

# Underwater archaeology and tourism development

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# General Framework

- Globalization - a requirement for diversification of goods and services
- Cultural diversity
- Balanced development
- Sustainability
- Innovation
- Multi-activity
- Social in design consensus

# The diving industry (1)

- Worldwide there are more than 6,000 diving centers.
- In the last years, there are more than 1.300.000 certified divers per year.
- The total number of certified divers worldwide is more than 24 million.
- These numbers will increase, as countries like India and China, are going to be closer to the developing world.
- 72 billion Euros in 2004: direct turnover of the marine tourism in Europe.



*Sources: 1. Worldwide Membership & Certifications Statistics  
2. EU Green Paper for the European vision for oceans and seas*

# The diving industry (2)

- Significant growth development of the diving tourism globally.
  - 3.500.000 scuba divers in Europe
  - 70% choose the Mediterranean
  - They spend at least 2 billion Euros each year.
  - 800.000 Europeans divers each year make one trip with 10 night-outs spending more than 1,4 billion Euros annually \*
  - Moreover 520.000.000 Euros spent in direct trips\*
  - Main diving destinations in Europe are: Spain, Malta, Cyprus and new ones such as Turkey and Croatia.



\* Source: European Underwater Federation ([www.euf.org.uk](http://www.euf.org.uk)),  
RSTC (Recreational Scuba Training Council, [www.rstc.eu.org](http://www.rstc.eu.org))

# The diving industry (3)

## Characteristics of active scuba divers of the United States of America:

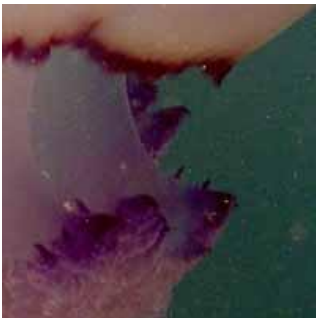
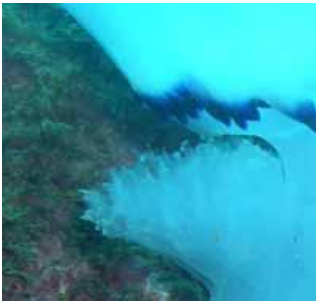
- Average age between 38 – 53 years old.
- 76% men.
- Income for the 56% of them is between 75 up to 100 thousand dollars.
- 71% of them are married.



Study sample of 3.815 scuba divers of USA of all levels.

*Source: DEMA, Diver Acquisition Project “Profile of the most Active Divers in the US; Life-style and Demographic Study”*

# The diving industry (4)



- More than 80 diving parks operate globally with particular positive effects in the economy and in the marine environment.
- Present institutional framework in Greece for the diving parks and their latest developments.
- The example of the diving park in the Medes Islands in L' Estartit of Spain.
- The dream of every scuba-diver is to dive in an ancient ship wreck.

# The diving industry (5)

Examples:



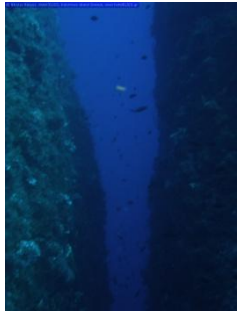
- In the Medes islands more than 70.000 dives occur every year, by 20.000 scuba divers constituting the 9.3% of the total of the tourists, while the touristic period has totally elongated.



- In 1983 the Sharm el Sheikh summer resort in the Red Sea offered 2 diving centers, 3 diving boats and 200 beds, while in 2003 it offered 40 diving centers and 20.000 beds.

# Diving in Greece

- Greece has just managed to have more diving centers than Malta.
- Following the legislation N.3409/2005 the dives in the entire Greek territory are permitted, except those being declared as archaeological areas and where elsewhere are prohibited.
- Advantages of the diving tourism in Greece :
  - New closer destination for the European scuba-divers with a combination of other important forms of tourism (antiquities, natural beauties, entertainment, culture e.t.c. )
  - Excellent weather conditions and climate which encourages diving through out the whole year.
  - Non-existence of extreme meteorological phenomena and dangerous marine beings



