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MARINE ARCHAEOLOGY HERITAGE AS A TOOL OF LOCAL DEVELOPMENT. A FIRST APPROACH

M.G. Lucia
University of Turin, Italy

1. A CONCEPTUAL BACKGROUND

In the era of globalisation and a consequent standardisation of territorial organisation, the importance of cultural heritage for the development of a social identity, as a tool of enhancing the belonging to a community feelings and of activating the process of local development - i.e. the self reproduction of the territorial system - is generally agreed. The cultural heritage has been carefully considered by qualified academics as a potential tool for self sustainable development and for increasing the competitiveness of the territorial systems.

Cultural heritage is not a geographical subject of study. However, on the basis of a social project which envisages it as an important tool to reach its objectives, it becomes so. In turn, the action of social planning reflects on the territory depending on the procedures which geography proposes to identify and interpret, in the perspective of local development. (Dematteis, 1998).

This paper represents an initial attempt, subject to further survey and verification, of a geographical approach to investigating as well as recognising archaeological marine remains as a resource to be included in the construction of territorial development projects which deploy political economical and social forces.

The crucial problem which comes to light when one tries to apply a geographical cultural heritage approach to marine archaeological finds, is considering the finds as an element of the *milieu*. In fact, the finds are objects which go far back to historical eras and that could hardly be considered of historical or identity value by the coastal community where it is discovered. Often, the finds belong to different cultures which are localised in that particular archaeological site for purely incidental reasons. It is however, possible to consider an archaeological marine remain as a resource by enlarging our point of view. It is well known, that there were strong relationships between the various Mediterranean populations during the classical era, which facilitated the sharing of knowledge, traditions and innovations and, therefore, the belief in a Mediterranean culture (Braudel, 1966). Bearing this in mind, one is able to envisage the pieces of cultural heritage found in the sea as a testimony to a common origin and a common process of civilisation in the Mediterranean, evoking feelings of a common descent.

These remarks make it possible to include marine archaeological remains in a geographical analysis, as element of the *milieu*, or as the evidence of the social history of the territory, and which can therefore be valued as resources and become part of a process of re-qualification and development of the coastal areas. In other words, when these finds have been accepted as cultural heritage and are recognised as part of a geographical context, they can be involved in the present process of territorial growth (Governa, 1998).

In the primary phase of the research, an attempt has been made to investigate the following items:

- I Marine archaeology functions
- II "Cultural heritage zone" settlement
- III Cultural heritage preservation rules
- IV Marine archaeological finds as a tool for assessment.

A second phase, still in progress, proposes to examine in the practical case of some islands of the Mediterranean, the action of the networks of local subjects for the uses of marine archaeological finds, as a tool for identifying the boundaries of protected marine areas and as an instrument for activating a type of cultural tourism, well as involving the local community in setting up businesses connected to archaeology and the consequent auto-sustainable territorial development, based on enhancing local material and cultural resources.

2. FOCUS ON THE ROLES OF ARCHAEOLOGICAL FINDS

It is well known that the Global Marine Interaction Model considers marine archaeology to be a use of the sea, encompassing it into a research category (Couper, 1983 ; Vallega,1993). Compared with the other uses of the sea, marine archaeology shows some peculiarities. It is not the result of the exploitation of marine resources, and does not have an environmental impact. So the sea is simply a "receptacle" of finds. Consequently as marine archaeology cannot be considered a real use of the sea, we should clarify the meaning of "use" in relation to marine archaeology, by stressing its features, and try to appraise its potential effects in the context of local development (Lucia, 1991).

To this aim certain events, which drew marine archaeology to point out its scientific topics and its methodological equipment, should be examined. In fact marine archaeology is a new branch of archaeology. It was only at the end of the 60s, as a result of a lively debate, that epistemological issues were settled. Archaeologists have unanimously acclaimed the unity of theoretical principles and scientific goals of the discipline, stating that differences between the branches derive from the historical and chronological context, and not from the surroundings where the experts work, or from the equipment they employ. Terminology has been established, using the expression underwater archaeology which encompasses not only finds recovered from the sea, but also finds recovered from rivers, lakes and pools, whereas marine archaeology has been defined as "the scientific study of the material remains of man and his activities on the sea".

Bearing in mind the epistemological principles which claim that marine archaeology pursues the same goals of archaeology *tout-court*, research deals principally with the study of man and his activity on the sea. Nowadays an experimental phase on archaeological-geographical approach is already well under way, which aims to attain knowledge of the ancient organisation of the coast and the sea (Bass, 1980; Gianfrotta and Pomey, 1982; Mukelroy, 1978).

Moreover, the ecological and economic endowments bestowed on cultural heritages allows one to assert that marine archaeology is both a cultural and economic utilization of the sea and it can be conceived as a use of the sea as well. Within the framework of coastal system management it should be included in the category "protection", or "recreation".

We can base these statements on a breakdown of the role performed by marine archaeology, assessing its cultural and ecological functions.

