# DELIMITATION OF SEA BOUNDARIES IN THE MEDITERRANEAN

by

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IAI/19/82

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IAI - Istituto Affari Internatzionali

Castelgandolfo, September 6 - 9, 1982

GROWING ECONOMIC INTERDEPENDENCE AND THE FUTURE OF SECURITY IN THE MEDITERRANEAN

## The delimitation of boundaries in the Mediterranean Sea

One of the most delicate and important issues of world foreign policy in the next twenty years will be the delimitation of boundaries in sea areas adjacent to coasts - the so-called territorial seas - in which states exercise sovereignty or in nonadjacent areas - exclusive economic zones and continental shelveswhere states exercise primarily economic rights.

Today the sea is still an important reserve of protein and salt and a major path of communication that has been left intact and undivided by past wars. But today the sea is also a mine, oil natural gas and other minerals from the seabed and below are now being extracted and will be extracted even more in the future (1). The sea area is also crossed by electric, telephone and telegraph cables as well as submarine pipelines. In the sea complex equipment will be installed to produce energy by exploiting sea currents and winds, where nuclear power stations and artificial islands will be located, outfitted with instruments for both scientific and industrial purposes.

Besides their peacefull utilization, sea areas along the coasts have enormous strategic and military importance because of naval control over land which has traditionally been exercised from the sea.

Therefore, the demarcation of sea borders between States can only result from complex bilateral international negotiations which will lead, in the last analysis, to the distribution of mineral resources, important strategic locations, food resources, and space to install evermore sophisticated installations resulting from technological progress.

If the delimitations of sea boundaries is difficult even for States having in front of them vast spreads (here I refer to the coastal States of Africa and of the North and South American continents) (2), it is not hard to imagine how much more complex and problematic it is in the marginal seas and even more so in the "Mediterranean", or internal seas (3).

The geometric parameters which contribute to distinguishing the ocean basins from the marginal seas and internal seas (form, dimensions, depth and, above all, distance from the opposite coasts), together with the provisions of the international law of the sea, make the operations of sea boundary delimitation objectively more difficult for the countries facing both the marginal and internal seas.

In regard to pollution, the Mediterranean is extremely vulnerable; an echange of water, some in the form of deep currents, takes place with the Atlantic and a smaller exchange with the Balck Sea.

As has been said many times before, its waters require about 80 years to renew themselves; this means that the accumulation of polluting substances is greater than the quantity which can exit through the Strait of Gibraltar (8).

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From the geo-petroleum perspective, the Mediterranean presents complex and differentiated geological situations and, consequently, diverse petroleum potential.

From already developed or highly promising off areas we can go on the much less promising basins. Furthermore there is the great unknown potential of very deep waters, which have shown hydrocarbon manifestations in the stratigraphic tests made during scientific research undertakings.

In the deep areas of the Western Mediterranean, especially in a zone situated between Sardinia, the Balearic Islands and the French coast, a huge basin has been found of potential oil interest which may be the object of industrial operations only when it will be possible for the technology of prospecting in very deep waters to achieve clearer results, and for the technology of production to allow exploitation at depths of between 2,500 and 3,000 meters of water (9).

Small sedimentary basins have been found in the territorial sea and the Mediterranean continental shelf of Spain;

offshore hydrocarbon exploration. In the tertiary sedimentary sequences of the Adriatic and Ionian Seas primarily natural gas fields were found, while in the Mesozoic calcareous reservoirs of the Central Adriatic and the area surrounding Sicily, mostly oil fields were discovered.

Exploration in the Italian offshore area deeper than 200 meters will become more and more important, especially in the lower Adriatic and the Ionian where positive results have already been obtained.

The Yugoslavian territorial sea and continental shelf have been relatively little explored; however, the area should hold an interesting oil potential, both in the tertiary clastic sequences and in the Mesozoic carbonates of the Dalmatian series.

Five companies now operate in the Yugoslavian offshore and hold exploration permits for a total of 50,000 sq km.

About twenty exploratory wells were drilled; some of these were mineralized with gas.

Exploration of the Albanian continental shelf has not yet begun. Even though it is rather limited in extension, it appears to be very interesting from the geological viewpoint inasmuch as it is the prosecution of a mio-pliocene sedimentary basin which extends from the Albanian land to the sea (2 and a half million tons of oil a year are already produced in the Albanian land mass from similar terrain). The Albanian government has not yet issued mining permits for the offshore area.

In the Greek territorial sea and continental shelf, the discoveries made up to now are limited in amount (Prinos and Kavala); from the former field approximately 400,000 tons of oil a year are extracted while 40 million cubic meters of gas a year are extracted from the latter.

Four companies are now operating in the Greek offshore and hold a total of about 23,000 sq km of exploration permits. About twenty exploratory drilling were done. Further findings are possible both in the Aegean basin and in that of the Ionian shore.

The Turkish territorial sea and continental shelf do not appear promising geologically with regard to hydrocarbon formation and accumulation. Exploration done up to now however has been very little and has given only signs but no positive results as yet.

Exploration permits have been issued up to now for approximately 10,000 sq km.

The Cypriot territorial sea and continental shelf do not appear very promising with regard to hydrocarbon formation and accumulation.

The Cypriot offshore is generally deep. No exploration permits have been issued in the last few years.

The territorial sea and continental shelf of Syria do not appear promising with regard to hydrocarbon formation and accumulation. Exploration permits in the offshore have not yet been issued.

The Lebanese territorial sea and continental shelf do not appear promising with regard to hydrocarbon formation and accumulation. An exploration permit in the offshore was issued; exploratory wells have not yet been drilled.

Some exploration was done in the territorial sea and Mediterranean continental shelf of Israele; several permits were assigned and 6 exploratory wells were drilled with substantially negative results.