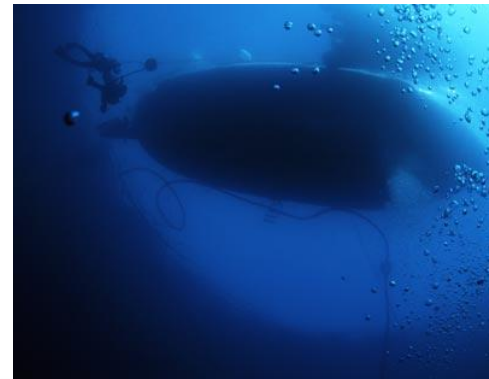
# Underwater archaeological wealth in Greece (1)

- The ministry of Culture and Tourism through the Ephorate of Underwater Antiquities is responsible for the protection of Greek underwater cultural heritage.
- According to estimations, there are more than 7.000 potential positions of underwater archaeological interest in Greece.
- Only the modern wrecks of the 20th century in the Greek seas surpass the number of 1.000
- The known places of underwater archaeological interest amount in few hundreds.
- The ancient shipwrecks which have been thoroughly studied amount in less than 50.



# Underwater archaeological wealth in Greece (2)

In recent underwater archaeological researches of the Institute of Underwater Archaeological Researches, in a shore line of 5 nautical miles long, at the west shores of the Pagasitikos Bay, from Amaliapolis up to Cape Telegrafos, 13 archaeological sites have been located, from which most of them have been certified as ancient shipwrecks by the archaeologist of the Ministry of Culture and Tourism Mr. Hlias Spondylis being in charge.



# Underwater archaeological wealth in Greece(3)

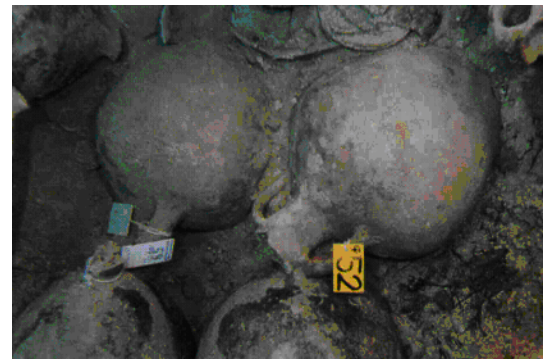
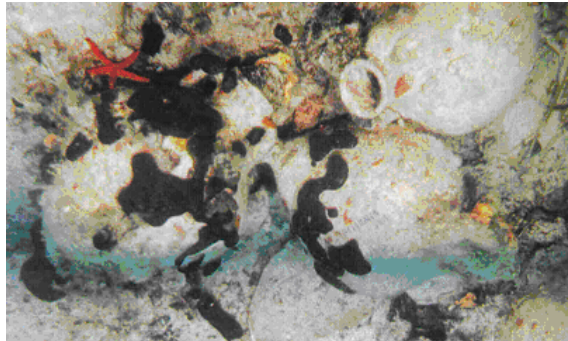
In an exploratory research in the North Evoikos 2006-2008, in cooperation with the Ephorate of Underwater Antiquities of Underwater Antiquities and of the Hellenic Institute of Marine Archaeology, with the archaeologist Mr. George Koutsouflakis being in charge, in the area of the South Evoikos Bay, Kinossoura Marathon, the group of islands of Stiron, Portolafia of the Marmarion Bay and the marine area of Ramnountos of Attica, a total number of 13 places of underwater archaeological interest is located, from which 12 of them correspond to ancient shipwrecks dated from the 6th century B.C. up until the 13th century A.C.).



# Underwater archaeological wealth in Greece(4)

- The ancient shipwrecks constitute a time capsule of history.
- Summit of UNESCO - “Protection of Underwater Cultural Heritage” - Paris, 2/11/2001:

“Maintenance IN CITU (on the spot) of the underwater cultural heritage should be considered the first choice before allowing or determining any other activity to occur in the particular site”

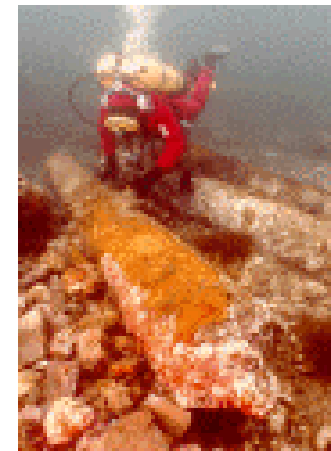


# Examples of Underwater Museums in the world (1)

Already some countries around the world have managed to create the first underwater museums. Some examples are presented below:

## 1.Nova Scotia - Canada

Through the Archaeological Shipwreck Programme and in cooperation with the Museum and the Parks of Nova Scotia of Canada, Eco-Nova attracts divers from all over the world to visit its shipwrecks sites. Many of the British shipwrecks have have occurred in Nova Scotia, through its historic strategic position in the specific region. One of the most important shipwreck dive is the CELEBRE, a French battle ship of the 18th century which was sunk in a naval battle which took place in the north region of Nova Scotia.



