Mediterranean Insecurity

CLIMATE CHANGE. MARITIME STRATEGIC IMPLICATIONS

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Introduction

Many years ago, Lieutenant Colonel Ferdinand FOCH, the future Marshal of France, taught his students at the Army War College that the essential question to be posed in Strategy, whenever someone is tackling a problem, was "*What is it all about?*".

In order to deal with the strategic implications of "*Climate Change*" in the maritime domain, therefore, we should always bear in mind this question. To start, the need exists to consider the implications of the term "*Change*": those who are not affected will take, in the best of cases, a mild cultural interest to the subject, and will consider all related data and information as they appear, bare statistics; they will seldom understand how much "*blood and tears*" they contain. Only if, among the casualties, there will be a personal acquaintance, the statistics will be considered as they often are, a tragedy, and they will feel affected and really interested in the issue!

The same applies to Climate Change: those who feel affected by the change will either join the party of those willing to take remedial action, as they feel being damaged by the change, or – sometimes – will rejoice, due to the improvement change procures to their living conditions.

The first strategic aspect to be considered, therefore, is that any action aiming at containing, mitigating or offsetting the consequences of climate change will encounter an opposition by those who are favored by the change itself, and fear any action aimed at reducing their "*positional advantage*" thus gained. Any set of actions related to climate change will therefore need to be considered as a "*Strategic Approach*" - not simply a plan - in order to consider that some opponents will counter us.

The second strategic aspect of climate change is that it is a process developing very much at "*slow motion*", as compared to other catastrophes, like earthquakes, tsunamis or even bradyseism, even if the latter events produce the same kind of effects and induce similar collective reactions, and are therefore useful as examples in any study on climate change.

It will be difficult, therefore, to understand when populations affected by these slow developing changes will find their condition unbearable and will act, by migrating or devoting themselves to criminal or adversarial activities, to find a way to survive. History, on this subject, might be most useful.

There is, though, a problem: while scientists have been able to know all about previous catastrophic changes of climate, going back many millennia, and have more recently become able to spot also minor, albeit still significant, similar events - as the so-called "*mini-glaciations*" - the correlation between these phenomena and single socio-political feats is still incomplete and has been done, so far, only for very recent upheavals.

In fact, it takes some effort, but it is possible to note that there are already in history some indications of what these phenomena, when they occurred in the past, have caused to mankind. But why we have not gone in depth to correlate events and climate changes? The main reason is, probably, that people tend to forget tragedies and avoids analyzing them; this has prevented many historian from correlating some events which

plagued Europe in the past with all possible root causes, including, among them, also past climate changes.

The most striking instance is the large amount of mass migrations from the North, as well as from the East, which have deeply transformed our societies, throughout the centuries. Albeit common wisdom tends to consider that mass migrations took place by land, several among them used the sea: old accounts about the so-called "*People of the Sea*", invading Europe, as well as the Viking saga show us that mass migration was not limited to crossing continents by land.

Of course, every historian agrees on the fact that these populations had grown beyond the capacity of their homeland to feed and support them, and that they were compelled to seek new territories to ensure themselves a more prosperous future; it is also well on record that these populations were in such a deep mood of despair that they did not care about the fact that, in many cases, the territories they were invading were already inhabited by other populations.

There is no direct evidence, however, whether these past invasions were prompted by climate changes, by an unusual demographic growth or, more probably, by a mix of both effects. When dealing with past human actions of "*Climate Engineering*", producing effects on other neighboring areas of the world, some correlation appears to be possible.

One suspicion, in fact, exist, when dealing with the end of the Roman Empire: Rome had transformed North Africa into the "*Garden of Europe*", by cultivating large extensions of territory, as Sicily was not able to supply the empire with enough grain any more. Descriptions of German climate, available through history, are indeed explicit on the fact that life in Northern Europe was most uncomfortable at that time, due to the cold climate.

The effect of the intensive cultivation of Northern African lands might have been a reduction of temperature in Northern Europe, thus forcing German tribes to migrate

South and to cause the crumbling of the Roman empire. This is, of course, an assumption, which is - nonetheless - indirectly confirmed by the present reluctance, by some European Nations, to financially support ambitious projects aiming at increasing the cultivable land in that region, especially in Egypt: the projects of the Aswan Dam, as well as those attempting to fill with water the Depression of Al Qattara have been met, so far, with diffidence by European financers.

Some scholars, too, affirm having seen a correspondence at Heads of State level asking the Italian government to stop its program of re-forestation, precisely to avoid a significant drop of temperature in Germany. Only a hint, though, is available on the fact that our government was aware of the consequences of such a measure, and it can be drawn from a statement by MUSSOLINI, who said that "*the main aim of the reforestation of the Apennines mountains was to make the Italian climate colder*".