The territorial sea and continental shelf of Egypt were explored quite intensely only off the Nile Delta; exploration was also begun in the Siani Mediterranean offshore; the rest has hardly been explored at all.

Natural gas appears more promising than oil. On the whole, there is not much data. However, inspite of the depth of its seabeds, even not far from the coast, areas may be interesting in the future.

At present seven companies operate in the Egyptian Mediterranean offshore and hold exploration permits for a total of 24,500 sq km.

Thirteen exploratory wells were drilled and a gas mineralized field was discovered (Abu Qir) which produces approximately 600 million cubic meters per year.

In terms of oil rather than natural gas, the Libyan territorial sea and continental shelf appear to be the most interesting areas in the Mediterranean basin. Exploration has been intense since 1974 and results have been very promising.

Five companies are currently operating in the Libyan offshore, holding exploration permits for a total of 175,000 sq km.

Fifty-one exploratory wells were drilled and showed good results.

Even though the exploration carried out up to now in the Maltese territorial sea and continental shelf have not shown positive results, there seem to be possibilities of discovering hydrocarbon fields in the Mesozoic carbonate series.

The Tunisian territorial sea and continental shelf seem interesting: the main exploration thermes are the Mesozoic calcareous rocks, the Eocene calcareous deposits and the Miocene sands. Ever since 1970 exploration of the Tunisian continental shelf was started up with considerable success and practically the whole area between the Tunisian coast and the line of demarcation with the Pelagie islands was assigned in exploration permits.

At present, five companies are operating in the Tunisian offshore and hold exploration permits for a total of 60,000 sq km.

Eighty-five exploratory wells were drilled and various fields were discovered: Ashtart, the gas mineralized field of Miskar, Yasmin, Birsa, Isis, Tazerka, Halk el Menzel and Athirat.

In 1981, the Tunisian offshore produced 1,800,000 tons of crude; in the future natural gas production is expected to reach around 1,5 billion cubic meters per year.

The Algerian continental shelf is characterized by a very deep bathymetry and by a geological situation which would not seem to be favorable to hydrocarbon accumulation due to a complex tectonic of the Alpine type. Exploration was very reduced and one exploratory well was drilled.

The territorial sea and continental shelf of Marocco (Mediterranean sector) were little explored and there is not yet enough data (no exploratory wells have been drilled yet) to draw overall conclusions which are certain. The seismic tests show that the area has a low potential.

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In order to delimit the boundaries of the continental shelf of the Mediterranean basin countries, 31 bilateral treaties are necessary (11). However, the treaty solution is not the only one for delimitation which may also be substantially determined by arbitration or by the International Court of Justice.

Up to now one partial and five complete delimitations' have been made.

1.- The Italo-Yugoslavian Agreement, signed on January 8, 1969, and ratified with Presidential Decree No.830 of May 22, 1969

(exchange of ratification instruments took place on January 21, 1970.);

The Italo-Yugoslavian Agreement on the delimitation of the Gulf of Trieste territorial sea ("Osimo Treaty") signed on November 10, 1975 (ratification authorization provided by Law No.73 of March 4, 1977; exchange of ratification instruments took place on April 3, 1977);

- 2.- The Italo-Tunisian Agreement signed on August 20, 1971 and ratified by law No. 357 of June 3, 1978 (exchange of ratification instruments took place on December 16, 1978);
- 3.- The Italo-Spanish Agreement signed on February 19, 1974 and ratified by Law No. 348 of June 3, 1978 (exchange of ratification instruments took place on November 16, 1978);
- 4.- The Italo-Greek Agreement signed on May 24, 1977 and ratified by Law No.290 of May 23, 1980 (exchange of ratification instruments took place on November 12, 1980).

To be added to these four agreements is a partial delimitation relative to the seabeds situated within 200 meters of bathymetry, carried out between Italy and Malta with the Note Verbale of May 29, 1970.

5.- Sentence of the International Court of Justice on February 24, 1982 relative to delimitation of the continental shelf between Libya and Tunisia (an agreement should follow in execution of the present sentence which in any case, indicates, the borderline exactly).

Therefore, to complete the delimitation of the entire seabed surface of the Mediterranean Sea another 26 treaties or agreements are necessary (which could also be substituted, as mentioned, by arbitrations or sentences of the International Court of Justice) (12) to which 14 treaties for territorial sea delimitation (13) would be added even if theoretically, which, except for exceptional cases (Greece - Turkey), should not encounter particular difficulty since by now it is a proven rule (art.12 of the Geneva Convention on the territorial sea and contiguous zone the content of which is practically repeated in art. 15 of the Law of the Sea Convention) that:

"Where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the countrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial seas of each of the two States is measured".

What rules are applied to the delimitation of the continental shelf?

In international law, the situation still presents a few elements of uncertainty since the Geneva Convention of 1958 on the continental shelf was ratified by no more than about fifty-five States (14) and it is impossible not to take into account that on April 30, 1982, a new Convention on the Law of the Sea was adopted and will be open to signature starting this coming December (therefore the new Convention has not yet come into force)(15). Moreover. from 1942 to the present, a total of about sixty bilateral treaties have been signed between States to determine the respective borders on the continental shelf. Therefore, the practice of the States has not yet been consolidated in the last forty years and in order to define the entire offshore situation as a whole another hundred or so treaties will still be necessary (i.e., more than double those already stipulated), if we add those for the delimitation of the exclusive economic zone to those for the delimitations of the continental shelf. It is to be held that rules and criteria of international law applicable to the delimitation of the continental shelf and the eclusive economic zone (16) are indicated by art. 6 of the Geneva Convention of 1958 on the continental, shelf, by articles 74 (regarding the exclusive economic zone) and 83 (regarding the continental shelf) of the new Law of the Sea Convention, by the practice (the approximately sixty treaties signed up to now), by international jurisprudence (sentences of the International Court of Justice of February 20, 1969 relative to delimitation of the North Sea continental shelf and of February 24, 1982 relative to the continental shelf between Tunisia and Libya) and by the arbitral decisions (French-English arbitration of June 30,1977).