# Examples of Underwater Museums in the world(2)

## 2. Nagshead, USA

In NAGSHEAD of North Carolina of the U.S.A., has been created an underwater park of USS HURON, of the American USA Navy, which was the last ship constructed with iron instead of steel.

The USS HURON was sunk in 1877, following a strong storm, only 250 yards from the shore. Even though due to its position, a big part has been covered by sand, the frame and the prow of the ship are almost intact and many interesting particles such as the big propeller and the steering wheel have also been rescued.



# Examples of Underwater Museums in the world(3)

## 3. Caesarea , Israel

In the coastal city of Caesarea , Israel, 20 feet under water, lays the “Herod’s Harbor” one of the biggest and most significant ports of Roman Empire. With water-proof maps and the escort of an instructor, the divers can swim and admire the exhibits: vessels, enormous anchors, marble columns, and also a Roman shipwreck, a destroyed lighthouse, the ancient waterfront, remnants of previously brilliant harbor that King Herod constructed honoring Caesar Augustus.



# Examples of Underwater Museums in the world (4)

## 4. Baia, Italy

In our neighboring Italy the magnificent underwater archaeological park of Baia is located, with numerous of antiquities and mosaics in a depth of 5-6 meters. Baia, one of the most beautiful and wealthier summer resorts of the roman empire was destroyed due to an earthquake and was sunk. The divers have the opportunity to admire the luxurious villas (one of which is considered to be the summer residence of Julius Caesar ), the thermal spas, the roads and other shipwrecks such as the *Portus Julius*, the *Villa dei Pisoni* and the *Villa Protiro*.



# Examples of Underwater Museums in the world (5)

## 5. Tahoe Lake , California

California's first underwater shipwreck park, the Emerald Bay Historic Barges was officially opened to the public in September 23, 1994. The site consists of two large wooden barges whose names still remain unknown, constructed in 1900 for the the use of carrying cargo to the lake. Section of the deck with interesting objects such as the towing bits are exceptionally well preserved due to the low water temperature.



# Examples of Underwater Museums in the world (6)

## 6. Lake Champlain, USA

In the states of Vermont and New York, in the Lake CHAMPLAIN has been created an underwater park for various of the famous shipwrecks of the region, such as the *O.J. Walker*, a commercial boat which was sunk in 1895 due to a strong windstorm. The mast, the steering gear, as well as pieces of the vessel are scattered on the deck and around the ship, while the steering wheel stands quite impressively in its initial place.



# Examples of Underwater Museums in the world(7)

## 7. Florida, USA

In the state of Florida since 1987 the creation of underwater parks with the shipwrecks of the region has been developed, gathering a large number of divers, not only for its significant archaeological features but also for its abundant marine life. The ships that are included in the system of underwater parks are the following:



- a) Urca de Lima (opened in September of 1987 and was sunk in the beginning of the 18th century)



- b) San Pedro (inaugurated in April of 1989 and was sunk in 1733)

- c) City of Hawkinsville (opened for the public in 1992 while it was sunk in 1993)



# Examples of Underwater Museums in the world(8)

## Florida - USA (continue)

- d) USS Massachusetts (inaugurated in 1993)



- e) SS Copenhagen (opened in June of 1994 while it sunk in 1900)

- f) SS Tarpon (opened in the spring of 1997 while it was sunk in 1937)



- g) Half Moon



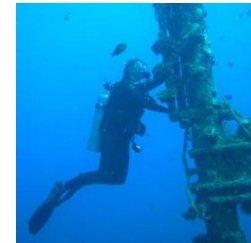
- h) Lofthus (sunk in 1898)



