

Extensive information:

Project Sea Turtles Crete Greece



Table of contents

	<u>Page:</u>
1. Introduction	4
1.1 Anatomy	4
1.2 Behaviour and reproduction	4
1.3 Diet	5
1.4 Endangered species	5
2. The Project	6
2.1 Education	6
2.2 Protection	6-7
3. Volunteers	8
3.1 Research opportunities	8
3.2 Period / duration	8
3.3 Requirements	8
3.4 Fees	8
3.5 Accommodation	9
3.6 The work	9-10
3.7 The project staff	10
4. Crete, Greece	11
4.1 Geography	11
4.2 Project location	11
4.3 Climate	11
4.4 Culture	12
5. Travel information	13
5.1 Flight arrangements	13
5.2 Passport and visa	13
5.3 Insurances	13
5.4 Arrival in Crete, Greece	13
6. Medical advise	14
6.1 Advise	14
6.2 Required vaccinations	14
6.3 Recommended vaccinations	14
6.4 Medical service	14



7.	Personal equipment	15
7.1	Essential items	15
7.2	Optional items	15
8.	General information	16
8.1	Food and drinks	16
8.2	Supermarkets and markets	16
8.3	Laundry services	16
8.4	Telephone	16
8.5	Internet access	16
8.6	Electricity	16
8.7	Transport during your stay	16
8.8	Excursion arrangements	17
8.9	Photo and film materials	17
8.10	Currency	17

Note: This document will be updated annually. Although Global Spirit will do its best to keep the information as current as possible, please be aware that changes that will inevitably take place at the projects described below may not be outlined in this document.

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1. Sea turtle introduction

Sea turtles are reptiles that have totally adapted to sea life. Like all reptiles, they have lungs and need to surface occasionally to breathe, their skin is covered in scales and they lay eggs. Although they spend most of their lives at sea, they are dependent on land for reproduction. Unfortunately, all seven species of sea turtles are threatened by extinction due to the degradation of their nesting habitats, pollution and human interaction (such as fisheries).

1.1 Anatomy



The Loggerhead (*Caretta caretta*) is one of three species of sea turtles that can be found in the Mediterranean Sea and the only one that nests in Greece. The loggerhead is one of the most widespread of all the marine turtles. Its common name comes from its relatively large head, which contains powerful jaws. The carapace (top shell) and flippers of the adult turtle are reddish-brown in color, whilst the underneath (or plastron) is more yellow in appearance. Adults can reach a length of 80-100 cm and weigh about 80 kg.

1.2 Reproductive behaviour

Loggerhead turtles are pelagic animals. This means that they travel in the open sea but approach the coast when they are ready to reproduce.

They reach sexual maturity when they are 20-30 years old. The eggs have the same shape and size as a ping-pong ball and are laid in a dry part of a sandy beach. The eggs are placed in an egg chamber, which is usually dug in an undisturbed area and is about 50-60 cm deep. The female comes ashore and climbs up towards the back of the beach. She then makes a shallow hole in the sand called a body pit. Then she digs the egg chamber using her hind flippers, lays the eggs inside, and covers the nest with sand. There are usually 120 eggs per clutch, and each female lays approximately two clutches every 15 days. The females only come ashore to nest at night from the end of May until the end of August. The females usually nest every 2-3 years with 3-4 nests per season.

The nests must remain undisturbed in the warm sand for about 60 days before the eggs hatch.

The hatchlings remain in the nest for several days before emerging to cross the beach and enter the sea.

Hatchlings can be seen emerging from their nests from late July until the end of October. They dig their way out of the nest in a joint effort and usually emerge during the night. They then make their way down to the sea by heading for the brightest source of light - in undisturbed beaches this is usually the reflection of the stars and moon in the ocean. This race from their nests to the sea is crucial for the turtles' survival. Although a female sea turtle may lay hundreds of eggs each summer, it is estimated that only a few hatchlings out of a thousand will survive to adulthood.



1.3 Diet

Loggerheads turtles are carnivorous and feed mainly on jellyfish, crustaceans such as sea urchins, and other slow-moving organisms. They have very powerful jaws which enable them to easily crush the hard shells of their prey.

