GREEN FINS GUIDELINES

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UNEP

สมาคมกรีนฟินส์

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1 History of Green Fins

Coral reefs are an important resource in Southeast Asia. Many countries with coral reefs generate significant tourism and employment income. As tourism continues to expand, coral reefs are under increasing threat. The loss of the corals will have an impact on the dive industry as well as the people who depend on coral reefs for their livelihood.

In Thailand, reefs along Andaman and Thai Gulf coast cover 160 square kilometers. About half is designated National Parks. Over 1000 dive, snorkel tour and boat operators bring an estimated 500,000 guests to visit primary dive sites during the six month high season each year. The popularity of reef tourism is ever increasing and this lack of conservation awareness is poised to wreak havoc on the reefs of Thailand.

In late 2003 UNEP East Asian Seas Regional Coordinating Unit (EAS/RCU) planned to implement a new project titled, "Promoting Coral Reef Monitoring & Public Awareness Through Network of Dive Operators for Protection of Coral Reefs in Southeast Asia : A 'Green Fins' Programme."

The objective of the project is to establish a network of environmentally-friendly dive operators that will assist with monitoring coral reefs and enhancing public awareness through operating their dive shops according to a set of eco-friendly guidelines.

In July 2004, the Green Fins Project Planning Workshop was held in Phuket with the objectives to agree on the project implementation plan, to finalize the guidelines for dive operators participated in the project, and to identify any needs for capacity building. The major components of the project were also discussed and agreed, including the potential incentives for participation of dive operators and the criteria for the Green Fins network.

On 16th September 2008, Green Fins Association was established in Thailand for sustainability of the project. Becoming an Association gives Green Fins more flexibility to work with government agencies and the private sector.

Green Fins Association Thailand's mission to protect and conserve coral reefs is made possible by working closely with partners in the public and private communities. Public sector partners include the Department of Marine and Coastal Resources, National Parks, and the Tourism Authorities of Thailand. Private sector partners include those in the tourism industry, ranging from hotels to dive operators.

As of today (Feb 2009), there are over 300 individual members and 106 operator members. The operator members are from 6 provinces from the Andaman coast, the gulf of Thailand as well as Bangkok and the east, Chonburi province.

This booklet provides helpful conservation information guides on how to care for our environment and natural resource.

2 Green Fins Code of Conduct

Mission Statement:

" To protect and conserve coral reefs by establishing and implementing environmentally friendly guidelines to promote a sustainable diving tourism industry."

As a Green Fins Member You Are Expected To:

1. Adopt the Green Fins mission statement.
2. Display adopted Green Fins agreement for the public to see.
3. Adhere to the "Green Fins" Friendly Diving and Snorkeling Guidelines and act as a responsible role model for guests .
4. Participate in regular underwater cleanups at dive operator selected sites.
5. Participate in the development and implementation of a mooring buoy program, and actively use moorings, drift or hand place anchors for boats.
6. Prohibit the sale of corals and other marine life at the dive shop.
7. Participate in regular coral reef monitoring, and report monitoring data to the regional coral reef database.
8. Provide adequate waste management on board vessel and handle responsibly.
9. Operate under a "minimum discharge" policy.
10. Abide by all local, regional, national, and international environmental laws, regulations and customs.
11. Provide guests with an explanation of Green Fins "Friendly Diving and Snorkeling Guidelines" in pre-briefings.
12. Provide training, briefing or literature for employees and guests on good environmental practices for snorkeling, diving, boating, marine wildlife interaction, and other marine recreational activities.
13. Provide staff and guests with public awareness and environmental materials (books, pamphlets, fish ID books, etc.).
14. Provide guests with information on local marine protected areas, environmental rules and regulations.
15. Promote a strict "no touch" policy for all reefs diving and snorkeling.

3 Green Fins Icons

No stepping on coral – Coral is very fragile and takes a long time to grow. Stepping on coral could result in breaking or damaging the surface of the coral as well as cutting your feet. Coral is very sensitive to the touch and the smallest contact can kill the animal. Watch your feet and fins at all times.