- i) Vamar



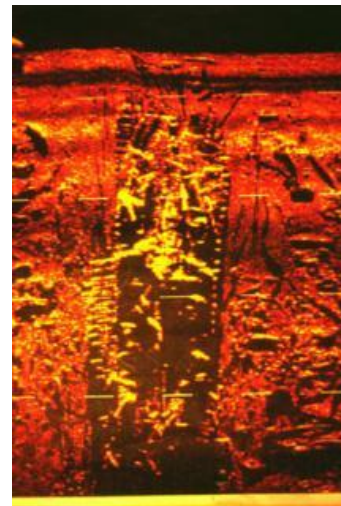
- j) Regina



# Examples of Underwater Museums in the world(9)

## 8. Helsinki, Finland

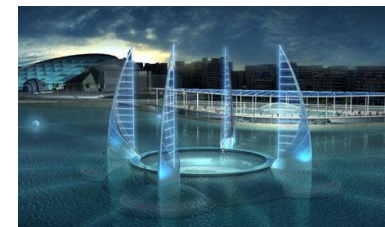
The first maritime historical underwater park of Finland, opened in the summer of 2000. It is located in the wreck site of the Kronprins Gustav Adolf of Helsinki, which during a naval battle it struck on a reef and was sunk by Russian battleships. Particularly impressive is the fact that all 71 canons of the ship are maintained intact.



# Examples of Underwater Museums in the world(10)

## 9. Alexandria , Egypt

Located off Alexandria, Egypt, the Underwater city of Cleopatra, crumbled into the sea after several earthquakes. Among other things located under the sea one will find sunken sphinxes, broken columns as well as a hieroglyphic covered obelisk. In the forthcoming underwater archaeological park, in the location of the Pharos of Alexandria, the visitors will have the opportunity to admire the exhibits in the natural resting places at the site of Cleopatra's now sunken palace.



# Examples of Sicily (1)



# Examples of Sicily(2)

## Pantelleria

L'isola di Pantelleria (l'antica Cossyra) è la più grande delle isole intorno alla Sicilia; situata a sud, dista 70 Km dalla costa africana e costituisce la parte emersa di un edificio vulcanico che culmina a 836 m. nella Montagna Grande, a sua volta circondata da 24 coni craterici detti cuddie. Sono numerose le manifestazioni vulcaniche secondarie: le favare o fumarole, i bagni asciutti o stufe, le buvire o

## Pantelleria, Punta Li Marsi

Nella parte più remota dell'isola di Pantelleria sono stati individuati due siti molto interessanti per l'abbondanza del materiale archeologico e per la bellezza dei fondali. Due itinerari archeologici e naturalistici subacquei che arricchiscono le prospettive turistico-culturali dell'isola, che ha già risposto con entusiasmo decretando il successo del percorso di Cala del Gadir.

## Punta Li Marsi percorso 2

Questo secondo percorso è costituito da ancore di vario tipo, antiche e moderne, e va ad integrare il precedente. Ha inizio ad una profondità di 16 metri, su fondo roccioso misto a sabbia che si raggiunge attraverso un canalone, all'inizio del quale si trova il primo reperto: un'ancora litica trapezoidale a tre fori. Alla fine del canalone, ad una profondità tra i 22 e i 23 metri la prima concentrazione di reperti: una piccola anfora moderna in ferro, un'ancora litica di forma indefinita che presenta due profondi solchi di imbracatura, un'ancora moderna tipo Hall con catena,



# Examples of Sicily(3)

## Isole Egadi

Di fronte alla costa occidentale di Trapani, si trova l'arcipelago delle Egadi (Aegates) riserva naturale marina dal 1992. Geologicamente collegato con la Sicilia, comprende tre isole principali: Favignana, Levanzo, Marettimo e gli isolotti di Formica e di Maraone. Abitato sin da epoca preistorica, come testimonia la Grotta del Genovese a Levanzo, e l'insediamento fenicio-punico di Favignana,

## Levanzo, Cala Minnola

A Cala Minnola, a sud-est dell'isola, alle batimetriche comprese tra i 15 e i 20 metri, si nota la presenza di un fondale roccioso con colonie di posidonia. Nei pressi di una repentina caduta, che verso nord raggiunge un fondale sabbioso a circa 30 metri di profondità, un altro itinerario guidato permette di visitare un relitto con un ricco carico di anfore e ceppi d'ancora in piombo di notevoli dimensioni. E' stato progettato e realizzato in via sperimentale un sistema di telecontrollo del sito che permette di effettuare una visita virtuale anche a chi non si immerge. Con la trasmissione su video delle immagini dal fondo del mare, il sistema di telecamere - attivo 24 ore su 24 - trasmette via cavo e via etere il segnale a Favignana, dove attraverso dei monitor è possibile controllare il sito in tempo reale.