Art. 6 of the Geneva Convention of 1958 provides the following:

"1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite each other, the boundary of the continental shelf pertaining to such States shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by spe-

cial circumstances, the boundary is the median line, every point of which is equidistant from the nearest point of the baselines from which the breadth of the territorial sea of each State is measured.

2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured".

The continental Shelf convention, quite properly, makes a distinction between delimitations between States whose coasts are opposite each other and between States having adjacent coasts. In the former case the continental shelf area off and dividing, opposite States, can be claimed by each of them to be a natural prolongation of its territory. These prolongations meet and overlap, and can therefore only be limited by means of a median line; and, ignoring the presence of islets, rocks and minor coastal projections, the disproportionally distorting effect of which can be eliminated by other means, such a line must effect an equal division of the particular area involved.

The case of lateral delimitation, on the other hand, is different, i.e. between States with bordering coasts, because of the higher incidence produced by "special circumstances" due to the concave or convex shape of the respective shores. In fact,

by applying the criterion of equidistance, a country whose coasts have a convex form increases its share of the continental shelf since the borderline tends to open towards the wide part of the sea; on the contrary, if the coasts of a State have a concave form, the line of equidistance tends to be bent towards the inside, reducing its share of the continental shelf. Since the phenomenon can take on profoundly unjust aspects, the two sentences of the International Court of Justice (both relative to cases of lateral delimitation) affirm that the criterion of equidistance cannot be considered the only applicable criterion because it did not reflect an existing customary rule in being, but that other criteria must be able to compete with it: the proportionality between . the length of the coasts and the continental shelf areas assigned to each of the two States and the fact that all the relevant circumstances must be taken into account.

In the case of delimitation between States whose coasts are opposite each other, the "special circumstances" have much less importance, except in exceptional cases of islands or reefs located near the territorial sea of a foreign State or in a foreign gulf (as the English islands in the French-English arbitration of June 30, 1977). The importance of the "special circumstances" in the delimitation between States with opposite coasts is, as a rule, marginal precisely because if the foreign island is far enough away from the coasts of the State interested in delimitation, the length of the two shorelines, the continental coastline and the island coastline, being a question of geometry, leads to a fair delimitation of the respective shares of the continental shelf.

In other words, it is easy to demonstrate with nautical map and compass in hand, that the binomial "median line - length of coasts" already takes the real situations into account objectively and because of geometrical-mathematical factors, usually leads to fair results.

We should ask ourselves, however, if articles 74 and 83 of the new Law of the Sea Convention, which are identical in content, are an improvement or a worsening of the cited Art.6.

Article 74 provides:

## "Delimitation of the exclusive economic zone between States with opposite or adjacent coasts

1. The delimitation of the exclusive economic zone between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures provided for in Part XV.

3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such

arrangements shall be without prejudice to the final delimita-

4. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the exclusive economic zone shall be determined in accordance with the provisions of that agreement".

The mixing-up of the two cases in point (delimitation between States with opposite coasts and delimitation between States with adjacent coasts) constitutes in terms of clarity a retrogression with respect to Art.6; the difference in fact between the two cases cannot be ignored. First of all, Art. 74 puts the delimitation between States with opposite or adjacent coasts on the same level.

However when Art.74 specifies "on the basis of international law" it makes a reference also to Article 6 of the Geneva Convention which, quite properly, distinguishes the two cases and treats them, not by chance, in two quite different paragraphs.

The ambiguity of paragraph 1 of Articles 74 and 83 is the result of the difficulties encountered during the Law of the Sea Conference with regard to delimitation both of the exclusive economic zone and of the continental shelf. Unfortunately it was not possible to overcome these difficulties by formulating a clearer and more suitable text, despite extenuating negotiations and the work of an "ad hoc" work group, whose meetings were attended by highly qualified experts. It was only the exigencies of a diplomatic nature, arising from the opportunity of broadening the consensus on this fundamental article, that led to a contradictory formulation of the text (it should not be forgotten that Venezuela and Turkey even voted against the entire Convention to demonstrate their dissent regarding those articles of delimitations to the international Community at the highest level).

Paragraph 2 of Article 74 fills a juridical void with respect to article 6 and shows undoubted progress with respect to the Geneva Convention: the international Community must be able to resort to special procedures to resolve any peace-threatening controversies. The negotiations for the delimitation of sea boundaries present many elements of potential (and also current) conflict or, at the least, difficult confrontation.

Paragraph 3 of art. 74 is a retrogression with respect to art.6 of the Geneva Convention (which provided that, where there was no agreement, neither of the two Stated would have been able to pass beyond the median line or the line of equidistance with reference to mining operations). Paragraph 3 is interesting only with regard to juridical esthetics, inasmuch at it envisages that ".... in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements.... not to jeopardise .... the reaching of the final agreement"...., but it does not bring cartesian solutions for solving the problems connected with the lack of an agreement.

The formulation of art. 6 does more for peace and international security than the expedients suggested by art. 74, to be appreciated in theory but difficult in practical application. Indeed, how will it be possible to reach a "temporary" agreement if a definitive agreement cannot be reached? What principles will inspire the temporary agreement? Up to what distance will the mining permits be issued by each of the two States in case the boundary of the continental shelf has not yet been defined?

When the diplomatic Conference was not able to find a positive solution to fill the gap in Articles 74 and 83 it evidently preferred silence.

