# TURTLEWATCH – EGYPT 2.0

# Manual


**Join the movement to protect marine turtles in the Red Sea!**

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# CONTENTS

# MARINE TURTLES OF THE RED SEA

Sea turtles are long-living reptiles characterized by slow growth, late sexual maturity and high mortality rates during their first developmental stages (eggs, hatchlings, juveniles). For this reason, sea turtles are considered extremely vulnerable to every kind of over-exploitation, and population recovery can take decades. At present there are seven species of marine turtles in the world, five of which can be found in the Egyptian Red Sea: the green turtle (*Chelonia mydas*), the hawksbill turtle (*Eretmochelys imbricata*), the leatherback turtle (*Dermochelys coriacea*), the loggerhead turtle (*Caretta caretta*) and the olive-ridley turtle (*Lepidochelys olivacea*).

All these species are listed in the IUCN Red List either as **critically endangered** (leatherback and hawksbill turtles), **endangered** (green and loggerhead turtles) and **vulnerable** (olive-ridley turtle). Furthermore, they are all listed in Appendix I of the Convention on International trade of Endangered Species (CITES) which forbids their trade in signatory countries. While green and hawksbill turtles are known to nest and feed along the Egyptian coastline, olive-ridley, loggerhead and leatherback turtles are seen more sporadically and only in the feeding areas.

# THE IMPORTANCE OF FEEDING GROUNDS


Sea turtles spend 99% of their life in the oceans, however very little is known about the behavior of these animals in the water. At present, most of the conservation and research efforts have focused on sea turtles at their nesting grounds because in-water studies are usually costly, work-intensive and present a number of logistical challenges ranging from weather conditions, restricted access to key sites and the lack of availability of experienced participants. However, very important information can be gained from in-water studies, spanning from the diet, migration patterns and short-term movements to abundance, growth and interaction with human activities.

At present, there is very little information for marine turtles in their feeding grounds in the Red Sea apart from scattered sightings and pictures taken mostly by professional and recreational divers and snorkelers. For this reason, the TurtleWatch – Egypt 2.0 project was launched. The aim of this project is to gather information on marine turtle's abundance and distribution using a standardized data collection protocol, this information will be used to improve our knowledge of marine turtles in the Red Sea.

# WHAT IS TURTLEWATCH – EGYPT 2.0 ?


TurtleWatch - Egypt 2.0 is a citizen science initiative aimed at collecting data on marine turtles in the Egyptian Red Sea. Started in 2011 under HEPCA, the project was designed to collect information from professional and recreational divers on sea turtle abundance and distribution.

Data collected by volunteers at sea has proven to be very useful in a number of surveys targeting coral reefs, marine mammals, fish and now, turtles. Recent studies also suggest that many recreational divers consider being involved in data collection or observation programs as an opportunity to contribute to the conservation of the marine environment. Marine turtles are easily identifiable species that usually occupy the same areas used by divers, thus they are particularly suitable for observation and monitoring projects that require the help of non-scientist users.

In 2015, the original data collection protocol was modified substantially, new ways of reporting data were introduced, and in 2018 the project was finally re-launched in its new version: **TURTLEWATCH - EGYPT 2.0.**

# HOW DO I CONDUCT A TURTLEWATCH SURVEY?

### Who can participate?

The TurtleWatch Egypt 2.0 program is open to all diving and snorkelling centres working in the Egyptian Red Sea area and their guests. This manual includes all the information necessary to conduct a TurtleWatch Egypt 2.0 survey and involve recreational divers interested in the program.

The manual is designed to be easily understandable and self-explanatory. If you are in doubt about any aspect of TurtleWatch Egypt 2.0 you may have concerning how to collect data and send it to us, please feel free to contact us at turtlewatchegypt@gmail.com.

### What do I need?

To participate in a TurtleWatch Egypt 2.0 survey, you need to enjoy swimming and diving with marine turtles, you need to be a good field observer and to report sea turtle information on a regular basis. An underwater camera is fundamental to report your sightings (see next chapter).

