conclusive for this section, as in 2019 there was a general tendency not to include information regarding the amount of inventoried material, although, in most cases, the models were specified.

France stands as a European benchmark in the production and export of missiles of all kinds

Similarly, we have found little data on European exports of this type of weaponry to the countries of the Southern Mediterranean, however it is noteworthy that France is the only European supplier of anti-tank missiles. It exported a thousand *MILAN* missiles to Libya up until 2011 and almost a hundred to Lebanon between 2015 and 2018. Turkey, on the other hand modernized its self-propelled artillery arsenal by purchasing 300 MTU-881 diesel engines from Germany between 2004 and 2013. France stands as a European benchmark in the production and export of missiles of all kinds. This fact will be reviewed in the subsequent sections, as much of the ballistic material purchased, both from France and from other member countries of the European Union is used to arm the vehicle fleet.

d) Air Defence

The same occurs with data on air defence systems as with the data in the previous section: it is inconclusive. However, the available data reflects that Turkey purchased a total of 840 *Rapier-2* air-to-surface missiles from the United Kingdom between 2002 and 2010. Another transaction to highlight among the Mediterranean countries is the loan of second-hand material from Germany to Israel, which comprises 125 *MIM-104A* missiles and two *Patriot* missile systems, all of which took place in 2013. Subsequently, in 2014 France sold 25 *ASTER-15* surface-to-air missiles to Morocco. There is also proof of the purchase of 7 *IRIS-T SLS* missile systems by Egypt from Germany during this period, although there is no data that the transaction was made.

e) Submarines

Algeria, Egypt, Israel and Turkey have all invested in the purchase of submarines, and three of these four countries have bought them from Germany. Israel bought two *Type-800 Dolphins* during 2014 and 2015 and Turkey six *Type-214*s that will be delivered before 2024. In the case of Egypt, apart from four submarines, of which two remain to be delivered, it also bought 125 anti-submarine torpedoes from Germany to arm its vessels, of which 50 had already been imported during the years 2016 and 2017.

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f) Warships

Within the category of warships, we have included destroyers, aircraft carriers and frigates. There are four countries that have made remarkable purchases, such as Morocco, which in 10 years has doubled its fleet from 3 frigates to 5 frigates plus a destroyer, and Algeria, which has made an even greater increase, from 3 to 8 frigates. Israel went from having no warships at all in 2009, to acquiring 4 frigates from Germany, which are to be delivered before 2022. Linked to the purchase of the frigates are other transactions that serve to equip and adapt the weaponry to the specific characteristics of each context. In the case of Israel and the 4 *MECO PC-IN* frigates, the 2016 purchase of *UMS-4110* anti-sub-

There are four countries that have made remarkable purchases, such as Morocco, which in 10 years has doubled its fleet. Algeria, which has gone from 3 to 8 frigates. Israel went from having no warships at all in 2009, to acquiring 4 frigates from Germany marine sonars for two of its submarines is also noted, in the same year, Israel also bought 3 *Flash* model sonars with the same combat purpose, although with the aim of installing them in helicopters.

In the case of Algeria, for example, we have discovered the purchase of 12 diesel engines from Germany and 3 air traffic control radars from the Netherlands for their *C-28A* frigates. Furthermore, during 2016, it purchased two *MEKO A-200* Frigates and various equipment to furnish them: it purchased 4 *CEROS-200* fire-surveillance radars from Sweden, 2 *Giraffe AMB* aerial surveillance radars and 65 *Mk-3 RBS-15* anti-ship missiles, and it acquired 2 127/64LW guns from Italy and an estimated 25 *MU90*[2] torpedoes. We would also like to highlight the purchase of a *MCMV-2010* model minesweeping vessel from Italy in 2017 and another may be on the way, according to information from SIPRI.

2. The data from SIPRI reveal an estimated total of 50 among those destined for frigates and those that are for Super Lynx helicopters.

With respect to Morocco, in order to assemble its *SIGMA* frigates and its *FREMM* destroyer, between 2011 and 2014 it purchased a total of 6 *20PA6* diesel engines, an estimated 40 *MM-40-3* missiles and 3 *TSM-2633 Spherion-B* anti-submarine sensors from France. Meanwhile, during the same period, Italy sold 1 *Orion RTN-25X* fire-surveillance radar and four 76mm *Super Rapid naval guns* and 50 anti-submarine torpedoes to Morocco. Finally, the country purchased 4 *MTU-4000* diesel engines from Germany.

For its nationally-produced *MILGEM* frigates, Turkey purchased 16 *MTU-595* diesel engines from Germany in the 2011-2013 period and in 2018. Some are still pending delivery. From Italy, it bought 8 *Super Rapid* 76mm naval guns, 4 *STING* fire-surveillance radars and 4 *SMART* air-surveillance radars, between 2011-2018. Finally, the Netherlands sold 12 *SMART* radars between 2011and 2014 for its *MEKO-200* and *Perry* frigates.