If international codified law shows some uncertaity in indicating the criteria generally applicable to delimitation of the continental shelf, international practice seems to be more and more oriented towards the median line in the case of delimitation between States with opposite coasts (always excepting the presence of "special circumstances"), while the criterion of equidistance in the case of delimitation between adjacent States appears to be attenuated in its practical application because it is very rare in reality to find two States which have a rectilinear shoreline.

These evaluations are taken from histories of continental shelf delimitation agreements, published by C.N.R. (17), supplemented by those agreements which have later been made part of public domain. \* (18)

International jurisprudence on the subject consists of two sentences from the International Court of Justice: the North Sea Continental Shelf Case of February 20, 1965 and the Case Concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya) of February 24, 1982; both of these cases refer to delimitation between States with adjacent coasts, even though the Court broadens the evaluations - though not strictly connected to the matter at hand - by making rapid references to suppositions of delimitations between States with opposite coasts.

In the first of the two sentences it is explicitly stated that:

".... the use of equidistance method of delimitation not being obligatory as between the Parties".... and that "delimitation is to be effected by agreement in accordance with equitable principles, and taking account of all the relevant circustances, in such a way as to leave as much as possible to each Party all those parts of the continental shelf that constitute a natural prolongation of its land territory into and under the sea, without encroachment on the natural prolongation of the other".

The Court also envisages that during the delimitation negotiation:

" The factors to be taken into account are to include: 1) The general configuration of the coasts....; 2) the physical and geological structure, and natural resources of the continental shelf areas....; 3) the element of a reasonable degree of proportionality, which a delimitation carried out in accordance with equitable principles ought to bring about between the extent of the continental shelf areas appertaining to the coastal State

and the length of its coast mesaured in the general direction of the coastline, account being taken for this purpose of the effects, actual or prospective, of any other continental shelf delimitations between adjacent States in the same region".

In the sentence relative to the Libyan-Tunisian case, the fact is emphasized that "the delimitation is to be effected in accordance with equitable principles, and taking account of all relevat circumstances"....but it is also specified that, in the present case, "geographical circumstances" and "the physical structure of the continental shelf areas are not such as to determine an equitable line of delimitation", while the importance is underlined of the reasonable ratio which must exist between coastal development and extension of the continental shelf attributable to each State and which is thus further reinforced by a constant jurisprudence.

The only case of delimitation of the continental shelf between States with opposite coasts on which an arbitral Court has pronounced, itself is a French-english one, defined with the sentence of June 30, 1977. The case is atypical and undoubtedly the "special circumstances" characterized by the presence of British Islands (Alderney, Guernesey and Jersey) in a French Gulf (Saint Malo), take on considerable importance.

In this arbitration the delimitation was decidedly inspired by equitable principles also because the term open table principles has a meaning when the interested States, instead of proceeding directly to delimitation by negotiation, entrust

the determination of the border line to an arbiter.

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The delimitation of sea borders between the 18 States washed by the Mediterranean (19) will require generally very delicate and complex negotiations, also because in the "restricted" limits of an internal sea, the positive and negative effects of every action have repercussions on coastal States with sharpened and amplified intensity. In the Oceans instead, marked by the vastness of space which we could define as immense, the cause and effect relationships of every action are more mitigated even though more widespread.

The flaws in international law will make even more complex the work of delimiting the Mediterranean boundaries and it does not help much that the two sentences of the International Court of Justice, in addition to articles 74 and 83, envisage that the result of demarcation must be equitable. it is a prescription with weak juridical value that is destined to remain vague in order to facilitate the agreement (20).

Probably the most serious difficulties of a technical nature will be encountered in the delimitations between States with adjacent coasts (lateral delimitations) whose length exceeds 200 km, while for the delimitation between States with opposite coasts (frontal delimitations) these difficulties will usually be very attenuated. Unfortunately, in not a few cases, added to the difficulties of a technical nature are political difficulties with historical roots.(21)It is evident that in the presence of a bilateral political climate already deteriorated by other questions, all the more serious the more they go back in time, the delimitation negotiation becomes extremely delicate and agreement is even more difficult to reach.

Beyond the normal technological difficulties often exorbitant claims of one of the two parties characterized at times by positions of rigid instransingency. In these cases, even if the bilateral political relations are considered positive, the negotiation cannot be successful. However, the situation could be solved favorably in some cases by recourse to the International Court of Justice or to international arbitration (in approximately 5 cases of delimitation recourse to these procedures would be accepted with satisfaction by both parties concerned).

Participation in the same international organizations (European Community, NATO, Arab League), exactly because it demostraites. "likemindedness" regard certain important common approaches in the economic political and military spheres is usually a premise for starting up a constructive and serene delimitation negotiation (22). However if negotiations fail because there'is " Likemindedness", one can refer delimitation problems to the International Court of Justice, or an arbitral board.

Unfortunately, many countries of the Mediterranean basin have an extremely negative energy balance which holds back

economic development, causes inflation, and makes it more difficult to keep the deficit in the balance of paymentsw within reasonable limits. (23)

If, at the end of 1980, 21 installations (semisubmersible vessels, platforms and jackups) were in operation in the Mediterranean in oil and gas exploration, 10 years from now their number could rise to 50 if the juridical questions regarding the delimitation of the continental shelf were solved. This would undoubtedly result in an increase in exploration and, consequently, in production of hydrocarbons, thus attenuating the energy dependence on other areas in the interests of the Mediterranean people.

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### Conclusion

### The Continental Shelf

The exclusive and sovereign rights exercited by each coastal State in exploiting the continental shelf, understood as that part of the seabed and subsoil of the submarines areas adjacent to the coasts but situated beyond the territorial sea, are recognized by international law.