L'itinerario può essere visitato contattando l'assuntore di custodia:

Chiara Marraffa - tel.3402622854

CHIUDI

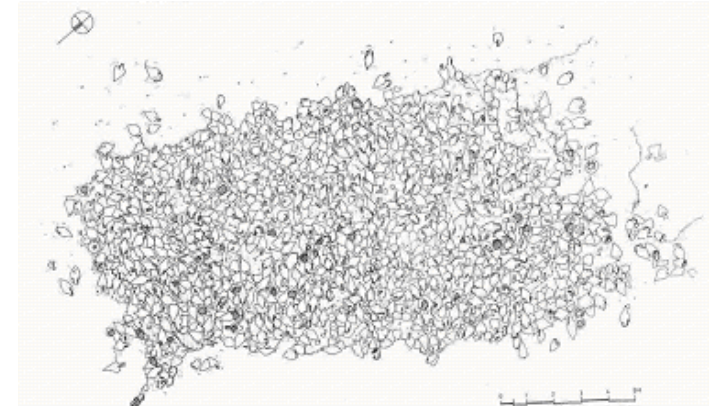


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# Underwater archaeology and diving in Greece (1)

- The institutional framework in Greece.
- The initiative of the awarded Innovative Plan of Development of “Ano Magniton Nisi”, aiming at the creation of an innovative and competitive product supported on the regional particularities of the natural environment and on the utilization of unique cultural treasures of region Alonissos, Skopelos and the remaining deserted islands of Northern Sporades area.



Drawing of Peristera wreck



# Underwater archaeology and diving in Greece (2)

## The institutional framework for the Underwater Museums in Greece (1)

- They have been forecasted with article 11 par. 1. period 2 of the legislation law N.3409/2005 concerning recreational dives
- With the above law, already declared underwater archaeological sites in Greece, can be declared as underwater museums, in which guided dives can be performed with the escort of guard-divers of antiquities or archaeologists.
- Each underwater museum can be created with a common decision of the Ministry of Culture and Tourism and the Ministry of Economy, Competitiveness and Commercial Marine Industry. In the same decision the place, the shape and all of the operational conditions of each specific underwater museum are being defined.

# Underwater archaeology and diving in Greece(3)

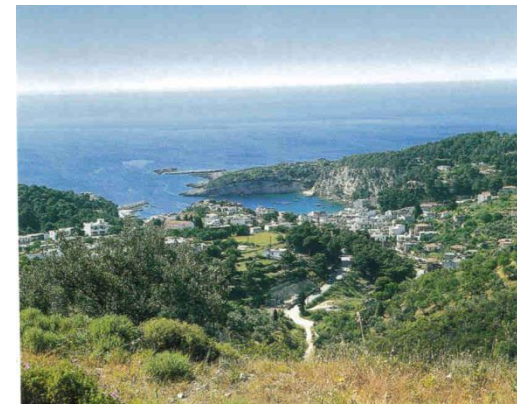
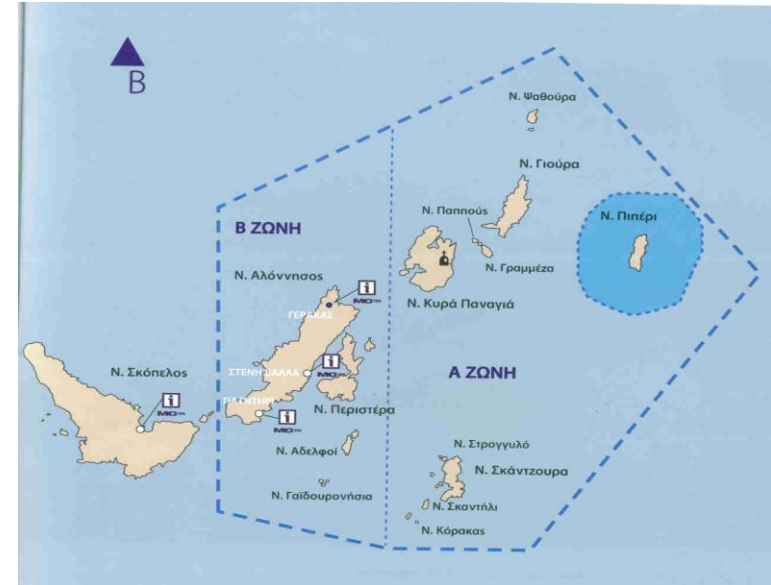
## The institutional framework for the Underwater Museums in Greece (2)