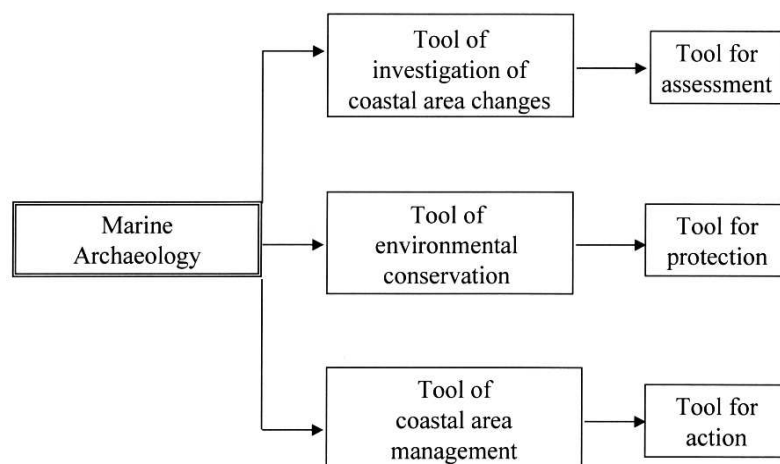


Figure 1. Marine archaeology functions.

Thanks to its conventional function, namely the enhancement and the protection of evidence of the history of civilization, marine archaeology may provide a framework to outline the development of human utilization of the coastal area, and give deeper insight into the ancient organization of shipping, trade, ports, and the spread and exchange of knowledge and technology

In recent years, concern has been focused on the ecological endowments of marine archaeology. In fact the establishment of an archaeological area could be the starting point of the delimitation of marine parks and reserves and play a crucial role in efforts to preserve the marine and coastal ecosystem. In fact nowadays the science of planning and management considers cultural heritage to be a field of “proactive conservation”. This means that cultural heritage combines knowledge of the past with conservation of local traditions and the cultural identity of coastal communities. As said above, marine archaeology could also play a role for environmental preservation and economic growth, by means of “environment friendly tourist enterprises”, as well as being rich in cultural features.

3. THE “CULTURAL HERITAGE ZONE” SETTLEMENT

As far as international regulations are concerned, interest in the protection of cultural heritage affairs emerged, although this has not yet been much acknowledged, from the Conference held in Geneva in 1958. In particular, it should be underlined that the recovery of underwater objects does not pertain to the coastal State, but is included in the provisions for high seas freedom. Since the coastal State is endowed with regulations on recovery and protection of underwater objects, article 23 could consider the action of a foreign ship as an infringement of the innocent passage rule.

The 1982 UNCLOS contains, instead, two articles (149 and 303), which refer specifically to archaeological and historical objects found at sea, and a “General Provision” which explicitly gives the coastal State the task “to protect objects of an archaeological and historical nature found at sea”. Article 149 relates to the “area”, i.e. the establishment of a “contiguous zone” which stretches up to 24 nautical miles from the baselines, regarded as a sort of “archaeological zone” and covered by the global governance of the coastal State., Compared with the 1958 UN Convention, this highlights a more pronounced attitude of the coastal States in extending their powers into the territorial sea, not even with merely economic aims.

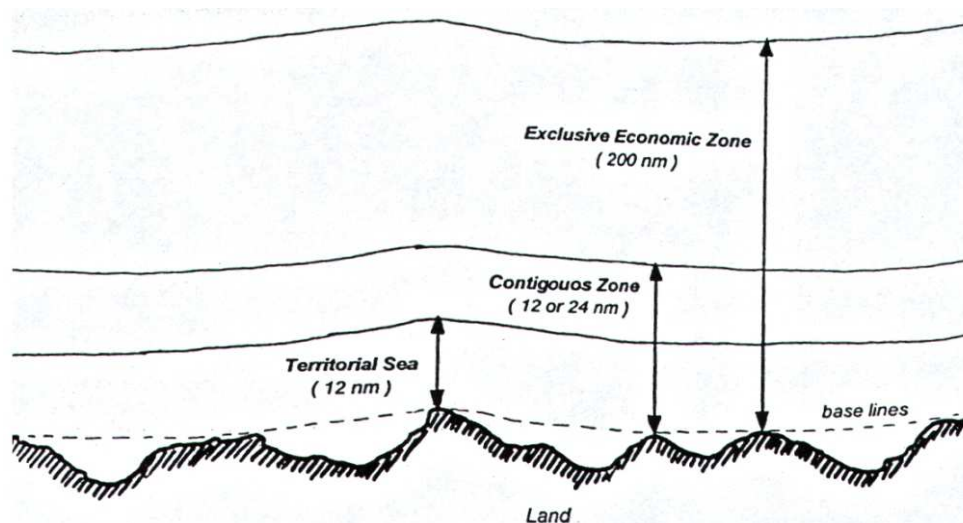


Figure 2. The jurisdictional areas of the coastal States according to UNCLOS 1982
Source: Hayashi, 1996; elaborated

Article 303 refers to the objects of an archaeological and historical nature found in the contiguous zone, namely within the territorial sea boundary and 24 nautical miles from the baselines. The provisions of the Convention refer to article 303 which states *inter alia* that in order to control trading in such objects the coastal State could impend the removal of archaeological finds, because it is regarded as an infringement “within its territory or territorial sea of the laws and regulations referred to that article” (Migliorino, 1984). This adds criticism to the provisions of the 1982 United Nation Convention on the International Law of the Sea in the cultural heritage protection (Brown, 1996; Francalanci and Spanio, 1989).