This exclusive right to exploitation, or better, as Conforti says, "the right to exercize in an exclusive way its own power of government over exploitation operations" (24), is <u>automatically</u> acquired by the coastal State (inasmuch as it is a right inherent in the sovereignty of each maritime State) and does not depend on physical occupation, effective or notional of the continental shelf. It is not by chance that the International Court of Justice establishes that the rights of the coastal State to the continental shelf exist "ipso facto e ab initio" by virtue of the sovereignty of the State over the territory and through an extension of such sovereignty under the form of the exercise of sovereign rights for purposes of exploration and exploitation of the natural resources of the seabed. In order to exercise this right, it is not necessary to follow any particular procedure, nor to carry out special juridical acts or any special proclamation; its existence does not require any constituting act; moreover, such a right is independent of its actual exercise (25).

Since, however, it is necessary to <u>delimit</u> the space in which this right may be exercised by the coastal States, the definition of the boundary of the Mediterranean continental shelf is an indispensible and necessary operation. It follows from this that each State will regulate according to its own juridical tradition the operations of mineral exploration and exploitation of the continental shelf subject to its jurisdiction.

Regarding other aspects, the expression "delimitation", which means division or "suum cuique tribuere", should make way for the expression "collaboration", i.e., in programs arranged and carried out in common; individual national laws should make way for international regional conventions, or at last be in

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harmony with them; the governing power of each individual State should be transformed into coordinated forms of operation, carried out towards common goals.

The geographic reality must never be forgotten; the Mediterranean is an internal sea, a "limited basin", profoundly different from the oceans from the physionomical viewpoint. In a limited basin, the results and the consequences of each operation carried out in the sea are projected into the coastal States which are mainly and directly interested.

Human activity in the hydrosphere, if exercised in an irresponsible way, leads to the degradation of the natural environment. Some of these calamities which are undoubtedly serious and dangerous even when they happen in an ocean environment, take on catastrophic dimensions for the coastal countries of an internal sea. The prevention and repression of pollution in the Mediterranean proposes again, in decisive terms, the ever more intense and constructive collaboration among all the 18 States for the defense of this sea(26). It will be necessary more and more in the future to operate in common in the surveying and measuring sectors, in the sector of regulations for prevention and management, and in the

# Security in sea operations and ways to avoid undue interference in the exercise of lawful activity

The regulations for operational security in the sea should also be agreed upon among the 18 Mediterranean States, since technical progress will involve a proliferation of plants and installations which necessarily, in basins of limited exten-

sion, could create interference in activities (27).

## Marine research

Furthermore, research efforts could be borne with advantage by all the 18 Mediterranean States in the common interest in order to enhance the diffusion of scientific Scientists and research workers from the 18 Staknowledge. tes could gather around the same table together to establish integrated research plans. Oceanographic undertakings could be carried out in collaboration with the universities and research institutions of all the Mediterranean States in order to guarantee to all of them the diffusion of information, data, samples taken and evaluations made. The result of collaboration could lead to the institution of a scientific data bank for the Mediterranean, which would presuppose uniform regulations for the use and calibration of the meteoceanographic instrumentation, for the analysis and gathering of data, for the analysis and evaluation of samples. If the results of collaboration are positive, it might also be possible to plan the joint study and design of new equipment and of still more sophisticated instrumentation for carrying out joint research in the Mediterranean.

# An Institution for the Association of technical experts on continental shelf delimitation

Finally, an institution can be foreseen as an Association that would unite all the various categories of technical experts on the subject of continental shelf delimitation (geodesists, cartographers, experts in hydrography, geologists, oceanographers

and jurists) who would be able to meet, speak and exchange technical and scientific information in order to standardize the methodologies utilized in delimitation negotiations (28). For, in the final count, the ability to speak one technical language is the premise for the carrying out of good diplomatic work.

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#### Notes:

1) - It was only at the end of the second world war, following President Truman's Proclamation - with which the natural resources on the seabed and ocean floor along the American coasts were declared subject to federal government jurisdiction and control - that the sea and more specifically, its depths, were considered as an enormous potential reserve of mineral resources.

In the light of current knowledge, 40 years after the Truman Proclamation,20% of world oil and 17% of natural gas are extracted from the seabed; from 1970 to 1979 over 23,000 exploratory wells were drilled and 205 oil and gas fields were discovered in 94 countries. Despite these figures, the "sea mine" is far from having reached the apex of its maximum activity: man looks for oil on deeper and deeper seabeds. He builds the technology to extract poly-metallic nodules from the ocean depths. He studies the most suitable systems to exploit metalliferous sands and mineralized muds. Perhaps one half of the planet's oil and gas reserves lie on the bo<u>t</u> tom of the sea; the percentage is much higher with regard to solid minerals.

2) - Coastal States that face on the opeans of the African and North and South American continents, generally have long sec tions of seashore and are rarely interested in delimitation negotiations with countries on the opposite coasts. As provided for in the Law of the Sea Convention adopted on April 30th, 1982, these States will have to indicate the external limit of their continental shelf towards the high seas, to mark the boundary with the international seabed area, on the basis of provisions of Annex II of the aforesaid Convention.

This particular delimitation operation will not pertain to States facing on internal seas.

3) - Oceans and adjacent seas cover, without interruption, an area of 361 million sq km, or 72% of the entire surface of the globe.

> The seabed and subsoil of this vast hydrosphere is com plex and differentiated into numerous physiographic provinces which vary not only in size and depth but, and primarily, in those morphological geological and geographical features that link fluid and solid masses intensely to one another.

The largest expanses in the hydrosphere delimited by huge continental masses whose opposite coasts are consider<u>a</u> bly far from one another are generally considered oceans by geographers.