No stirring the sediment – As you swim, your fins create a wash that can cause sediment and small debris to upset small habitats and cover corals. This will reduce the photosynthetic efficiency of the coral and can cause it to die. It can also lead to small animals being washed away or increase their chance of predation from other animals.

No chasing or touching marine wildlife – This can cause great stress to any animal and by touching certain species such as puffer fish, you can transmit diseases or remove protective coatings on fish , mammals , invertebrates and other species . Look but never touch and try not to get too close.

No feeding fish – Feeding fish or any other wildlife can lead them to be reliant upon humans as their food source. Feeding fish can also dull their natural fear of people, leading to more aggressive behavior. It can also lead to algae smothering corals as fish no longer eats the algae.

No littering - The problems with marine litter range from marine life mistaking it for food to chemicals contaminating the water supply and entering the food chain for marine life and humans. Bin it, don't throw it.

No collecting marine life, dead or alive – Removing species that would normally break down and be recycled into the sea leaves other animals without nutrients and elements needed for growth. Even empty shells on the beach play a part. Take nothing.

No gloves – Wearing gloves gives a false sense of protection to hold onto things underwater. Aside from damaging coral, gloves do not provide any security against dangerous marine life.

No shark fining – The shark species has decreased 80% in the last 50 years, with tens of millions killed each year for their highly prized fins. Removing these top predators damages the ecology of our seas. Don't eat in restaurants that sell shark products.

No spear fishing – This method of fishing removes the largest and slowest species which can dramatically change the balance of the ecosystem and upset the food chain. It is also likely to injure a species if it is not speared correctly leading to a slow death and can be dangerous to divers, snorkelers and swimmers.

No anchoring on coral reefs - Anchors are heavy and often have a long chain attached. When dropped onto coral reef, it causes great damage and can destroy the reef. Even more destruction to coral occurs when the boat changes direction with the wind and currents. Coral takes many years to grow and provides shelter for fish and other marine species. Think before you drop an anchor. Look below!

Don't buy coral or marine life souvenirs – This encourages people to remove tons of marine life, dead or alive, from the marine ecosystem each year. If we didn't buy it, people wouldn't collect it. Leave it where it belongs.

Use mooring buoys - Replace potentially damaging anchors with mooring buoys. This increases awareness and also sets a good example for others.

Wear a life jacket – The recommended way for first time snorkeler and swimmer who are not confident in the water. It is a way to remain above the corals without accidentally standing or kicking shallow corals.

Volunteer – Positively impact your environment by volunteering with conservation groups. A little help from everyone goes a long way.

Support conservation - Donate to project that help to conserve the environment. Your financial support goes a long way to help reduce the negative impacts from humans. Give what you can today.

4 Reef Watch Guidelines

Reef watch is a simple one-dive-one-survey method to record the health of a coral reef. You can easily learn the method and take part in the programme. On your dive or snorkel trip you will be able to collect valuable information to help us care for the reefs you visit today.

The data you collect using the Reef Watch underwater slate will help us to see any trends developing on the reef. Your participation provide us with valuable information to monitor the reef's health.

Record information on country, province, (island if appropriate), name of the reef, direction the reef faces (back of the reef facing out to sea), and the latitude and longitude of the dive. If you do not have the latitude and longitude please sketch a map of the location on the reef where you dived.

Your dive leader can provide this information or any other part of the survey where you are unsure.

Reefs name: Dive/Snorkel site

Facing direction: Which side of the coast (island) are you surveying?

Reef width (m): Distance between the shore's edge to seaward edge of the reef.

Maximum depth of reef and time when recorded: Maximum depth is measured at the slope end. Note that depth of reef varies with time and tidal movement, so when you record depth you have to record time as well.

Average depth of dive: Provide average depth of dive as this tells us the approximate depth you found most of your data.