Bearing in mind that the breadth of the territorial sea is measured from the baselines (12 nautical miles), the contiguous zone provided for article 149 overlaps partially with the economic exclusive zone (EEZ) and the continental shelf. Actually the EEZ and the continental shelf stretch 200 nautical miles

seawards from the outer limit of the territorial sea. As a consequence when overlapping of a contiguous zone and a claimed EEZ occurs, the recovery of archaeological and historical objects are governed exclusively by the laws of the coastal State concerned. Global governance is applied beyond the continental shelf where an EEZ is not claimed, or in the case in which the continental shelf stretches beyond the limit of 200 nautical miles from the baselines (Hayashi, 1996).

The jurisdictional issues inherent in protection of the heritage beyond the limit of the territorial sea were outlined, but not satisfactorily resolved by the 1982 United Nations Convention on the Law of the Sea (Couper, 1996). The provisions are regarded as ineffective to protect cultural heritage beyond the contiguous zone, and inadequate to resolve conflict between ownership claims, salvage claims and cultural heritage interest. Additionally, they do not give any advice on how to deal with the underwater cultural heritage. As a result, non-governmental organizations (NGOs) have made attempts to deal with effective governance of the underwater cultural heritage.

As the 1982 Convention on the Law of the Sea on the protection of cultural heritage, as said above, is regarded as ambiguous, unsatisfactory and inadequate to achieve, in practice, more national and international control, several non-governmental organizations (NGOs), have made efforts to apply a more comprehensive regime to the underwater cultural heritage.

Principles and guidelines for the implementation of article 303 of the 1982 UN Convention on the Law of the sea were put forward by the International Law Association (ILA) in 1994. Bearing in mind that the provisions of the United Nations Convention on the International Law of the Sea for cultural heritage control by the coastal States on the continental shelf is not binding, the Draft Convention - article 1(3) - provides for the settlement of a "Cultural Heritage Zone" beyond the outer boundary of its continental shelf (article 3), "which means all the areas beyond the territorial sea of the State up to the outer limit of its continental shelf", "as defined in accordance with relevant rules of international law". Thus the Draft requires the coastal States to avoid uses that could affect and damage the underwater cultural heritage, in "its territory or any other areas over which it exercises jurisdiction"

Inter alia we have to stress articles (7;8) that enforce the rules applying the exercise of control of any activities affecting cultural assets in the area inside national jurisdiction, respecting any area "which is not within a cultural heritage zone or territorial sea of another State Party (...)".

Although the Draft Convention's approach to archaeological affairs is generally accepted, some governments express serious doubts and reservations about particular aspects of it, especially the breadth of the archaeological area beyond the territorial sea (Brown, 1996; O'Keefe, 1996)

4. THE PRESERVATION OF CULTURAL HERITAGE GUIDELINES

4.1. The international level

In order to develop scientific awareness of an integrated management of natural and cultural resources, it is of utmost importance that cultural heritage is protected as well.

Although they have no a juridical effectiveness the UNESCO conventions and the IMO's resolutions must be mentioned.

While the UNESCO conventions do not explicitly pertain to marine archaeological remains under the jurisdiction of the coastal States, some distinguished authors, because of the comprehensiveness of the definition of "cultural heritage" and "natural heritage", declare their application to archaeological objects to be legitimate (Migliorino, 1984). However, the 1956 Recommendation (art.1) provides for application to archaeological sites (Clément, 1996)

In 1995, UNESCO, recognizing the importance and the urgency of the protection of the underwater cultural heritage, submitted to the General Conference (Twenty-eight th Session) a "feasibility study on the drafting of an international instrument for the protection of the Underwater Cultural Heritage", with the aim to attain a specific convention to preserve marine archaeological objects. The General Conference unanimously agreed on this proposal (Resolution 7.6), encouraging the General Director to pursue this goal with the co-operation of the United Nations, the IMO and the experts in archaeology, and to "report back (..) on this matter" at the next session in order that it could determine "whether it is desirable for the matter to be dealt with on an international basis and on the method which should be adopted for this purpose" (Clément, 1996).