The oceans cover an area of approximately 320 million sq Km with average depths of arount 4,000 meters.

Those expanses of water adjacent or contained between continental masses that wash the coasts of emersed lands or enter them are considered seas.

It is calculated that the total surface of the seas ex tends for about 40 million sq km with an average depth of around 1,200 meters.

Authentic ocean basins, in the geological sense, are situated beyond the continental shelf; adjacent seas, on the other hand which can be divided into "marginal seas" and "inland seas", are generally located on the continental shelf. The marginal seas are characterized by a very large and open area of contact with the continents, separated from the oceans at time by islands of volcanic or coralline origin.

The marginal seas are distinguished by shallow mar ginal seas (for example the North Sea, the Bering Straits) and by deep marginal seas, separated from the oceans by underwater formations, with or without islands (for exam ple, the seas of eastern Asia).

The internal seas are almost entirely surrounded by land and therefore communications with the larger expanses of water are generally limited to the existence of one or more strait. The internal seas show great variations depth and, because of this important aspect, are divided into shallow internal seas and deep internal seas.

All the shallow seas, whether marginal or internal, go under the name of epicontinental seas.

On this basis, we can make the following classifications:

-shallow marginal seas: the North Sea, Bering Straits, Arafura Sea;

-deep marginal seas: Andaman Sea, South China Sea, East China Sea, Sea of Japan, Okhotsh Sea, Bering sea, Gulf of California, St.Lawrence Gulf, Bay of Bengal;

-shallow internal seas: Hudson Bay, Baltic Sea, Caspian Sea, Persian Gulf;

<u>-deep internal seas</u> : Mediterranean Sea, Black Sea, Red Sea, Gulf of Mexico and Antilles Sea.

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- 4) The Mediterranean Sea occupies 2.511.000 km2 or 0,7 per cent of the world's oceans; the Mediterranean Sea extendes for about 3.700 kms eastward from the Strait of Gibraltar to the coast of Syria.
- 5) Eighteen sovereign entities have coasts on the Mediterranean. They are Spain, France, Monaco, Italy, Yugoslavia, Albania, Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Egypt, Libya, Tunisia, Malta, Algeria, Marocco. In addition, a nineteenth sovereign entity, the United Kingdom, has two dependent territories in the Mediterranean, namely Gibraltar and the Sovereign Base Areas on the island of Cyprus.
  - 6) The Mediterranean is an area abounding in situations of potential instability, latent crises and endemic conflicts. Since the beginning of the twentieth century, there have been 37 wars and other armed conflicts involving the countries of the Mediterranean; warfare between the Romans and the Cartaginians; between Moslems and Christians, between the corsairs of the Barbary Coast and the merchant fleets of European kingdoms, between the non-European countries and colonial powers, between States of North Africa and Middle East States and Western Europe. Actualy the Middle East represents the most difficult political and military knot to untie.
  - 7) The Strait of Gibraltar is about 58 kms long and at its nar rowest about 13 kms wide between Point Marroque in Spain and Point Cires in Morocco; the bed of the Strait is irregular with some submarine canyons, and fast currents pass through it both at the surface and near the bed.

The deepest part of the Strait is about 300 metres; it is located near Tanger.

8) - The western Mediterranean area is visited by over 60,000 million tourists and consequently these areas in the high season are classified among the most densely populated.
In the Tyrrhenian and Ligurian Seas alone, the amount of mercury discarged exceeds 50 tons per year; the quantity of chlorinated organic compost is more thant 40 tons/per year; nitrogen from sewers and fertilizers accounts for 300,000 tons/year.

The negative effects of industrial discharges, (industrial and chemical pollution reaches mediterrane waters through river flow, in the air and directly from coastal industrial activities) above all in the northwestern area of the Mediterranean (responsable for the largest quantities of industrial pollution are France, Italy and Spain) are added to those caused by urban wastes.

9) - The exploratory well drilled offshore in the deepest water (1,487 meters) is in Canada (off Terranova) and was drilled for Texaco in 1979.

Still in a "backward" stage is available technology for bringing into production wells discovered in very deep water.

Of the five wells in the world discovered in the sea that oil men define as "deep", only two are in production (off the coast of California and in the Gulf of Mexico);the sea depth is a little more than three hundred meters.

- 10) Of the 530,000 sq km of the Italian continental shelf,21% has a bathymetry of 200 meters; 7% between 200 and 500 meters;
  13% between 500 and 1,000 meters; 18% between 1,000 and 2,000 meters; 26% between 2,000 and 3,000; and 15% over 3,000 meters.
- 11) Mediterranean Sea Bilateral treaties for the delimita tion of the continental shelf (\*) Spain-Morocco Spain-Algeria

Spain-Italy (already ratified) Spain-France

France-Italy

Italy-Algeria

Italy-Tunisia (already ratified)

Italy-Malta(only one section completed)

Italy-Libya

Italy-Greece(already ratified)

Italy-Albania

Italy-Yugoslavia(already ratified)

Yugoslavia-Albania

Albania-Greece

Greece-Libya

Greece-Egypt

Greece-Turkey

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Turkey-Cyprus

Turkey-Syria

Syria-Cyprus

Syria-Lebanon

Lebanon-Cyprus

Lebanon-Israel

Israel-Cyprus

Israel-Egypt

Egypt-Cyprus

Egypt-Libya

Libya-Malta

Libya-Tunisia(already completed by judgement of the International Court of Justice on Febru<u>a</u> ry 24, 1982)

Tunisia-Algeria

Algeria-Morocco

and the second second

(\*):in addition exclusively for the delimitation of the ./..

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territorial sea is the treaty between the Principality of Monaco and France.