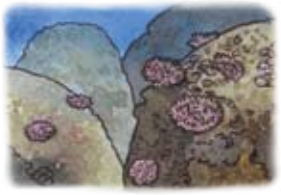
Reef Topography at the Diving Site: What type of topography is the entire reef in general? Is it a gentle slope from the shore(1)? Is there obvious reef flat or reef slope(2)? Is it a steep slope or wall type(3)? Or is it a submerged rocky reef(4)?

Reef Type: Please choose only one

Dense coral reef: Dense area of hard corals alive or dead (may have small areas of sand or rock).

Patch reef: Reef that contains patches of coral colonies scattered on the sand floor. This type of reef is usually found on a sandy lagoon or channel between two islands where the current is rather strong. So, in a patch reef, you might find that the sand floor area cover is more or less over 50% and the rest is corals.

Rocky reef: Corals grow on rock beds



Zone of Reef Where Observed: Please choose only one zone matched your site survey.

- ☐ reef flat area exposed at extreme low tides
- ☐ reef slope
- ☐ both reef flat and reef slope
- ☐ wall
- ☐ irregular topography or submerged rock

Percentage Cover (Estimate): In a diving path of every 10 minutes, record cover of each category. Find the average value of cover type over the whole area surveyed.

Live hard coral: Reef builders - Hermatypic Corals.

Dead coral rock: Coral dead but still intact.

Dead coral rubble, scattering on sand: An entire sand bed area with dead coral rubble.

Soft coral: Coral without hard skeleton, mostly swaying with the tide/waves.

Sea fan: Feathery branches often form in a 2-dimensional traditional fan shape.

Fleshy algae: Generally green or brown and leafy or grass-like, they can grow much quicker than coral and rapidly smother the reef.

Other: Anemone, Corallimorph, Giant Clam, Sponges and Zoanthid, are organisms which have taken up available space and are firmly attached

to substrate. Zoanthid and Corallimorph are close cousins to corals but do not build reefs and can instead smother coral.

Sand floor: Sand area.

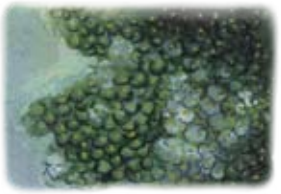
Rock floor: This does not mean limestone from dead coral, but other rock such as granite. This can be covered in encrusting algae as a suitable substrate for larvae settlement.

Remember you can always use the marine life identification book provided by your operator if you would like to learn more about the animals you are identifying.

Common Type of Corals: Those coral growth forms which are the most dominant on reef (not all growth forms seen).

- ☐ Massive – large or small boulders
- ☐ Submassive – short very thick columns
- ☐ Short or Long branches – Finger-like or staghorn





- ☐ Table – branching form which has spread horizontally
- ☐ Leafy or vertical plate – folds or coral flowing in area with a definite edge like a lettuce
- ☐ Encrusting - coral seems to spread over the floor in a thin layer
- ☐ Mushroom – corals are single large polyps of several centimeters in diameter and are found scattered over reef floor

Indicator Species:

Remember to look in crevices and under rocks and corals for sessile animals. Select one method to survey.

1) Count in the area of approximately 10 x 10 m. The recommendation is to do this in 3 plots and take the average. Note that you are not to fill in the actual number, but check one of the following in the given range: none, small number, fair number, or large number.
2) For some fish, especially those that wander around in a school (such as parrot fish) or animals, which may stay in clumps (such as crown-of-thorns starfish), you may count or estimate for a total dive (not in a plot of 10x10 m). Please remember to enter approximately how far you dove in meters.

Needle spined urchin: Identified by long spines usually found on sea floor where they are grazing for food, algae grazers small number good for healthy reef, large number may indicate to much algae and dead matter.

Crown- of- thorns- starfish (COT): Purple, blue, light brown, green and black color, usually at least 20 cm in diameter. They can be found anywhere on the reef generally where coral is dense as they feed on coral polyps. They are nocturnal predators so are usually hidden in crevices or under table corals during the day. You might find a dead white patch on coral while COT is hidden under such coral. Spines are toxic, 1 or 2 COT on a dive is normal. More than 10 in 1 hectare (100x100 m) could be defined as an outbreak. Over 30 in 1 hectare is a serious case. Please contact the Phuket Marine Biological Center. An email address is provided at the back of your slate.