- With the establishment of each underwater museum's Common Ministerial Decision, all conditions set by the Ministry of Culture and Tourism for protection of the site and of the underwater antiquities are guaranteed, as well as, the way of guarding and controlling of the site by the forecasted from the law, guards and archaeologists.

# Underwater archaeology and diving in Greece (4)

## Characteristics of the region:

1. Fragmentation of the geographical region
2. Disadvantage of island region
3. National Marine Park of the Sporades for the protection of the monk seal
4. Outstanding natural beauty with surfeit of regional species
5. Extremely mild tourist development
6. Existence of ancient and modern shipwrecks.



# Underwater archaeology and diving in Greece(5)

## Required Actions:

- Creating a detailed framework for implementing and operating rules under the existing institutional framework for the creation of the first pilot of Underwater Museums in Greece.
- Systematic and further documentation of marine archaeological wealth in certain areas of the country, such as that of the South Evvoia Gulf and West Pagasitikos Bay.
- Spreading the idea of developing marine archaeological wealth, aiming at the sustainable growth development of the islands and the coastal regions of the country.

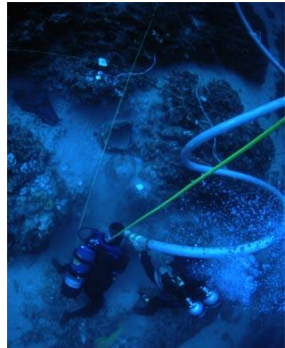


# Underwater archaeology and diving in Greece(6)

## Prerequisites for creating Underwater Museum

The underwater archaeological sites (shipwrecks, ancient settlements, harbors) must be:

- In a relatively shallow depth, usually up to 40 meters with a maximum of 50m for technical scuba-divers,
- In place where there is easy access from the point of departure and arrival,
- In places where ordinary weather conditions are favorable for diving throughout the whole year.
- In places where clear water, without particularly dangerous conditions of currents and navigation,
- In places easily retained by normal visual means and
- In places where there is sufficient number of reachable ancient shipwrecks that can be visited (for example at least five).



# Estimated results (1)

- Utilization of the coastal environment
- Creating high value-added quality tourism.
- Obtaining competitive advantages, unique in worldwide level through appropriate management of the available local resources.
- Creating new job positions in the archipelagos.
- Creating an attractive environment for installation and operation.
- Improving the quality of life of the residents.
- Significant opportunity of leverage private sector investments.
- Inflow of financial resources from Greece and abroad.
- More funding for underwater archaeological research in Greece and more jobs for underwater archaeologists.



# Estimated results (2)

- Presentation of Greece and its cultural / tourism product globally.
- Important features of duplication in many sites of the Greek islands and coastal regions of the mainland.
- Contributing to the revised Lisbon objectives (Innovation, Entrepreneurship, Environment Balanced Development, Sustainability).
- Compatibility with the priorities of the NSRF 2007 - 2013 *"our islands to be recipients of integrated sustainable development interventions of a wide-range, which are though limited in proportion as the size of the islands reduces while at the same time the sensitivity of their ecosystems in their touristic pressures is increased»*.
- Better protection of our underwater cultural heritage.



All the photos of the presentation are from public published material, especially from the internet. Specifically, the following sources are mentioned:

- **The book “Ano Magniton Nisoi, from Costa Mavrikis**
- **Guide to underwater cultural itineraries of Sicily**
- **Press Release of Underwater exploratory research in the South Evian Gulf by George Koutsouflakis**
- [www.ienae.gr](http://www.ienae.gr)
- [www.nps.gov](http://www.nps.gov)
- [www.scubaboard.com](http://www.scubaboard.com)
- [www.shipwrecktour.com](http://www.shipwrecktour.com)
- [www.travel-to-egypt.net](http://www.travel-to-egypt.net)
- [www.diving-world.com](http://www.diving-world.com)

*Thank you*

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