With respect to Egypt, in order to assemble its *Gowind-2500, MEKO-200* and *FREMM* frigates, it purchased some 65 *MM-40-3 Exocet* anti-ship missiles from France between 2015 and 2017, although they not all have been delivered. France also sold approximately 25 *ASTER-15* air-to-air missiles in 2015 and is in the process of selling 100 *MICA* air-to-air missiles. Germany sold 4 *MTU-4000* diesel engines in 2015. For its part, Italy sold 5 76mm *Super Rapid* naval cannons to Egypt between 2015 and 2017, which finally bought 4 *SMART* air-surveillance radars and 4 *STING* fire-surveillance radars from the Netherlands in 2017.

g) Patrol Boats and Coastguard Vessels

This category includes corvettes and patrol boats, in all their variations, models and adaptations. It should be noted that these are the vessels of reference for maritime patrols and coast guard units be they military or paramilitary, and that there has been a tendency, in almost all the countries investigated, to increase their fleets of patrol boats.

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Turkey bought 4 *Comandante* maritime patrol ships from Italy (2012) and 6 *Kiliç* corvettes from Germany between 2005 and 2010. It armed itself with material purchased from the Netherlands during the same period, namely: 12 naval cannons (6 *Compact 40L70* and 6 76mm *Compact*), 6 *LIROD* radars and 6 *STING* radars, (both fire-surveillance models) and 6

MW-08 air-surveillance radars. Turkey subsequently purchased 16 *Compact* 40L70 naval cannons from Italy between 2011 and 2015, for its *Tuzla* patrol boats. Spain is committed to the delivery of a *BPE* amphibious assault ship in 2021, for which Turkey has already acquired a *MAN-3240* model diesel engine from Germany. It also purchased six *Frankenthal/Type-332* minesweeping ships between 2005 and 2010.

Egypt has dedicated its efforts to equipping its *Ambassador-4* corvettes between 2013 and 2015, buy purchasing four *MRR-3D* air-surveillance radars from France, while from the Netherlands it acquired 4 *Scout* maritime-surveillance radars and 4 fire-control *Sting* radars. Italy sold it 4 *Super Rapid* 76mm naval guns and, finally, it bought 139 *RIM-116A RAM* air-to-air missiles and 16 *MTU-95* diesel engines from Germany.

Morocco purchased an *OPV-70*[3] maritime patrol vessel in 2011 from France, supplying it with two *W-12* diesel engines that were purchased from Finland in the same year, together with a 76mm *Super Rapid* model cannon that was acquired from Italy between 2011 and 2014.

3. Offshore Patrol Vessel –OPV-.

During the period studied, Algeria purchased 31 *FPB-98* patrol boats from France, the Netherlands sold four *OPV-1400* maritime patrol boats to Tunisia in 2018, although only two are currently detailed in the *Military Balance* and, finally, Italy sold 6 *Bigliani* patrol boats to Libya between 2009 and 2010.

h) Amphibious Craft

This category includes ships that have the capacity to transport troops and land and air vehicles, as well as disembark them, without the need for an operational port. The data collected also shows an increase in vessels of this type. Morocco has gone from holding 5 to 6 amphibious craft, with the purchase of a 50m *LCT* in France in 2016, while Israel also purchased a craft during this period. Algeria and Egypt have however invested the most in these terms.

Algeria made a significant investment with the purchase of 7 amphibious vessels during the period studied, including a *BDSL* model assault craft that was purchased from Italy in 2014. It also bought 2 *Scanter-6000* air and sea surveillance radar between 2014 and 2015 from Denmark and an estimated 25 *ASTER-15* surface-to-air missiles for its *BDSL* vessels, purchased from Italy in 2014. Finally, Finland sold two *W-12 model* diesel engines for its *BDSL* vessel. Egypt, on the other hand, bought 8 ships, bringing its total to 20. France provided half of these new acquisitions, these being two *Mistral* assault ships and two *EDAR* landing ships, all of which were delivered in 2016. In the same year it purchased 6 W-16 model diesel engines and 2 W-18 model engines for its *Mistral* ships from Finland.

i) Aircraft

We have classified aircraft airplanes into three subcategories: first, those that are specifically used for combat and whose function is evident, such as those categorised as Fighter Aircraft –FTR-, Fighter Ground Attack –FGA-, Attack Aircraft -ATK-, those with electronic warfare systems -EW- and anti-submarine warfare aircraft- ASW. The cataloguing of the