Sea cucumber: Variety of colors, cleaners of reef because they feed on dead and decaying matter from top to bottom of the reefs.

Parrot fish: Reef Grazers which average 20 cm in length in a variety of colors. Recognised by parrot like jaws. Swim over several habitats on the reef and regularly graze on the reef. Important reef fish as graze on algae clearing the way for new coral larvae to settle and keeping algae in check, some species will eat coral polyps.

Bumphead parrot fish: Very large, distinctive bump on the forehead, found in all areas of the reef, regularly nipping down on rocks and coral to feed.



Grouper: Generally found at the bottom of the reef or in places they can hide and wait for prey. Predators on the reef, they rely on their camouflage. They are usually shy and have a rock or crevice to run to so they can be difficult to spot. Under branching and massive corals, they are usually resting on their pectoral fins. As a top predator on the reef they prey on weak and sick fish, keeping the overall reef healthy.

Snapper: Cruise around reef in schools and have a sloping forehead. They are fished regularly for food so there is danger in overfishing.

Butterfly fish: Mostly found in pairs, generally disk shaped. They roam along the reef grazing on many types of food and as they feed, clear space for new coral or other animals to settle.

Napolean wrasse: Rare visitor, fished for its lips

Spiny lobster: Spiny lobsters tend to live in crevices of rocks and coral reefs, only occasionally venturing out at night to seek snails, clams, crabs, sea urchins or carrion to eat. Spiny lobsters are edible and an indicator of overfishing. Sometimes, they migrate in long lines across the sea floor.

Over the whole dive how would you rate the following?

Reef attractiveness:
Provide your personal opinion. Was it exceptional, very good, good, fair, or poor?

Hard coral variety:
Provide your personal opinion on the variety of growth forms and amount of species. Was it exceptional, very good, good, fair, or poor?

Reef fish count:
Do you think there were many fish? Was it superabundant, abundant, moderate, limited or poor?

Reef fish variety:
Provide your personal opinion on the variety. Was it incredibly varied, varied, limited or noticeably few?

Damage to the Reef : Over the course of your dive, did you see damage being done to the reef or the results of earlier damage?

Fishing gear: Nets, lines, traps entangled on or over the reef.

Spear fishing: Did you see this?

Dynamite blasting: Did you hear an explosion during your dive or notice recent impact from dynamite fishing? In the blasted reef, you might find that large massive corals were broken into small pieces (wrist size). Can anything else cause this?

Careless diving: Fins or equipment hitting coral, kicking up sediment on to corals.

Shell collecting: People collecting shells

Stepping / holding on to coral: People stepping or holding on to the reef while snorkelling or diving.

Oil slick : Appear as a thin film on the surface of the water.

Anchoring on coral: Anchors on coral or being dragged across coral reefs.

Sediment: Kicked or stirred up on reef or from land based activities.

Sewage: Expelled into the sea from boats or land near coral reefs.

Over the course of your dive, did you find?

Coral bleaching: Coral turns white, very pale or a bright pale yellow (polyps still exist)

Seaweed smothering the reef: Particularly leafy algae, either green or brown

Standing dead coral: Corals that are dead but are still intact and not broken up

Additional comments: Please use this section to add sightings of rare or endangered species or any crown of thorn out breaks. Anything you are unsure about may be relevant and can be added here.

Please submit data online at www.greenfins-thailand.org Alternatively you can send information to Niphon Phongsuwan, Phuket Marine Biological Center, P.O. box 60, Muang District, Phuket, 83000 or e-mail to nph1959@gmail.com , info@greenfins-thailand.org

Thank you

5 Fish Feeding and the Four Deadly D's

It's an entertaining and interactive marine experience for the diver, and an easy meal for those beautiful fish, so what's the problem? It is now generally accepted that despite being a "once in a lifetime experience", feeding marine fish is a bad idea for everyone, including divers, fish and the ecosystem. The Green Fins 4 Deadly D's explains why we should not feed fish or throw food leftovers and waste into the sea.