This statement has recently found a scientific demonstration: as some scholars have recently noted, in fact, "*forest preservation efforts and reforestation in the tropics is more effective in cooling the planet*".

Considering more generally the situation of our continent, if you look at the climate of Northern Europe and you compare it to what happens in North America and Asia at the same latitude, you might note that the former is much milder than the latter: Washington and Palermo are almost on the same parallel, and, while the American capital town suffers a snowfall in winter and a tropical heat wave in summer almost every year, in Palermo many houses have no heating plant at all, due to the mild climate of this part of Sicily, while in summer the heat is seldom extreme.

This sharp difference is due – as scientists have told us – to the beneficial effect of the Sahara desert, which has caused the "*Thermal Equator*" to move northward significantly. Should it return closer to its geographical position, climate in Northern Europe would become more similar to the Canadian climate, with much lower

temperatures, as the first French colonists, who left Bretagne and landed there in the XV century, quickly discovered, much to their distress.

Another interesting instance, more directly related to the maritime environment, is the account on the Chinese naval expedition between 1421 and 1423: according to one study, at that time "*Greenland was circum-navigable, for not only was the maximum limit of the polar ice well to the north of its present position, the climate of Greenland was far warmer than it is today*" , and the "*Vinland Map*", providing an accurate layout of the island, is its proof.

Even more striking is the "*Waldseemüller Map*", published in 1507, showing the northern coast of Siberia; this has led some researchers to consider the possibility that a part of the Chinese fleet, during this expedition, "*made its way back to China through the Bering Strait*".

Going to more recent events, as an American environmentalist has noted, "*scholars have made it clear that one contributing factor to the onset of war in Syria was a record drought that drove millions of people off farms and into cities*" . If we are aware of climate change consequences on recent events, we should also be capable of pointing out similar connections between climate and history, and assess the future strategic consequences of present climate trends.

Summing up, the geopolitical consequences of climate changes, which have apparently taken place in the past, have been swept away from the collective memory, as mankind hates changes, and prefers oblivion, thus being caught by surprise, when they occur. The study of the influence of climate on foreign relations attracts little interest among public opinions.

But decision-makers have always been interested in climate, due to the fact that it can either disrupt or facilitate operations. NAPOLEON III said that "*if the great French astronomer U. LEVERRIER had been able to discover the planet Uranus, he could have certainly been capable to forecast also climatic conditions in Crimea, where*

France was engaged militarily" . This interest on "*Climate Forecasting*" is shown by the most recent strategic documents, most concerned on this subject.

Climate Change and Declaratory Strategies

It is interesting to note that climate change has been mainly seen as a threat by the most relevant strategic documents, while only recently some thoughts are available on the other side of the coin, i.e. the opportunities it offers. This approach is shared by many international Institutions, as, for instance, the World Bank, whose November 22, 2014, report depicts "*Climate Change*" as a threat multiplier.

Let's start with one among the most profound strategic documents, the European Security Strategy of 2003, where it is stated: "*Competition for natural resources - notably water - which will be aggravated by global warming over the next decades, is likely to create further turbulence and migratory movements in various regions*" .

The subsequent Report of 2008 is even more explicit and detailed, when it says: "*In 2003, the ESS already identified the security implications of climate change. Five years on, this has taken on a new urgency. In March 2008, the High Representative and Commission presented a report to the European Council which described climate change is a "threat multiplier". Natural disasters, environmental degradation and competition for resources exacerbate conflict, especially in situations of poverty and population growth, with humanitarian, health, political and security consequences, including greater migration. Climate change can also lead to disputes over trade routes, maritime zones and resources previously inaccessible*" .

In 2014, though, the European Maritime Security Strategy looked into climate change from a slightly different perspective, when it stated that: "*The opening of possible transport routes through the Arctic and the exploitation of its natural and mineral resources will pose particular environmental challenges which must be managed with*

the utmost care, and cooperation with partners will be paramount" and called for measures by Member States aimed at preventing excesses and disputes.

More recently, in 2016, the EU Global Strategy stated that "*Climate change and environmental degradation exacerbate potential conflict, in light of their impact on desertification, land degradation, and water and food scarcity*". The grand strategic effects of climate change could not be highlighted more explicitly.

NATO, in the most recent Strategic Concept, appears to be rather pessimistic, when it mentions Climate Change, albeit briefly, by saying: "*Key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs will further shape the future security environment in areas of concern to NATO and have the potential to significantly affect NATO planning and operations*".

It is worth asking ourselves why the prevailing attitude expressed by most among these documents is a widespread fear of climate change consequences. The reply is that the common feeling is that these changes might run against pursuance of the key aims of Western Countries, most careful to preserve their populations' welfare.