# HOW MUCH INFORMATION SHOULD I RECORD?

**We need very little information for our TurtleWatch Egypt 2.0 surveys, see below for a detailed list (items marked with an * are mandatory):**

**Pictures or videos*:** this is the most important information related to your sighting. We need one or more pictures of the turtles you have seen, in order to be able to identify them to individual level. We use pictures of the right and left facial profiles to identify single turtles, plus sometimes we collect pictures of special features (scars, malformations, missing flippers) or the whole carapace that can facilitate the identification (see figures 1, 2, and 3).

Figure 1. Left profile

Figure 2. Right profile

Figure 3. Carapace

**Name of the photographer***: who took the pictures you are sharing? This information is used to credit the photographer when pictures are shared in social media or used in presentations for educational purposes.

**Date***: when was the picture taken? This information is used to see if there are differences in marine turtle distribution according to the season.

**Location***: where was the picture taken? What is the common name of the dive / snorkelling site? This information is used to identify areas important for marine turtles.

**Permission to share your pictures***: can we use your pictures for our educational material?

## Other information that you can record and send us:

**Name of the dive centre/independent**: were you by your own or in excursion with a dive centre? Who organized the trip? This information will help us promote dive and snorkelling centres that are part of our Turtlewatch – Egypt 2.0 network. This information is generally used to acknowledge canters participation in our project in social media.

**Time:** what was the time when you saw the turtle?

**Depth**: at what depth did you see the turtle? If you are reporting a turtle seen while snorkelling, you can say if the turtle was at the surface, mid-water or at the bottom. We generally use meters as unit measure for depth.

**Water temperature**: what was the temperature of the water when you saw a turtle? This information is used with the information on the date of the sighting to understand how the water temperature impacts the presence / absence of turtles. We generally measure the temperature in Degree Celsius. If you were diving and had a diving computer, you will have this information.

**Activity at first sight**: what was the turtle doing when you first saw it? Generally turtles are observed feeding, breathing, swimming, resting or being cleaned. When more than a turtle is observed at the same time, usually they are fighting, involved in courtship behaviour or mating.

**Species:** can you identify what turtle you saw? You can use the identification key in the next section to help you. The easiest way to identify a sea turtle species is by counting the scutes (plates) on the carapace and on the head. Sometimes the shape alone of the turtle may allow you to identify the turtle species (see below).

**Approximate carapace size**: how long was the carapace of the turtle you saw? You can provide an estimate of the turtle's straight carapace length (SCL; is **the length of the carapace only, from the neck to the tail** of the turtle without considering the curvature of the carapace). Figures 4 and 5 show how you can estimate this. The data is used to understand whether a turtle is juvenile or adult based on the SCL. As we need to keep a minimum distance of 2m from a turtle, the best way to estimate the carapace length is by comparing it to the length of something else (i.e. another diver, a section of the reef, etc).

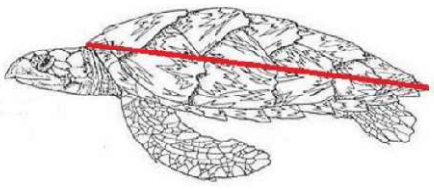


Figure 4. Straight carapace length from the side

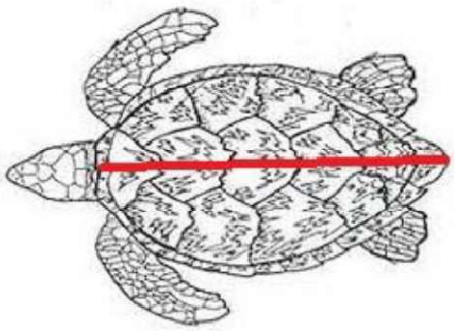


Figure 5. Straight carapace length from above

**Sex:** it can be identified only in adult or sub-adult individuals (carapace length of more than 70cm). The best way to identify the sex of a turtle is by observing its tail. If the tail extends well beyond the carapace (>20cm), it is an adult male. The tail of a female turtle is short and usually extends only slightly beyond the end of the carapace (< 10cm) (see fig. 6).