Therefore, the protection of cultural heritage has also been granted by IMO's Guidelines on Particularly Sensitive Areas (PSSAs) as well. The concept of PSSAs had been included in Resolution 9 adopted at the International Conference on the Safety and Pollution Prevention. The implementation of the Resolution started in 1986 at the IMO's Marine Environment Protection. IMO Guidelines focus on the need for protection of historically and archaeologically significant marine areas, envisaged as being particularly sensitive. APSSAs is conceived as "an area which needs special protection through action by IMO because of its significance for recognized ecological or social economic or scientific reasons, and which may be vulnerable to environmental damage by maritime activities. Obviously the implementation of the Guidelines requires co-operation between the IMO and other international organizations, together the coastal States. This would ensure an adequate interrelation between provisions for shipping and non-shipping activities, in order to protect the cultural underwater heritage which is encompassed in an established PSSA (Blanco-Bazan, 1996).

A Charter on the Protection and Management of Underwater Cultural Heritage has been drafted by the International Council on Monuments and Sites (ICOMOS). Annexed to the Draft Convention of ILA, (manca il soggetto) was adopted by the 66th ILA Conference held in Buenos Aires in 1994. The Charter provides guidelines for all kinds of archaeological heritage. It is concerned with environmental conservation, and states that the role of underwater cultural heritage is to enhance the environment in the future. As a consequence ICOMOS asserts the need "to take individual and collective responsibility in the present for ensuring its continued survival".

In particular, we have to stress that the ICOMOS periodically updates the Charter, emphasizing the parameters for the assessment of archaeological sites, in accordance with archaeological and technical developments. In addition, it should be noted that the Charter deals with the breadth of archaeological areas in a different way, to ILA which prefers a wider cultural heritage zone. ICOMOS, in fact, encourages the coastal States to adopt customs laws in order to take the opportunities provided by the article 303(2) to control trade of archaeological finds in the contiguous zone (O'Keefe, 1996). This attitude aims to achieve more expeditious procedures compared with the extended and complicated proceedings required by amending an international convention.

4.2. The European context

Since its early days, the Council of Europe has drawn significant attention to cultural heritage. In the Convention on Cultural Heritage 1969 (art.1) the Council of Europe defined archaeological finds as "all remains and objects, or any other traces of human existence, which bear witness to epochs and civilizations for which excavations or discoveries are the main source or one of the main sources of scientific information." Later on, the *Recommendation 848/1978* of the Parliamentary Assembly of the Council of Europe includes in this definition "all objects that have been beneath the water for more than 100 years, but with the possibility of discretionary exclusion of less important antiquities once they have been properly studied and recorded, and the inclusion of historically or artistically significant objects of more recent date" (Migliorino, 1984).

The EC has not only signed international and regional agreements and conventions as a representative of the Member States, but has issued regulations and directives with specific reference to cultural heritage. The *1992 regulation (3911/92)* on the export of cultural goods provides measures ensuring that this kind of export is "subject to uniform controls at the Community's external borders". Archaeological objects, of more than 100 years old, covered by article 1 are the "products of excavations on land or under water, archaeological sites, archaeological collection". Export outside the customs territory of the Community requires an export license (EEC, 1992).

The *Directive 93/7/EEC* on the return of cultural objects unlawfully removed from a territory of a Member State was addressed to the Member States in 1993. The regulation of the "return" refers to the categories envisaged in the 1992 Regulation, including archaeological finds, as well as cultural objects classified as national treasures, or objects which belong to a public collection or ecclesiastical institutions (EEC, 1993).

The Council of Europe drew up the *European Convention on the Protection of Cultural Heritage in 1969 (revised in 1992)*, for co-operation of all European States in the protection and enhancement of cultural heritage. The Convention encourages "the protection of deposits and sites where archaeological objects lie hidden (...)".

Thus it declares (art.2) among other things, to delimit and protect sites and areas of archaeological interest, to create reserve zones for the preservation of material evidence to be excavated by later generations of archaeologists.

The achievement of this goal obliges the Convention to address contracting parties (art.3) to prohibit and restrain illicit excavation, to take the necessary measures to ensure that excavations are, by special authorization, entrusted only to qualified persons, to ensure the control and conservation of the results obtained (Migliorino, 1984).

In this context we have to underline the Recommendation 848/1978 on Underwater Cultural Heritage which requests member States *inter alia* to draw up a European Convention on Underwater Cultural Heritage, to negotiate agreement between member States on the declaration of national protection zones up to 200-mile limit, "wherever that limit is in keeping with geographical realities, as a basis for the implementation of the proposed Convention". Moreover the Recommendation encourages the co-operation with UNESCO, supports the setting up of a European Group for Underwater Archaeology and the European Youth Centre and the European Youth Foundation, the latter entrusted with research on existing laws, archaeological techniques etc., and the former with educational goals.