(12) - The International Court of Justice was also presented with the controversy between Libya and Malta for the delimitation of the continental shelf (special agreement for submission to the Court has been signed on May 23, 1976)

## MEDITERRANEAN SEA

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## Exclusive fishing and fisheries

State	Territorial Sea	Contiguous zone	conservation in Mediterranean Sea
Spain	12 n.m.	12 n.m.	same as T.S.
France	12 n.m.	20 km.	er tr 11
Monaco	12 n.m.		19 19 FF
Italy	12 n.m.	12 n.m.	11 11 11 <sup>1</sup>
Yugoslavia	12 n.m.	12 n.m.	<b>11 11 11</b>
Albania	15 n.m.	-	PL TF 19
Greece	6 n.m.	-	14 17 19
Turkey	6 n.m.	-	12 n.m.
Cyprus	12 n.m.	12 n.m.	same at T.S.
Syria	12 n.m.	18 n.m.	PL 53 18
Lebanon	undeclared	_	6 n.m.
Israel	6 n.m.	_	same as T.S.
Egypt	12 n.m.	18 n.m.	_
Libya	12 n.m.	-	_
Malta	12 n.m.	-	same as T.S.
Tunisia	12 n.m.	_	same as T.S.
Marocco	12 n.m.	_	6 n.m. in Strait of Gibraltar

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13) - To delimit the territorial sea between the various Mediterranean States the following agreements should be ne cessary :

Spain-France

France-Pricipality of Monaco

France-Italy

Yugoslavia-Albania

Albania-Greece

Greece-Turkey

Turkey-Syria

Syria-Lebanon

Lebanon-Israel

Israel-Egypt

Egypt-Libya

Libya-Tunisia

Tunisia-Algeria

Algeria-Morocco

The territorial sea between Italy and Yugoslavia has already been delimited with the "Osino Treaty".

The delimitation of the territorial sea specifically does not generally lead to particular difficulties because its maximum extension, on the basis of international kaw, cannot exceed the 12 nautical miles usually calculated start ing from the coast line and, for such a small part, the effect of the deviation produced on the delimitation of some unusual coastal shapes is practically non-exist ent or so weak as not to produce inequitable results.

14) - This Convention is in force for the States which have ratified or acceded to it, but the number of States parties to it (about 55) is not great in proportion to the total number of States now in existence, or even to the total number of coasta States. Few articles of this Convention (Articles 1,2 and 3) were considered by the International Court of Justice in the North Sea Continental Shelf Cases (1969) to reflect existing customary international law and thus applicable even to States which were not parties to the Convention. Of the 18 Mediterranean States only 5 are parties to the Convention on Territorial Sea and Contiguous Zone (Spain, italy, Malta, Israel and Yugoslavia) and 8 are parties to the Continental Shelf Convention (Spain, France, Malta, Albania, Yugoslavia, Greece, Cyprus and Israel).

15) - The convention on the Law of the Sea is not yet a Treaty document binding on those States which ave signed since by Articles 306 and 308 the Convention is subject to ratification and shall not enter into force until the lapse of 12 months from the date of deposit of the 60th instrument of ratification or accession.

There after it will be in force for those State which have ratified or acceded but not for other States. Few articles reflect-like the1958 Conventions - existing rules of customary international law and those provisions will be binding on all States as customary rules or as general principles of international law, not as Treaty rules.

16) -The regime of the continental shelf, in the new Convention on the Law of the Sea, is held distinct from that of the exclusive economic zone, even if the latter could absorb the former up to a distance of 200 miles. The continental shelf is a vital doctrine not only when applied to the seabed beyond 200 miles, but also in case that the interested State has not or does not want to institute the exclusive economic zone. In the Law of the Sea Convention it is particularly obscure whether the exclusive interested State ipso jure

or whether its appartenance to the coastal State arises only from express proclamation, there is no provision dealing with the exclusive economic zone similar to Article 77, paragraph 3.

17) -See, particularly, Atlante dei Confini Sottomarini, by B.Conforti and G.Francalanci - Milan, 1979. The following are to be considered agreements for the delimitation of the continental shelf based on the median line or on the line of equidistance, or inspired mainly by these two methods :

USSR-Norway

Sweden-Norway

USSR-Poland

Poland-Democratic Republic of Germany

Sweden-Norway

United Kingdom-Norway

United Kindgom-Federal Republic of Germany

United Kingdom-Denmark

United Kingdom-The Netherlands

Norway-Denmark

France-Spain

Spain-Italy

Italy-Yugoslavia

Italy-Greece

Saudi Arabia-Iran

Iran-Bahrein

Iran-Qatar

Qatar-Abu Dhabi

Iran-United Arab Emirates

Iran-Oman

India-Sri Lanka

Thailand-Indonesia-Malaysia

Indonesia-Malaysia

Korea-Japan

Canada-Denmark(Greenland)

Mexico-United States

United States-Cuba Venezuela-Trinidad & Tobago Argentina-Uruguay Venezuela-Netherlands Antilles Brazil-Uruguay

The following agreements for the delimitation of the con tinental shelf do not follow the median line or the equi distance line methods nor are they inspired by them: Denmark-Federal Republic of Germany The Netherlands - Federal Republic of Germany Italy-Tunisia Sudan-Saudi Arabia Senegal-Guinea-Bissau Chile-Peru Ecuador-Peru Colombia-Panama Maldive-India and other adjacent States Gambia-Senegal Colombia-Costa Rica France-United Kingdom (international arbitration) Libya-Tunisa (sentence of the International Court of Justice)

\*Thanks to Dr.Gian Piero Francalanci, Manager of the Geo desic, Cartographic and Photointerpretation Department of AGIP for his kind collaboration in finding unpublish ed delimitation agreements and for evaluations made. 18) -The doctrine of the continental shelf could be surpass ed by the doctrine of the exclusive economic zone, pro vided for by articles 55 to 75 of the Law of the Sea Convention; in the future, although with difficulty, it could happen that some States will institute the exclusive economic zone in the Mediterranean (even though it is considered that what could tip the scales in this sense, is Italy whose eventual exclusive economic zone would cover 25% of the Mediterranean); in this case, the powers developed by the coastal State in the limits of the exclusive economic zone will be destined to absorb those developed up to now in the limits of the continental shelf.