This fear is therefore related to our strategic aims. On this subject, the European Union Council was most explicit in defining them, when it issued in December 2013 a document saying: "*An effective Common Security and Defense Policy helps to enhance the security of European citizens and contributes to peace and stability in our neighborhood and in the broader world*" .

It is indicative that the first aim set by the European Council deals with the fear that our present status of welfare and security might deteriorate; only once this aim is fulfilled, EU will take interest in improving the situation of others, less fortunate than our citizens.

Self-interest has always plagued our continent, in international relations, and this is nothing but the most recent instance. In Italy, a phrase of our Prime Minister in 1914, who spoke about the "*Holy self-interest of the Country*" is in every history book, and

other Nations are not thinking differently! We tend to forget that humanity is like the crew of a ship: "*all hands*" survive, win and thrive together, or they all die, should the ship founder.

Strategic Consequences of Climate Change

From what has been said, so far, it should be clear that climate change is like globalization: it favors some areas of the world, whose opportunities of improving their condition increase, while in others it causes tragedies, famine, diseases and death. As we are on the side of those who might lose our status, it is logical that we take, more or less a pessimistic approach. Big disparities, indeed, exist even now, and they are not only due to human and governments' misfits.

Those who are damaged by climate have always attempted to offset their unfavorable situation, either by migrating in masse or by trying to find out other ways of living – mostly devoting their attention to criminal or adversarial activities, as piracy, smuggling or to warfighting. In fact, it should be understood that these populations have few alternatives to such kind of conduct.

Any change will, therefore, lead to other instabilities and wars, even if other regions might enjoy previously unknown benefits.

It is clear that, as always, defense, containment, mitigation and aid to development are the eternal remedies, in order to contain and offset the dire effects of these disparities. What needs to be highlighted, though, is which are the strategic consequences of climate change in the maritime domain.

In his "*Commentary of MAHAN*", Herbert ROSINSKY notes that "*the original character of naval strategy, as opposed to strategy on land, is the juxtaposition of two aspects, one military and the other economic*".

More specifically, a French strategist, COUTAU BÉGARIE, identified three key functions of the sea: source of riches, avenue of communications, and mean to project power. He mentions also a fourth, the sea as environment of leisure. But the most important aspect, as another French strategist, Patrick HEBRARD, pointed out, is that "*sea is a common good for mankind, due to its influence on our planet, on climate, and – to say it in short – on its survival, with the consequent need to protect it*".

Having said that, the first and less evident effect of climate change on the maritime environment is the possibility of a significant variation in sea trade patterns, due to the new opportunities offered by the reduction of the polar ice cap. This is somehow similar to what has been recently caused by piracy in the Horn of Africa: merchant vessels followed in increasing numbers the "*Route of the Cape*" and transits through the Suez Canal dwindled, thus impoverishing Egypt.

Even if a recent study assessed that: "*The Arab Spring can be at least partly credited to climate change. Rising food prices and efforts by authoritarian regimes to crush political protests were linked first to food and then to political repression—two important motivators in the Arab makeover this past year*", this was not the only cause: the loss of State incomes was indeed another cause.

In fact, the fateful decision by the Egyptian government of MUBARAK to increase the price of essential commodities, as grains and fuel, due to the sharp decrease of incomes, prompted the revolt which, once repressed, became the second episode of what we know as the "*Arab Spring*".

Trade, in fact, has always followed the "*Lines of Least Resistance*", in order to minimize costs and risks. This happened already in the past, after the Ottomans seized Constantinople, promptly renamed Istanbul. The high taxes and severe limitations imposed on trade following the "*Silk Road*" were one among the motivations of the search for another road to connect Europe and Asia.

COLUMBUS said precisely this, when he declared his intent to "*Seek the Levant through the Ponent*", even if the new "*Road to India*" was found only later, by the Portuguese Vasco DA GAMA, who circumnavigated Africa and reached the Indian subcontinent for the first time, through the new route, in 1498.

The result was the impoverishment of the Mediterranean region, bypassed by this new flow of trade, at the advantage of the Atlantic coast of our continent. Based on this experience, MAHAN, said: "*Except as a system of highways joining country to country, the sea is an unfruitful possession. The sea, or water, is the great medium of circulation established by nature, just as money has been evolved by man for the exchanges of products. Change the flow of either in direction or amount, and you modify the political and industrial relations of mankind*".

It is easy to conclude that an extensive use of the North Sea Road (NSR) would cause a decrease of Mediterranean trade, with dire consequences for all littoral States, and the increased use by vessels of the "*Route of the Cape*" is causing a similar effect, even if we have not noticed it yet.