1. DISRUPTION of ecological processes

Over time this activity can change the behavior of the fish as they learn to connect divers, snorkelers, and boats with feeding time. Marine life maintains an intricate balance of ecological relationships and behavior. Unnatural feeding encourages species that would never usually come into contact with humans to interact. This may result in serious injury and harm to individuals. Upsetting such complex and unique systems can lead to measurable negative impacts.

2. DISADVANTAGEOUS health impact to fish

When fed, fish may stop natural feeding cycles which are important to ensure they are receiving the correct nutrients to survive. Over a prolonged period, fish conditioned to accept a free meal from a diver could become under nourished, stressed or in some cases, death.

3. DANGER to humans

Attacks and bites have been increasingly reported by fish feeders and others in the vicinity because marine life mistake divers' actions for handouts, or the marine life lose their natural wariness of humans underwater. There was highly publicized case of a resident moray eel in the Similan Islands trained to eat sausages by visiting divers, one day it mistook a diver's thumb for a sausage and bit the entire thumb off.

4. DAMAGING the environment

Many fed species like grouper and small sharks are predators whose feeding habits provide key roles in the delicate balance of life on coral reefs and other marine habitats. By supplementing the diet of these fish, we interrupt this important natural balance. There is much evidence today in Thailand that fish feeding is increasing the severity and rate of the coral eating Crown of Thorns (COT) Starfish outbreaks. For example, Sergeant Majors feed on the starfish's eggs, trigger fish feed on either young or adult COT and even parrotfish, the algae grazer, might eat juvenile COT accidentally when grazing. So by feeding these fish you are increasing the survival rate of COT which will lead to more destruction of the reefs. Green Fins asks all tourists, divers, and boat crew not to feed fish anywhere, to throw your left over lunch into the bin and to ensure that rubbish is taken off the boat and disposed of responsibly. It is not allowed to feed fish in National Parks around Thailand.

Thank you very much for supporting marine conservation and helping us save our seas.

6 Underwater Photography Guidelines

The world's coral reefs are under threat from many stresses and pressures. Each year millions of divers hit the water. Although most divers are concerned with protecting the environment, the goal is to minimize any additional stress on corals. Photographic equipment affects divers' buoyancy and mobility in the water. Divers need advanced skills to take photos and videos underwater.

Do Practice buoyancy control and photography skills in a swimming pool before diving. Photographers should have good buoyancy skills to avoid damaging the fragile marine environment.

Do Secure gauges, regulators and other equipment so they do not trail over reefs and cause damage.

Do Assess the situation before approaching. Position yourself and your camera without touching the reef.

Do Learn to fin slowly backwards so you can move away from the reef without causing damage.

Do If it is necessary to hold on to something, touch only on a rock or dead patch reef.

Do Avoid stirring up sediment by gently lower your fins down onto the sand.

Do Respect an animal's space and back off if it looks like it is becoming stressed.

Do Be still and patient so that the subject will relax and allow you to take one best shot only.

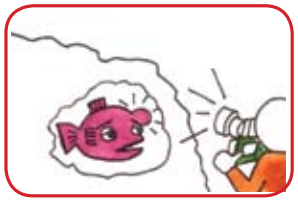
Don't Touch animals. Touching or manipulating animals adds stress, making them defensive and sometimes aggressive.

Don't Invade an animals' space. Getting too close to animals will cause your subjects to flee. If some territorial animals become highly stressed, move on to another subject.

Don't Touch or hold on to corals for support or move or break corals to get a clear shot.

Don't Take too many shots of each animal. Excessive use of flash light will scare and stress them.

Don't Use tools such as sticks or pointers to move marine life for the clear shot.



Don't Use strong beams or lights on night dives as this can cause confusion to the animals. Fish can harm themselves by bumping into surrounding reefs.