1.4 Endangered species

Sea turtles have been swimming in our oceans and seas for over 150 million years. Contemporaries of the earliest dinosaurs, they appeared long before mankind. After having survived climatic and geological changes, sea turtles today face extinction due to uncontrolled human exploitation. Although sea turtles spend the majority of their time at sea, their survival still depends on the condition of specific beaches. Amazingly, females will return to the beach where they were born to lay their eggs. Sadly, most of the beaches that sea turtles use for nesting have been destroyed or are under intense human pressure.

Greece is home to the last significant concentration of Loggerhead nesting sites in the Mediterranean with the most important area being in Laganas Bay on the island of Zakynthos. Here, on 5 kilometres of beaches, an average of 1300 nests is dug per year.

Threats to sea turtles today include the destruction of their nesting habitats, their accidental capture in fishing gear, the illegal wildlife trade and pollution.



2. The project



The project is a non-profit organisation founded in 1983 with the aim to protect sea turtles and their habitats in Greece. They work to raise public awareness about the dangers turtles face and lobby for the implementation of measures needed for their protection. For over 20 years, the project has been running conservation projects in Greece's main Loggerhead nesting sites. They've also started an environmental education programme directed towards Greek students and a Rescue Centre for the treatment and rehabilitation of injured turtles. More than 500 volunteers from all over the world participate in projects on Zakynthos, Crete, Peloponnesus and at the Rescue Centre:

The project of Crete aims at protecting and monitoring turtles and nests, informing visitors and promoting the co-operation with local communities and authorities as well as the tourist industry in order to achieve long term conservation. Every year the project informs some 150,000 people about the threats sea turtles face on the island.

Crete is one of the most important known nesting areas for the loggerhead sea turtle (*Caretta caretta*) in the Mediterranean, with an average of 500-800 nests laid annually on a total of 33km of beaches. Even though, the nesting areas of Crete are now being included in the NATURA 2000 network of protected areas, uncontrolled coastal development and human interference are exerting intense pressure on the nesting beaches of the island.

2.1 Education

The project's extensive Public Awareness Programme aims to educate local communities, tourists and other visitors and in effect stop the further deterioration of the sea turtles' nesting beaches. Regular slide shows on sea turtle biology and conservation are conducted at campsites, in hotels and other facilities.



2.2 Protection

The project is dedicated to the protection of:

Human impacts

The nesting sites on Crete are under heavy pressure due primarily to their increasing use for tourist and recreational purposes. Scattered sun beds, lights shining on the beach and vehicles are only some of the problems turtles face.

Meanwhile, sea turtles and their habitats are protected by several Greek laws and EU directives. Even though local and regional authorities do take into account the nesting activity on development plans, they still fall short of implementing the protective legislation. Tourism expansion lacks proper planning, is based on the individual incentive, and existing regulations are often abused.

Nest Management

On the monitored beaches of Crete, due to anthropogenic and natural disturbance all sea turtle nests made need some form of active management.



All nests identified on daily morning surveys are assessed as to the suitability of the location. If it is decided that they are not in danger of inundation or destruction by other anthropogenic impacts, (i.e., sun beds, proximity to outflow pipes), they are left in situ and a metal cage is placed on top of them. The cages identify the location of each individual nest and protect it from accidental destruction by beach users. They bear a sign in three languages (Greek, English and German) informing people of their purpose.

If it is decided that a nest location is unsuitable, it is transferred to a safer location on the beach, or to a natural beach hatchery. The hatcheries are fenced-off areas and usually result in high hatching success rates. Hatcheries serve also as a public awareness tool, since they attract attention.

During the hatching season, the large number of artificial lights on the beach disorients hatchlings. Gradually the problem of light pollution is dealt with by lobbying the local authorities and property owners to switch off problematic light sources. If this is not possible or unsuccessful, the project installs nest shades to prevent disorientation. Low shades of about 20cm height are constructed out of sand, wood or cardboard and placed on either side of the nest, forming a runway leading to the sea. This activity limits considerably hatchling mortality due to light pollution.

Co-operation with the local community

In 1997, a management plan was formulated exclusively for the nesting beaches of Crete. It suggests applicable solutions for the conservation of the coastal zone and the sea turtles. It is designed to be implemented and enforced at very low cost, balancing the conservation needs for sea turtles with the local need for sustainable tourist development. Protected sites in heavily developed areas, such as Crete, can prosper only if the public actively supports them. Therefore the project is in close co-operation with all the relevant authorities and the tourist industry both at a local and national level, along each step of the implementation of this management plan.