In 1985 the Council of Europe drafted a new Convention on the protection of underwater cultural heritage. But it did not succeed in coming to a final agreement. In the meantime the Council of Europe issued the contracting parties with a *Recommendation (921/1981)* on metal detectors and archaeology in order to control the employment of new technologies in the search and recovery of archaeological finds, and the *Recommendation 1072(1988)* for the international protection of cultural property and the circulation of works of art, including the archaeological objects. The Recommendation enhances, on the other hand, the educational features of the cultural heritage (Council of Europe, 1981; 1988; 1998)

The development of archaeological conservation techniques since the end of the 60s, and the increasing concerns on social and cultural approach to the archaeological assets, has stressed the need for revision of the 1969 Convention. A revised Convention was submitted for adoption to the European Conference of Ministers responsible for cultural heritage, held in Malta in 1992 (Cremades, 1993). The revised Convention makes provisions for protection and conservation policies and fosters European co-operation in defence of the heritage through co-ordination of conservation policies, consultations, exchange of information and experience. Stressing the promotion of public awareness, the Convention also underlines the role that archaeology should play in social and cultural development, and expresses the wish to reinforce the national legal system of the Member States to protect their cultural heritage. Particularly we have to focus on article 2 which provides for "the creation of archaeological reserves, even where there are no visible remains on the ground or under the water, for the preservation of material evidence to be studied by later generations" (Council of Europe, 1992).

Finally, within the scope of coastal system management, the emphasis ascribed to cultural heritage by the 1992 guidelines revisions of the EU Action Plan for Tourism, must be recalled. This plan makes special reference to cultural heritage, as an attempt to promote an alternative to traditional seaside tourism (ECC, 1993). The establishment of innovative museums, for instance outdoor museums, floating museums, underwater permanent exhibitions, are envisaged as profitable tools, able of developing cultural tourism.

Moreover the creation of specialized libraries and bookshops, restoration laboratories, marine environment research centres, as well as educational and training courses for archaeologists and professional and amateur divers, mean that marine archaeology could turn out to be a source of income, helping the development of cultural tourism, and thus reducing the pressure on the coast caused by the traditional sea-based leisure.

4.3. The Mediterranean Action Plan Protocols

The legal components of the Mediterranean Action Plan include several supplementary Protocols covering specific sectors of marine protection that could encompass cultural heritage (Fig.3). In this context the Protocol concerning specially protected areas in the Mediterranean, adopted in Geneva in 1982 (enforced in 1986) by a Conference of Plenipotentiaries of Contracting Parties of the Barcelona Convention, is of particular relevance. This has been subscribed by all coastal Mediterranean States, with the exception of Lebanon, and Syria, as well as by the EC (Ruiz, 1996).

The Protocol of the Convention on the protection of the Mediterranean Sea against pollution

(MEDPOL 1976, enforced in 1978) aims to set up protected areas in order to preserve areas of scientific, historical and cultural interest. The Protocol also includes provisions for "regulation of any archaeological activity and of removal of any object which may be considered as an archaeological object". In 1995 a Protocol concerning protected areas and biological diversity in the Mediterranean Sea, inspired by the principles of the sustainable development concept, has substituted the 1982 Protocol. It was adopted during the Ninth Ordinary Meeting of the Contracting Parties and the Plenipotentiaries at the Barcelona Convention, together with the Action Plan Phase II, revised according to the Agenda 21 approaches (Vallega, 1995).

National governments are obviously the main parties responsible for the implementation of international and national conventions, which generally as a recommendatory tool, are not endowed with the force to impose binding obligations on coastal States (Cicin-Sain, 1996).

In order to attain deeper insight into the power of the coastal State in drafting an appropriate management of the coastal area, it is necessary, in accordance with the features stressed by the Roper Report (Council of Europe, 1978) to investigate the laws, the significance assigned to the "underwater" expression, the kind of the protected cultural goods, the ways of protection, the jurisdictional extent of the archaeological area, property rights, the declaration of the discoveries of sites and finds. In particular, the competent governmental and non-governmental bodies, must be recognized, and the tasks which they are entrusted with. This makes it possible to assess the chance of implementation of laws in order to accomplish an adequate management of cultural heritage.

The growing awareness on the need to provide particular protection to specific sea areas has led to a proliferation of approaches, which define the features of such protection in different ways. Consequently, there is a real risk of conflicting issues related to the different approaches to the interpretation of national and international law, especially on the provisions for the breadth of the jurisdictional area. This brings to the fore the unanimous wish that an international organization such as UNESCO, which has been concerned with issues of protection of underwater cultural heritage since its establishment, is the appropriate body to deal with matters that have to be regulated at an international level, and to ensure suitable agreements at an international level when "the need to protect marine area requires restriction to the legitimate uses of the sea" (Brown, 1996).

5. MARINE ARCHAEOLOGY FINDS AS A TOOL FOR ASSESSMENT

For the aim of this paper the analysis is restricted to the marine archaeology classical age finds as a tool for assessment.

As Salomon Reinach said " (...) the richest museum in the whole world is still inaccessible. I mean the seabed of the Mediterranean Sea". Using evidence from written sources, on the features of the ancient fleet and the length of the routes, it appears, according some authors, that in the Mediterranean Sea there could be a shipwreck every fourteen square kilometres.