The other, not less striking effect of climate change in the maritime domain, is connected to an increase of the sea level. Any significant change in geography causes disputes: this situation is similar to what happened in history any time a volcanic island surfaced from the sea: disputes arose among Nations, willing to exploit this significant change to geography, in abeyance of the international rule involving any "*insula ex mare nata*".

Just south of Sicily, for instance, a volcano started erupting in 1831 and the lava piled up in such a way that a small island, only 4 square miles wide, appeared on the surface of the sea. Immediately, a British warship landed on the island, in spite of the hot temperature of the soil, named it "*Graham island*" and claimed its possession, notwithstanding that it was rather close to the Sicilian coast. It is not by chance that, in

British Admiralty charts, the shallow waters area where the island appeared is still named as "*Graham Bank*".

Also France sent a ship, having on board many scientists and a famous artist, Edmond de JOINVILLE, whose paintings have brought the memory of this island to us; however, as it was already evident that the islet, named by the French captain LA PIERRE "*Julia*", was quickly crumbling, the government in Paris lost interest in it.

Even if the same decrease in size of the island had been notified to the government of Naples, the Prime Minister sent a warship too; the captain, CORRAO, planted a pole with the flag of the Bourbons and renamed it "*Isola Ferdinandea*", in honor of king FERDINAND II. Of course, rising sea levels produce a different effect, but this does not exempt us from considering what disputes might arise from the disappearance of previously existing lands.

But what happens when this kind of phenomena takes place at a much lower speed, as it happens due to a rising sea level caused by climate change? And when a territory is abandoned by its population, which kind of disputes arise? It is difficult to predict what could happen, but one thing is certain: the geographic area affected will become very different, as compared to the past, carrying with it deep economic changes.

In Italy, a similar phenomenon occurs quite often, due to the rise or the foundering of coastal land, known as "*bradyseism*". In 1983, this happened near Naples, in the area of Pozzuoli, and the harbor of this town became impracticable for some years, until the land level went down again. Also, in various parts of our Nation, in Baja and along the Adriatic coast, where the coastal town of Egnatia once existed, it is possible to note, well underwater, what remains of once thriving ports and towns.

Going back to our times, as a scholar has pointed rightly pointed out, "*75% of all people living in areas vulnerable to sea level rises are in Asia, with the poorer nations most at risk*": indeed, the Maldive islands are already affected by the rise of sea level. Loss

of coastal land, in a densely populated area, as most areas in Asia are, leads to impoverishment, loss of infrastructures, and to mass migrations inland.

If you consider that Asia is now one among the most powerful engines of world economy, and trade between this continent and Europe is such that the maritime trade route connecting them is named the "*new Silk Road*", you might easily understand the economic consequences for Europe of the rise of sea level in Asia.

The only positive effect of rising sea levels would be a reduction of the present disputes, among Nations in Asia, on the possession of the numerous small islands, especially the Spratly, Paracel, Pescadores and Ryu Kiu, as many among them are barely emerging from water.

Inside Europe, too, the economic consequences for the Netherlands cannot be underplayed; even if it would be sufficient to raise the existing dams, protecting much of the territory, it cannot be forgotten that some ports of this Nation are the most active terminals of Northern European sea trade. This, in turn, might favor the Mediterranean region, at the expenses of the Atlantic coast of our continent.

Summing up, every change is a trauma, and we should not forget the amount of hard feelings deriving from it, when dealing with the consequences of climate change in the international domain.

Conclusions

The maritime domain is not exempted by consequences of climate change, whose effects on world economy might become relevant. It will be, though, a slow, incremental phenomenon, but it requires capabilities to cope with this new situation. Apart from instability, disputes, wars, migrations and hostile acts, climate change will profoundly affect world economy, also in ways we have not fully identified yet. This

will be most pronounced at sea, as this environment is full of riches, and many Nations are increasingly devoting efforts to exploit them.

As "*sooner or later, climate changes history*" , it is better to think about it now, and take all measures aimed at containing and preventing the expected effects, rather than being surprised when they become apparent. These measures should include capability developments, in order to put them into effect: Navies have definitely a role in managing problems posed by climate change, beyond their participation to joint warfighting activities.

Their tradition in the domain of "*Deep Water Policing*" is well established by history, and goes back many centuries. It should only be revived, lest Western Nations might find out that others are more effective and powerful than we are.

Last but not least, when dealing with mitigation of climate change effects, Navies have also a role in setting a good behavioral example: among others, warships should not be a source of pollution, when they operate. The "*Green Fleet*" project, started by the Italian Navy, is a most relevant instance of how Nations keen to limit climate change effects should behave.