We have classified aircraft airplanes into three subcategories: first, those that are specifically used for combat, support aircraft, training aircraft, as well as intelligence, patrol and rescue planes

following two groups is more ambiguous, as it comprises multi-purpose aircraft models that are adaptable to different objectives. However, and being aware of the biases, we have distinguished between support aircraft, where we include the mother planes –TKR-, transport planes –TPT- and training aircraft –TRG-, as well as intelligence, patrol and rescue planes, where we include those equipped for intelligence, surveillance and recognition –ISR-, early warning systems –AEW-, electronic intelligence –ELINT-, signal intelligence –SIGINT-, search and rescue –SAR- and those classified as maritime patrol aircraft –MP- . It should be noted that the training aircraft cover the entire spectrum of aviation education, and therefore a significant number of them have combat capacity and may also be used as intelligence, patrol and rescue aircraft.

Three European countries sold aircraft to the countries of the Southern Mediterranean. On the one hand is Italy, which sold 30 *M-346 Master* training aircraft to Israel between 2014 and 2016, 2 *ATR-72* transport aircraft to Turkey in 2013 and 6 *ATR-72MP* with maritime patrol functions, also to Turkey in 2019. In 2011 and 2012 France supplied 4 *C-27J Spartan* transport aircraft to Morocco, while Egypt sold 24 *Rafale* fighter jets during the 2015-2018 period, although estimates suggest that they delivered 20. Thirdly, in 2013 and 2014, Spain sold 9 *CN-235MP* aircraft to Turkey, 6 of them were classified as combat planes and three as maritime patrol aircraft. Spain also sold 10 *A400M* transport aircraft between 2014 and 2019 (evidence suggests that 7 of these were delivered), and Spain also sold 24 *C-295* transport aircraft to Egypt, between 2011 and 2016.

Apart from purchasing aircraft, some countries are investing in modernising their existing fleets and providing them with new capabilities. For example, in 2013 and 2014, Algeria purchased a total of 6 *T-200* radars from Italy, to install them in 6 *Air-350* aircraft, which were classified as transport aircraft, in order to provide them with terrestrial surveillance capacity, which meant that they ended up fulfilling another function. Turkey also bought 15 *Ocean Master* radars from France in 2013 and 2014, in order to provide surveillance and patrol capacity for some of its craft. It also purchased 40 *TP400-D6* engines from Germany for its *A400M* aircraft between 2014 and 2018 period. None of these last two purchases has been fully confirmed.

Apart from purchasing aircraft, some countries are investing in modernising their existing fleets and providing them with new capabilities for example, with terrestrial surveillance capacity

Egypt sought to equip its *Rafale* aircraft and did so with French materials that it bought between 2015 and 2018 and which are estimated to include: 150 *MICA* air-to-air missiles, 50 *Storm Shadow/SCALP* air-to-surface missiles and 12 *TALIOS* electro-optical systems. France has also been the only European supplier to aid the modernisation of the 27 old *Mirage F-1* aircraft and replace them with the new *MF-2000* in Morocco. France was commissioned first for reconstruction, which ended in 2011, and the same year it sold (also estimated) 150 *MICA* air-to-air missiles, 50 air-to-ground missiles and 4 *Damocles* electro-optical systems to equip them.

jj) Helicopters

We have also separated the helicopters into three subgroups. Firstly, combat helicopters, which includes those classified as attack helicopters –ATK- and those for anti-submarine warfare -ASW-. Secondly, support helicopters, which includes those used for transport –TPT- and for training –TRG-. Thirdly, those for intelligence, patrol and rescue, where we have included those fitted with intelligence, surveillance and recognition - ISR - early warning systems - AEW -, electronic intelligence - ELINT - and search and rescue – SAR equipment.

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The expansion of the arsenals in almost all the countries of the Southern Mediterranean in terms of intelligence, patrol and rescue helicopters is noteworthy. Italy remains the main supplier of helicopters, having sold 5 *Bell-412* multipurpose helicopters to Turkey in 2008 and later, 68 *Mangusta A-129-C* combat helicopters between 2014 and 2018 (some of which are yet to be delivered). In 2012, Egypt sold 2 *AW139* utility helicopters, and it also exported this same model to Libya, to whom it sold a unit in 2011, and to Algeria, where it exported 14 units between 2013 and 2015, along with 8 Koala *AW119* training helicopters in 2013 and 15 utility *A-109K* helicopters that were sold between 2010 and 2011. Finally, it also exported the *A-109K* utility helicopter to Libya, selling 10 units between 2006 and 2010.