Regular contact and liaison with all relevant departments of the local authorities is vital. Even though NGOs are generally not included in the decision making process, The project is regularly kept informed by local authorities and acts as a consultant on activities that may impact the nesting beaches or the sea turtles (e.g., use of heavy machinery for beach cleaning).

The project is working to incorporate the sea turtles in the tourist product of Crete and present the mutual benefits to the local tourist industry. Sea turtles are acting as an indicator of a healthy environment, well advertised both locally and abroad. The efforts of the project against mainly the long-term problems sea turtles face (such as pollution and beach erosion) help maintain the high quality of the local tourist product, which is based almost exclusively on the natural environment. Tour operators are proving to be important allies for the sea turtle project since they may provide information to tourists prior and upon arrival to the nesting areas. They may also act as a strong lobby pushing the local authorities to undertake more measures for the protection of the sea turtles.



3. Volunteers

3.1 Research opportunities (For volunteers who have previously worked with the project)

Research opportunities are available for students interested in conducting undergraduate or postgraduate research during their stay as a volunteer. Research applications must be completed well in advance in order to receive the necessary information and complete a research agreement form. If you are interested please indicate this in the section of the booking sheet that reads 'possible or additional general remarks'.

3.2 Period / duration

Volunteers are welcome on the island of Crete from 15 May – 20 September 2011.

You are free to choose your own arrival date.

Your stay must be 28 days or longer, but the recommended duration is 6 weeks.

Long-term participation is highly appreciated.

(Ideally it is recommended to stay about 3 months to have a broader experience and understanding of the environmental issues dealt and a deeper personal contribution on the project).

3.3 Requirements

No prior experience in animal care or welfare is required to participate in the project.

However, the following ARE required:

- Minimum age of 18 years.
- Volunteers must be able to communicate in English.
- Vaccinations (see medical advice section).

3.4 Fees

Participation fees are specified on the Global Spirit website.

These fees include:

- Accommodation (volunteers have to bring their own camp gear) *Rethymno project is an exception. There volunteers are covering their accommodation since the project is placed in an organised camping.*
- Training and supervision
- Volunteer T-shirt and Turtle biology booklet (received upon arrival)
- Administrative costs

These fees do not include:

- Flight/travel to and from Crete, Greece
- Transfer to and from the project
- Passport
- Travel insurance (compulsory for all participants) and cancellation insurance
- All meals
- Personal expenses such as telephone bills, internet, souvenirs, etc.
- Any excursions undertaken by the volunteer



3.5 Accommodation

Accommodation is provided at designated campsites at one of the Field Stations on Crete, reserved for project volunteers only. Camping gear, including a sleeping bag and tent, is required and is not provided by the project.

The sanitary facilities are very basic and include cold-water showers and toilets. The cooking facilities are also very basic. Volunteers have access to gas stoves, fridges, cooking pots and pans, cutlery and crockery. You will share these facilities with the other volunteers.

Volunteers must have a positive attitude towards working and living in a group and will have to accept the responsibilities that group living entails. Volunteers are also responsible for housekeeping duties.

Since the campsites are provided by members of the local community, it is important that they are kept clean and tidy at all times. No pets are allowed either. Volunteers are solely responsible for the safety of their personal belongings.

3.6 The work

Upon arrival you will go through an orientation. The kind of work you will be doing depends on where you will be placed by the project.

Duties are allocated by the field leaders and involve all aspects of the daily routine (public awareness, nest and turtle protection, and maintenance). Volunteers and field leaders represent ARCHELON both on and off duty. Therefore proper behaviour and appearance are essential at all times. Consumption of alcoholic beverages and smoking during working hours or drug and alcohol abuse at any time are not allowed.

If you are placed on the island of Crete to help with seasonal fieldwork, your tasks may include:

Nest Management and Habitat Protection:

- Assess the turtles' night activity (in the morning);
- Protect the nests from human encroachment and predation;
- Relocate nests which are in unsafe areas;
- Collect data on nesting females (only done at night by highly trained volunteers).



Public Awareness:

- Participate in the Information Stations found at key points of the nesting sites;
- Give slide shows on sea turtle biology and conservation which are conducted on a regular basis in hotels and other facilities;
- Carry out daytime Beach Patrols;
- Safeguard the beaches at night in order to minimise the impact of tourism on nesting activity.