Keeping to the facts, until the present, France and Spain, who have instituted the exclusive economic zone in the Atlantic sector, have avoided doing so for the Mediterranean sector.

19) - In consideration of the importance that international jurisprudence attributes to the ratio of proportionality which must exist between the length of the coasts and extension of the coasts and extension of the continental shelf, it is believed useful to report the data relative to extension of the Mediterranean coasts.

· · ·	Sta	t_e	Le	ength(in km)	<u>% composition</u>
· _ ···	ALBANIA			287	1.5
	ALGERIA			1,104	5.6
	CYPRUS			537	2.7
•	EGYPT			997	5.1
• ·	FRANCE			910	4.6
	of which:	Mediterranea	an 493		
-		Corsica	417		
<u>-</u>	GREECE (1)			3,048	15.6
	of which:	Continent &			
		islands	2,242	· ·	
		Crete	630		
		Rhodes	176		
	ISRAEL			222	1.1
	YUGOSLAVIA			789	4.0
	ITALY			4,542	23.2
	of which:	Continent	2,858		
		Sicily	854		
		Sardinia	756		
		Elba	74		
	LEBANON			195	1.0
þ.	LIBYA			1,686	8.6
	MALTA (2)			93	0.5
	MONACO			6	0.03
	MAROCCO			352	1.8

SPAIN (3)			1,834	9,4
of which:	Continent	1,350		
	Balearic			
	Islands	484		
SYRIA			152	0.8
TUNISIA			1,028	5.2
TURKEY (4)			1,805	9.2
	Tota:	1	19.587	100,0
			=======	=====

(1) Excluding the small islands in the Aegean Sea

- (2) Including the Island of Gozo
- (3) Including Gibraltar

(4) Excluding the Marmara Sea (443 km)

Source: "Sovereignty of the Sea", U.S. Dept. of State, October 1969. Six States have coastlines facing other seas different from the Mediterranean; in those cases the Mediterranean coastline, as percentage of all coasts, is the following: Spain 54%; France, 36%; Turkey 51%; israel 96%; Egypt 41; Morocco 21.

20)-It is to be excluded that equity can be understood in this regard, as a rule of "ius cogens".

Equity, on the other hand, has a precise meaning when the delimitation of the continental shelf is put to the decision of an arbitral board.

21) - The Mediterranean is an area abounding in situations of potential instability.

Soft tension between Spain and Marocco for Ceuta and Melilla the question of sovereignty over Gibraltar, which opposes two NATO members, Spain and United Kingdom; problems between Yugoslavia and Albania for the thorny question of Kosovo demands for greater autonomy; disputes between Greece and Turkey for limits of their respective territorial waters and sovereign rights over the continental shelf; a very difficult political situation between Syria, Lebonon and Israel; tension between Lybia and Egypt; difficulties between Algeria and Morocco for the problems of the ex-Spanish Sahara.

- 22) Sometimes the situations are so special and delicate (Greek-Turkish case) that the fact that the two States belong to NATO is not enough to prevent a serious international bilateral crisis caused by the delimitation of the continental shelf.
  - 23) On the whole the petroleum balance of the Mediterranean States is very negative. The latest data, published by the UN, refer to 1979.

<u>PETROLEUM</u> (data expressed in thousand tons)

SPAIN	895	48,445
FRANCE	1,205	126,000
ITALY	1,720	114,923
YUGOSLAVIA	4,143	15,643
ALBANIA	2,100	2,100
GREECE	-	15,180
TURKEY	2,620	14,040

SYRIA	8,940	9,120
LEBANON	-	1,855
ISRAEL	21	8,221
EGYPT	24,900	11,800
LIBYA	99,300	6,500
TUNISIA	5,537	1,541
ALGERIA	54,500	3,200
MOROCCO	26	3,426
CYPRUS	-	1,855
MALTA	no data available	
	205,907	383,849

Source: Yearbook of World Energy Statistics, United Nations, 1979.

- 24) See Conforti B., Lezioni di Diritto Internazionale, Naples, 1982, p.199.
- 25) See Giuliano M., Diritto Internazionale, Vol.II, Milan, 1974, p. 208.
- 26) The appalling implications of growing pollution in the Mediterranean become clear in the early 1970's, but concerted international action by Mediterranean States only began with the signing of the Barcellona Convention in 1976. The Convention and associated Protocols entered into force on 12 February 1978.

Italy has concluded also two bilateral agreements with Yugoslavia (signed in 1974 and come into force in 1977) and Greece (signed in 1979) for collaboration in safeguarding the waters of the Adriatic Sea and the Ionian Sea.

18.

Those agreements can be considered as interesting precedents for other co-operative ventures in the Mediterranean.

27) - In the Gulf of Mexico, over 4,000 petroleum installations, fixed and movable, made it necessary to determine special routes for navigation.

It will be opportune to study a set of regulations to guarantee to all activities the free exercise provided for by international law, avoiding undue interference and bearing in mind in a coordination effort - the different exigencies. In fact, complex interference is possible between navigation, exploration, mining production, research, fishing, laying of electric, telephone and telegraph cables pipelaying, tourism.

28) - The first difficulties in negotiation, at times, begin from the moment of choosing the nautical map which includes the sector to be delimited.

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