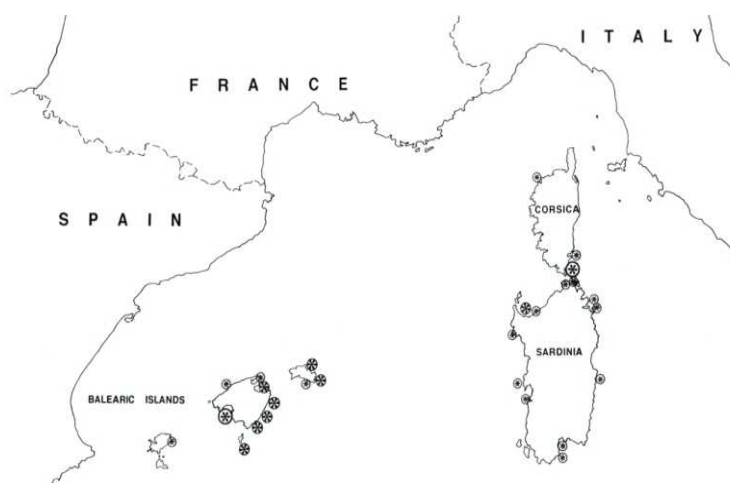


Figure 3. The main archaeological sites off the islands of the Western Mediterranean Sea

The map (Fig.3) shows the localization of the largest archaeological areas off the islands of the Mediterranean Sea, Balearic Islands, Sardinia, Corsica, consisting in shipwrecks and their loads.

Geographical location of shipwrecks is related to geological, morphological, biological and meteoric characteristics of the sea. Usually, favourable features for the preservation of archaeological finds, are found at the base of submarine cliffs, beyond the area covered with vegetation (about 30-40 metres deep), where conchiferous sand takes the place of rocks and sea weeds. In the area investigated these conditions do not occur everywhere. In fact the continental shelf is narrow, with the outer edge in very deep water. Slopes are steep, as a result of compression which large areas of the Mediterranean basin are subject to, whereas rises are influenced in the Western Mediterranean by the large cone of the Rhone.

Thus one can claim that finds and shipwrecks could be more numerous in the abyssal plain of the Western Mediterranean than those already discovered.

But first and foremost, they are concerned with historic features. In fact the Balearic Islands, Sardinia and Corsica are located at the crossroads of the routes used by the Phoenicians, Greeks, and later on utilized by the Romans.

I think that among the areas shown on the map, the Mouths of Bonifacio represent a very significant study case because of the large and contemporary number of shipwrecks (Fig.4).

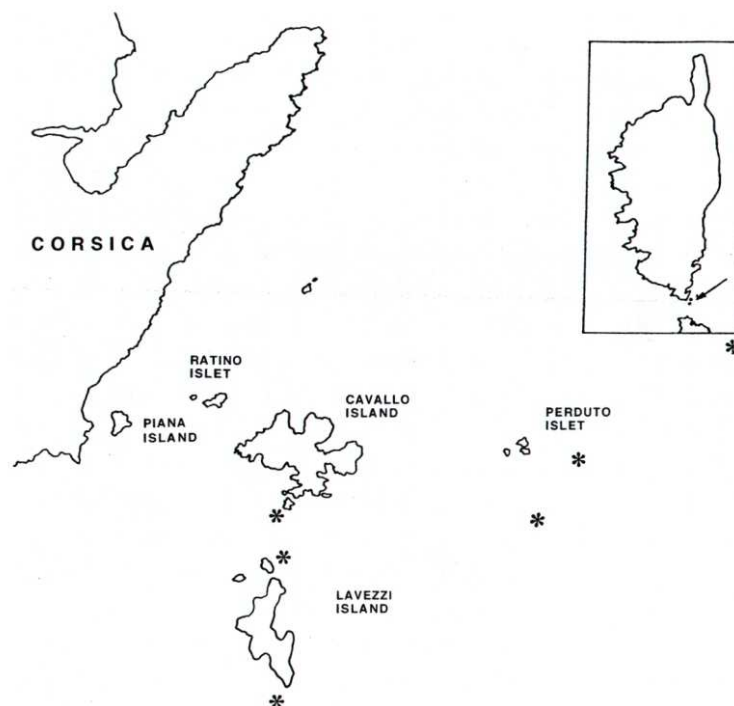


Figure 4. The main archaeological sites in the Mouths of Bonifacio

Despite the high risk of wrecks, related to the joint effect of the winds and sea currents and the presence of emerging rocks and sandbars, large and frequent trade relationships between Rome and their Iberian provinces, occurred via the Mouths of Bonifacio. This is probably because Roman ships were more seaworthy and the alternative routes were too long. In the area that is the object of this research, marine archaeology as a tool for assessment, enables one:

- to study the framework of the Roman trade policy for foodstuffs, the procedures of private capital investment in Iberian economic affairs, the process of "nationalization" of Iberian mines which provided in particular silver, copper and lead;
- to increase current knowledge of the Roman merchant fleet, in this respect literary and iconographic sources being inadequate;
- to advance further hypotheses on the framework of the routes and the ports of the classical age.
- In the late Republican age, the second half of the first century BC and in the first centuries of the Empire (first and second centuries AD), Spain, Gallia, and Africa, were the main wheat, oil and

wine suppliers, carried by ships of about 35- 40 dwt, some of them compare to today's combined cargoes, others to containerships. The organization of trade relationships relied heavily on the coasts of the Mediterranean islands, where suppliers ports were located, as well as shelter ports and so called "positiones", namely ports exploited as a starting point for military submission and economic colonization of the island itself.

Recently progress has been made in the study of ancient ports. The most recent conventions, indeed, have stressed the need to carry out a census of the ancient port structures in the Mediterranean area.

On behalf of Roman aristocracy - as stamping on the amphoras and ingots shows- economic and financial business was controlled by freedmen, who acted as entrepreneurs and shipowners. As for shipping routes, the Romans made use of the network established by the Phoenicians, Etrurians and Greeks. Only for their links with the Iberian provinces did they use a deep-sea route through the Mouths of Bonifacio, which was more hazardous but shorter than the Tyrrhenian one (Lucia, 1995)

7. CONCLUSIVE REMARKS

No doubt there are difficulties to draw conclusive considerations based on these initial results. However, the paper does, to date, throw light on some aspects which one is faced with when working out a method of studying marine archaeological finds in a geographical perspective.

In particular, from the analysis carried out on the institutional framework, on suggestions and proposals put forward by various seats for the protection and enhancement of cultural heritage, it becomes clear that the relationships between the various local, institutional and non-governmental agencies which are interested in cultural heritage are still conflicting. Indeed, to add to this argument, the second phase of the investigation will place particular emphasis on the actions of the network of local subjects and the nature of their relationships with the local network, in order to bring to the light the ways of interaction of the economic, social bodies and local decisional powers, to achieve economic efficiency, environmental protection and conservation, as well as the enhancement of local development.

Examples already exist of economic and ecological value, which the discovery of archaeological finds, if properly exploited, could signify. The case of the Swedish galleon *The Wasa* (17th century) is well known: restored and included in a dedicated museum, where temporary exhibitions are put on with the aim of promoting interest in archaeological discoveries. The funds provided by the government were recouped in a few years, thanks to the large number of visitors. We can also mention the Underwater Museum of Bodrum in Turkey. The Museum is set in the restored castle of the Knights of Rhodes, on the Bodrum peninsula overlooking a magnificent sea resort, and houses classical finds recovered in Turkish seas by the American archaeologists of the Institute of Nautical Archaeology, and also the Museum Nino Lamboglia (Sardinia). Significant among others is the "permanent underwater exhibition" on the seabed of Ustica (Sicily) in a special protected marine reserve. The finds (amphora, anchors, pottery, and glass) have been left on the seabed, highlighted by an explanatory notice. An archaeological itinerary has been set up, and guided dives and visits have been arranged for study or pleasure.

This effort, which has involved the local community in both economic and cultural ways, could increase opportunities for tourism which would also increase economic efficiency and aid preservation of the resource base, that is the environment. The experience of Ustica could be regarded as a model to be imitated, because it represents a successful example of conservation that could foster growth consistent with economic development, with the environmental conservation, and with the cultural identity of the local community.

REFERENCES

- Bass G.F. (1980), "Marine archaeology: A misunderstood science", in Mann Borgese E. and Ginsurg N. (Eds.), *Ocean Yearbook*, Chicago, Chicago University Press, pp. 137-152.
- Blanco-Bazan A. (1996), "The IMO guidelines on particular sensitive areas (PSSAs). Their possible application to the protection of underwater cultural heritage", in Couper A.D. (Ed.), *Marine Policy Special Issue on The protection of the Underwater Cultural Heritage*, 20 (4), pp. 343-349.
- Braudel F. (1966), *La Méditerranée et le Monde Méditerranéen à l'Époque de Philippe II*, Paris, Colin.
- Brown E.D. (1996), "Protection of the underwater cultural heritage. Drafts principles and guidelines for implementation of the United Nations Convention on the Law of the Sea", in Couper A.D. (Ed.),