Maintenance and Day-To-Day Duties:

- Perform basic maintenance of equipment which may include tasks such as painting and carpentry;
- Artistic skills including drawing and photography may be utilised;

You will work 7 days a week (about 8 hours a day) and are entitled to 3 days off during a 28 day period.



3.7 The project staff

Each project has a coordinator who is assisted by seasonal personnel (field leaders). Field leaders and other experienced members of the project are responsible for allocating duties as well as training and supervising volunteers.

The Official language of communication on the project site is English. Knowledge of other languages such as German or Russian can also prove to be very useful for public awareness purposes.



4. Crete, Greece

4.1 Geography

Greece is a mountainous peninsula located in Southern Europe, on the Mediterranean Sea, between Albania, Bulgaria, Turkey and the Former Yugoslav Republic of Macedonia.

Crete is one of the most important known nesting areas for the loggerhead sea turtle (*Caretta caretta*) in the Mediterranean, with an average of 500-800 nests laid annually on a total of 33km of beaches. Even though, the nesting areas of Crete are now being included in the NATURA 2000 network of protected areas. Uncontrolled coastal development and human interference are exerting intense pressure on the nesting beaches of the island.

4.2 Project Location

Crete is the largest and most famous Greek island. It separates the Aegean Sea from the Libyan Sea and is at the crossroads between Europe and Africa.

Rethymno and Chania are two of the largest towns on Crete, and are located on the northern side of the island.

The project on Crete has three different camp locations:

- Rethymno:

The field station in Rethymno is held in the private Camping Elizabeth, which is situated directly on the 11 km sandy beach of Rethymno. Walking distance along the beach to the centre of the old town of Rethymno is 45 minutes.

- Chania Bay:

The meeting point is the campsite in Gerani, a village situated about 14 km west of Hania town. The campsite is by the sea and close to all community's shops and services. The community is very turtle-friendly! There are no trees but temporary wooden and metal constructions. No electricity is available!

- Bay of Messara:

The community Camping "Matala" (class B) is almost next to the beach. It is fenced and planted with tamarisks and featuring service areas, a mini market and facilities like as electricity, WC, medical service, post, drainage.

4.3 Climate

Greece has a temperate climate. Dry, hot summer days are often relieved by seasonal breezes popularly called "meltemia". An outstanding feature of the Greek climate is its ample sunshine, estimated to be 3,000 hours per year. Winters are mild and the rainy season is between November and March.

Crete has significant climatic differences between the coastal zone and the mountainous areas, as well as between the western and eastern parts of the island.

The weather from mid-June to late August is usually hot and sunny during the day, with temperatures sometimes exceeding 40°C. During the night it can get quite cool and humid. In May and from early September the weather is cooler with occasional rainstorms.



4.4 Culture

Greece has a diverse culture that has been influenced by its location at the junction between the East and the West and by the many occupations endured by the Greek people throughout history.

Greeks are particularly proud of their culture and celebrate it with great passion; their culture helps to define their national and ethnic identity.



5. Travel information

5.1 Flight arrangements

Volunteers are responsible for their own flight arrangements. We advise you not to reserve your flight before we have confirmed your participation in the project (unless you are planning to include your participation as a part of a longer journey).

However, if you are unable to arrange your flight for any reason, please let us know on the booking sheet and Global Spirit will do what it can to help.

5.2 Passport and visa

To visit Greece, EU citizens will need a valid passport (or ID-card). The passport must be valid for at least six months after the date of your arrival. If you are not an EU citizen, please check whether a visa is necessary at the Greek embassy in your country.

5.3 Insurances

Every volunteer is required to have a travel (medical) insurance policy and cancellation insurance is highly recommended. You will not be permitted to work at the sea turtle project without travel (medical) insurance. Global Spirit can help you to arrange travel (medical) and cancellation insurance. If you'd like our help, please indicate this on the booking sheet. If you already have insurance(s) (or you are a participant outside the Netherlands) please send a copy of the policy to Global Spirit.

5.4 Arrival in Crete, Greece

You will be responsible for arranging your own transport to Crete, Greece as well as to the project location.

Specific directions describing how to get to your project location will be sent to you after your booking.



6. Medical advice

6.1 Advice

As Global Spirit is not a professional medical service, we advise you to go to a local clinic or medical authority in your own country for the appropriate medical advice.

This document is provided for informational purposes only

As a participant at this project you are responsible for your own actions. Global Spirit is not held responsible/liable for any unexpected casualties.