The United Kingdom exported 4 *Super Lynx-300* combat helicopters to Algeria between 2010 and 2012 and 6 units of the *Super Lynx-100* model between 2015 and 2016, as well as 6 *EH-101-400* transport helicopters in 2010 and 2011. Finally, Algeria bought 8 *W-3 Sokol* utility helicopters from Poland in 2014, (estimated data). In 2016 Algeria also bought approximately 25 *MU90* torpedoes from Italy to equip its *Super Lynx* helicopters.

From Morocco there is no proof that aircraft were purchased from the European Union, however the data does show that it currently has 30 more helicopters than in 2009, together with Tunisia, which now has 33 more, Algeria, 49 more and Turkey, whose numbers have grown by 100.

k) Drones

There's evidence that Morocco and Syria acquired intelligence drones during this period, and Algeria also has combat drones

The *Military Balance* shows evidence that Morocco and Syria acquired intelligence drones during this period, and Algeria also has combat drones (as well as intelligence models) however there is no specific data available. The SIPRI however details a purchase made by Morocco of three second-hand *Heron* drones from France in 2014, but there is no certainty that these have been delivered. There is evidence that Libya received 4 *S-100 Camcopters* from Austria in 2011.

l) Air to Surface Missiles and Bombs

Nor is there much information available in this category, as the amount of material available is not included, although details on type do exist. We may therefore conclude that over the last 10 years this armament has been modernised, given that new versions of previously-used standard models have appeared; the incorporation of sensors, infrared trajectory definition, laser or electro-optical systems for example, and the appearance of anti-radiation missiles.

According to SIPRI data and, as is usual in missile exports, the available data is an estimate. Turkey bought 143 *AGM-65 Mavericks* from Denmark in 2012. Egypt bought 500 air-to-surface missiles from France between 2016 and 2018 and 330 *AIM-9L/I Sidewinders* from Germany in 2018. This data, added to those already detailed regarding missile purchases for air defence, artillery and for equipping ships and aircraft, confirms that it is one of the weapons types most exported from Europe to the countries of the Southern Mediterranean.

5. CONCLUSIONS

The countries of the Mediterranean region account for a joint military expenditure of 170 billion dollars, which is equivalent to 10% of the world's military expenditure, while the area possesses only 6.8% of the world's population. During the last decade, military spending in the Mediterranean has increased by 2%, especially in Algeria, Turkey, Tunisia and Lebanon.

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The number of active military personnel in the Mediterranean has dropped by 25% since 2009. However, the general reduction of active military personnel has been compensated in some countries with the maintenance or even an increase in their paramilitary forces, especially in Turkey, Egypt, Algeria and Morocco. The Mediterranean seems to follow a global logic towards a transformation of its armies, in favour of models that are less numerous models, with greater technical capabilities and with access to weapons systems whose functions do not seem to follow the parameters of traditional armies.

The Mediterranean is the destination of 16.8% of world exports, the five major exporters of the Mediterranean are, in order of importance, France, Spain, Israel, Italy and Turkey, the latter being the country that has increased its exports the most, with figures of Turkish arms transfers being 478% higher in 2018 than in 2009.

With respect to imports, Algeria, Egypt, Turkey, Morocco and Israel, accounted for 74% of the total of the Mediterranean region between 2009 and 2018, all of them being countries with frequent or permanent situations of conflict or tension and with a complex situation in terms of the management of refugees

The largest arms companies have also found their place in the Mediterranean, with 14 military industries in the ranking of the 100 companies with the highest turnover in terms of armament in 2018 and with nineteen large companies located in the region. Among them, are some of the main military aeronautics and shipbuilding companies in France, Italy and Spain, however among those that stand out are the Israeli Elbit Systems, Israel Aerospace Industries and Rafael, the Turkish Aselsan and Turkish Aerospace Industries.

The Mediterranean seems to follow a global logic towards a transformation of its armies, in favour of models that are less numerous models, with greater technical capabilities and with access to weapons systems whose functions do not seem to follow the parameters of traditional armies

In the ten-year period between 2009 and 2019 there was a decline in the military arsenal in the Mediterranean region that was reported by the *Military Balance*, despite that, with respect to the specific data analysed, Turkey, Egypt and Algeria still have important military arsenals. The reduction of arsenals in the region can be explained by the fact that material is becoming obsolete and deteriorates without being replaced, and because new weapons purchased are more versatile and effective and have higher adaptability than their predecessors. In no case does this trend seem to be due to a demilitarisation process, but to multi-purpose, patrol and surveillance vehicles certainly being prioritised.

In general, the countries of the Southern Mediterranean have dedicated their efforts to modernise their vehicle fleets, mainly with the purchase of armoured cars, warships, patrol ships and coastguard vessels, as well as helicopters and aircrafts, which are Europe's most sold goods in this region. Also noteworthy is the purchase of intelligence equipment - radars, sensors, satellites - and diesel engines.

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