- Marine Policy Special Issue on the Protection of the Underwater Cultural Heritage*, 20 (4), pp. 325-336.
- Cicin-Sain B. (1996), "Implementation of Earth Summit agreement: Progress since Rio", in Belfiore S., Lucia M.G., Pesaro E., *Regional Seas towards Sustainable Development*, Milano, FrancoAngeli, pp. 17-49
- Clement E. (1996), "Current developments at UNESCO concerning the protection of the underwater cultural heritage. Presentation made at the First and Second National Maritime Museum Conference on the Protection of underwater cultural heritage", in Couper A.D. (Ed.), *Marine Policy Special Issue on The protection of the Underwater Cultural Heritage*, 20 (4), pp.309-323.
- Commissione delle Comunità Europee, Ministero del Turismo e dello Spettacolo (1993), *Guida Europea ai Musei del Mare nel Bacino del Mediterraneo*, Roma, Ministero del Turismo e dello Spettacolo.
- Council of Europe (1978), *Recommendation 848/1978 on Underwater Cultural Heritage*, Strasbourg, Doc.4200.
- Council of Europe (1978), *Report of the Commission of Culture and Education on the Underwater Cultural Heritage*, Strasbourg.
- Council of Europe (1981), *Recommendation 921/1981 on Metal Detectors and Archaeology*, Strasbourg.
- Council of Europe (1988), *Recommendation 1072/1988 on the International Protection of Cultural Property and the Circulation of Works of Art*, Strasbourg.
- Council of Europe (1992), *European Convention on the Protection of the Archaeological Heritage (revised)*, European Series Treaty/143.
- Council of Europe (1998), *Recommendation no. (98)5 of the Committee of Ministers to Member States Concerning Heritage Education*, Strasbourg.
- Couper A.D. (1996), "The principal issues in underwater cultural heritage", in Couper A.D. (Ed.), *Marine Policy Special Issue on The Protection of the Underwater Cultural Heritage*, 20 (4), pp.283-285.
- Couper A.D. (Ed.) (1983), *The Atlas of the Oceans*, London, Times Books.
- Cremades J.A. (1993), "Council of Europe policies and action for the protection of the architectural heritage", Paper presented in the workshop *Il restauratore a dodici stelle*, Genoa, May 19, 1993.
- Dematteis G. (1998), "La geografia dei beni culturali come sapere progettuale", *Rivista Geografica Italiana*, 105, p. 25-35.
- EEC (1992), "Council regulation 3911/92 on the export of cultural goods", *Official Journal*, L395, 31-11-1992.
- EEC (1993), "Council directive 93/7/EEC on the return of cultural objects unlawfully removed from the territory of a Member State", *Official Journal*, L074, 27-3-1993.
- Francalanci G., Spanio F. (1989), *La Convenzione delle Nazioni Unite sul Diritto del Mare. Aspetti Tecnici*, Genova, Istituto Idrografico della Marina.
- Gianfrotta P., Pomey P. (1982), *Archeologia Subacquea. Storia, Tecniche, Scoperte e Relitti*, Milano, Mondadori.
- Governa F. (1998), "Il milieu come insieme di beni ambientali", *Rivista Geografica Italiana*, 105, pp. 85-93
- Hayashi M. (1996), "Archaeological and historical objects under the United Nations Convention on the Law of the Sea", in Couper A.D. (Ed.), *Marine Policy Special Issue on The Protection of the Underwater Cultural Heritage*, 20 (4), pp.291-296.
- Lucia M.G. (1991), "Liguria : regione laboratorio di geografia e archeologia marina", in *La Liguria e il Mare*, Genova, Pubblicazioni dell'Istituto di Scienze Geografiche, pp. 35-61.
- Lucia M.G. (1995), "Archeologia marina nelle Bocche di Bonifacio. Funzione culturale e valorizzazione ambientale", *Rivista Marittima*, 4, pp. 57-67.
- Magnaghi A. (1995), "Per uno sviluppo locale autosostenibile", *Materiali. Laboratorio di Progettazione Ecologica degli Insediamenti*, 1, pp. 3-26.
- Migliorino L. (1984), *Il Recupero degli Oggetti Storici ed Archeologici Sommersi nel Diritto Internazionale*, Milano, Giuffrè.
- Mukelroy K. (1978), *Maritime Archaeology*, Cambridge, Cambridge University Press.
- O'Keefe P.J. (1996), "Protecting the underwater cultural heritage. The International Law Association Draft Convention", in Couper A.D. (Ed.), *Marine Policy Special Issue on The Protection of the Underwater Cultural Heritage*, 20 (4), pp.297-307.
- Ruiz J.J. (1996), "International law facing Mediterranean sustainable development : the revision of Barcelona Convention and its related Protocols", in Belfiore S., Lucia M.G., Pesaro E., *Regional Seas towards Sustainable Development*, Milano, FrancoAngeli, pp. 230-255.
- Vallega A. (1993), *Governo del Mare e Sviluppo Sostenibile*, Milano, Mursia.
- Vallega A. (1995), "Participation in the ninth ordinary meeting of the Contracting Parties to the Barcelona Convention and in the meeting of the Plenipotentiaries to the Barcelona Convention (Barcelona, June 5-10, 1995)", in Vallega A., Belfiore S., Pesaro E. (Eds.), *ICCOPS Newsletter Special Issue*, Genoa, pp. 25-31.