6.2 Required vaccinations

No vaccinations are required for working at this project.

6.3 Recommended vaccinations

You are recommended to be vaccinated against:

- D(K)TP
- Hepatitis A

These vaccinations are not required, but are still very important to have.

6.4 Medical services in Greece

Good medical services are available in Crete.

If you should need medical attention, please contact a staff member.



7. Personal equipment

7.1 Essential items

The following is a list of items that you should bring with you:

- Valid passport (or ID-card)
- A tent
- Camping mattress
- Sleeping bag (in May and October the nights can be quite cold)
- Work clothes for work on the beach
- Appropriate clothes and shoes for working with the public (e.g. presentations at hotels)
- Warm and comfortable clothes (May, June, September, October)
- Waterproof clothes (especially for May and September/October)
- A raincoat or poncho (especially for May and September/October)
- Strong, good walking shoes
- Slippers or sandals suitable for off road walking
- A hat or cap
- Sunglasses
- Insect/mosquito repellent
- First-aid kit with plasters and disinfectant
- Bathing/swimming suit
- A towel
- Sunscreen (it's recommended to use for at least SPF 15)
- Drivers license or boat licence (if you have one)
- Alarm clock

7.2 Optional items

The following is a list of optional items you may choose to bring with you:

- Water bottle
- A watch
- A torch and spare batteries
- A Pocket knife
- Binoculars
- A lighter
- A notebook
- A compass
- A camera (and photographic materials)
- Toiletry articles
- Snorkelling equipment
- Something against dehydration like ORS (we advise you to drink a lot of water)
- Imodium or other anti-diarrhoea medication
- Books
- Magazines
- Snacks
- Etc.



8. General information (Crete, Greece)

8.1 Food and drink

Greek cuisine is famous for its high-quality products and the amazing taste of its food and wines. Some dishes are prepared similarly everywhere in Greece, whereas others are local culinary specialties or may be cooked in different styles depending on the region (in islands like Crete, etc...).

Cooking facilities are available at every project site on Crete. Usually volunteers eat and cook together, splitting food expenses equally.

8.2 Supermarkets and markets

There are many supermarkets and markets available in Crete. Once you arrive at your project, a staff member will show you where supplies can be purchased.

8.3 Laundry services

There is a washing machine available only at Rethymno camp site of Crete which volunteers may use once a week.

8.4 Telephone

Volunteers will have to make their own arrangements when contacting their family and friends at home. The office phones are only to be used for emergencies.

There are several phone booths available near the campsites. Phone cards can be purchased for about € 5,00.

Mobile phones can be used and network coverage is generally good except in some mountainous areas and on some small islands. The main operators are Vodafone, Cosmote and Telestet. Please contact your home phone company for the most updated information.

8.5 Internet access

Although all project offices are equipped with internet connections, the office computers can only be used to **receive urgent messages**. However, all project camp areas or kiosks project areas have internet cafes nearby.

8.6 Electricity

Greece's electricity system has a voltage of 220 Volt (50 Hertz). Round two-pin plugs can be used. North Americans will require a transformer and British volunteers will need to bring an adaptor. These can be purchased in specialised shops in your own country.

8.7 Transport during your stay

The sea turtle project covers the costs of transportation to and from work shifts when needed.



8.8 Excursion arrangements

Crete is a great island to explore. Although you won't have much free time, you can arrange excursions on your own or through travel agencies.

Here are some examples:

- The Samaria Gorge tour.
- Knossos palace
- Archaeological museum of Heraklion
- Boat trips to other parts of the island exploring caves and lagoons that can only be accessed by boat.
- Tour by bicycle
- Trips to other small beautiful islands like Gramvousa island or island of Elafonissi
- Etc.

8.9 Photo and film materials

Camera film is available in supermarkets and photo shops.

It's also possible to develop your film before you go home. It can usually be developed in one day.

Slide film and videotapes are also available for purchase.

8.10 Currency

The monetary unit of Greece is the Euro.

Cash and traveller cheques can be changed in most banks. We advise you to bring traveller cheques instead of cash, because they are usually insured and the exchange rates are typically better.

All project camps or kiosks on Crete have ATM machines nearby.

Credit cards such as American Express, Master Card and VISA are accepted in big hotels, shopping malls, and at most shops and restaurants. However, many shops do add an extra charge for paying with a credit card. They can be also used at most banks to obtain cash directly (also for an additional charge).