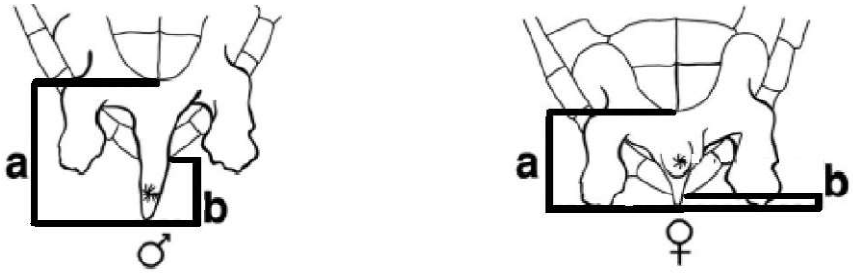



Figure 6. Tail length in a male (1) and female (2) turtle: (a) refers to the total tail length while (b) is the proportion of the tail that usually extends beyond the carapace. Pictures modified from Research and Management Techniques for the Conservation of Sea Turtles (IUCN, 1999)

**Other information/comments**: have you seen anything special like an unusual behaviour or an unusual feature on the turtle? Let us know any other information that you think could be useful.

Have you seen a turtle in **distress or injured**? Do not touch the animal, observe it for 10 - 15 minutes, try to record its behaviour, take a photograph of the wound and report it to us: you will help us monitor the individual with the support of specialised veterinaries we are in touch with.
**Important:** Do not try to take the turtle out of the water; this would be useless given the absence of a rehabilitation centre and it could worsen the animal's conditions instead.

# HOW DO I IDENTIFY DIFFERENT SPECIES?


# HOW DO I SHARE MY SIGHTINGS?

*You have two options to share your turtle sightings with us!*

### Use our Facebook page

You can post your pictures with all the information in your comments in our Facebook page (https://www.facebook.com/pg/turtlewatchegypt). If we need extra info, we will contact you through Facebook.

**You can scan this code with your phone and access our Facebook page directly!**

### Send us your pictures by e-mail!

You can send us an e-mail at turtlewatchegypt@gmail.com, you can share your pictures with us and all the relevant information. Every time we receive an e-mail we send you a thank you note. If you do not receive the thank you note, please e-mail us again.

# WHAT HAPPENS WITH YOUR DATA?

The collected data will be reviewed by our staff, inserted into our Red Sea Turtles database and will be used to generate spatial and temporal distribution maps. In the long term, this data will also help us to estimate population trends and abundance. Reports will be published on a regular basis on our web-site and your contribution will be acknowledged. If you are interested in receiving follow-ups of the project, you can follow us on our Facebook page and on Instagram (https://www.instagram.com/turtlewatchegypt/).

### What do we do with your pictures?

We use your pictures only in promotional and educational material. We will credit the photographer in all occasions. We will contact you if we would like to use your images in publications like dive magazines or posters.

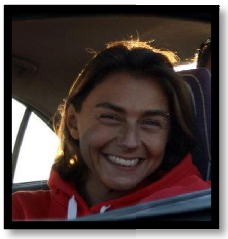
**PLEASE READ!**

**IF YOU DO NOT WANT US TO USE YOUR PICTURES IN ANY EDUCATIONAL OR PROMOTIONAL MATERIAL, PLEASE STATE THIS RLY IN YOUR E-MAIL OR IN YOUR FACEBOOK MESSAGE**

# MEET THE TEAM

Micol Montagna
Field and data coordinator

Abdallah Taher
Field Assistant



Agnese Mancini
Scientific coordinator

Dennis Lisbjerg
DZS president, adviser

**NOW YOU KNOW EVERYTHING YOU NEED TO KNOW TO JOIN OUR PROJECT!**

**ARE YOU READY TO BECOME A PROFESSIONAL TURTLE-WATCHER?**

Do you have any further question?

## Contact us!

Email: turtlewatchegypt@gmail.com

Facebook: https://www.facebook.com/turtlewatchegypt/

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