7 Underwater Cleanup Guidelines

Coral reefs are facing many threats from human activities including marine litter. One way to help protect and conserve the reefs is to participate in underwater cleanups. As coral reef is very fragile, cleanups have to be conducted very carefully. The following are guidelines on how to conduct underwater cleanups.

I. Pre-Reef Cleanup

Diver Pre-requisites

You are . . .

- A qualified open water diver with > 50 dives
- In good health
- A team player

Aside from standard diving gear, you...

Must have

- Knife, scissors or cutters for cutting
- Safety sausage
- Gloves to protect you from sharp objects
- Mesh sacks
- Plastic bags or lift bag
- Rope
- Buoys for locating divers positions

Should have

- Small saw
- Snap link
- Shaker
- Compass

Be sure the boat is adequate enough for transporting divers and garbage Make sure first aid kits are fully stocked and safety equipment has been checked.

Develop a survey and plan

- Gather information on the dive site (weather, tides, topography, activities)
- Observe the type of garbage if possible or find out from local divers
- Determine team roles and responsibilities
- Coordinate with relevant organizations, including the local community
- Develop a budget plan
- Expect the unexpected: anticipate incidents and find solutions

Brief before the dive

- Dive site landscape
- Steps for cleanup
- Team roles and responsibilities
- Safety
- Divers' hand signals
- Planned depth and dive time
- Technique for underwater cleanup diving
- Garbage transfer

II. Reef clean up

Safety

- Make sure underwater conditions and weather are suitable for diving
- Arrange boat guard to assist divers and prevent other possible interference
- Work with your buddy
- Dive without decompression sickness. Do safety stop and locate your position by using a safety sausage
- Check dive gear before and after the dive

Surface Team

- Arrange small boat for garbage transportation
- Arrange lifter equipment for heavy garbage
- Remove and return organisms from the garbage
- Have a good understanding of dive communication skill
- Have communication equipment ready (whistle, megaphone, binoculars, etc.) and be able to communicate with the team underwater
- Prepare garbage containers

Underwater Team

- Have suitable mesh sacks
- Work cooperatively with team and in buddy pairs
- Adhere to the dive plan (depth and time)
- Dive with multi level style
- Prepare a plastic bag, lift bag or safety sausage for lifting garbage to the surface

Dive protocol

- Work slowly and carefully
- Dive in a head-down position to avoid kicking coral
- Adjust buoyancy throughout the dives as the garbage bag gets heavier
- Make sure equipment is secure and the mesh sack is held so that nothing can trail or snag on coral
- One diver collects garbage while the other holds the mesh sack
- Place glass, needles and hooks inside other garbage for safety
- Never try to remove anything that cannot be easily lifted such as tires or car batteries

Plastic fishing net and lines

- Never try to pull a fishing net or line free. Cut and remove it in sections to avoid damaging organisms growing around it
- Use cutting tools or scissors rather than a knife
- Wind the net or line around an object or hand to control it

What To Remove and What To Leave

Check it before you bag it

- Make sure nothing is living in or on each item before removing
- Do not remove bottles that are covered in growth
- Hold bottles and cans close to sand beds and empty sand or silt

What to LEAVE

- Anything that is stuck or encrusted with growth of marine life
- Anything that may be dangerous
- Heavy items – never use your buoyancy control device to lift heavy objects
- Metal drums, gas tank and containers that may contain hazardous materials

III. Post-Reef Cleanup

Sort out the garbage

For reuse and recycle, stabilization of hazardous waste and landfill purposes

- Plastic and Foam
- Glass and Tile
- Clothes and Paper
- Metal
- Fishing gear
- Wood
- Hazardous waste

Arrange for garbage to be collected

- Do not leave it on the beach
- Find a buyer for reusable and recyclable garbage
- Coordinate with responsible organizations to handle hazardous waste
- Contact the local authorities to transport non-hazardous and non-recyclable waste to landfill

Record Data

- Complete data recording sheets which can be download from our website
- Document all that is collected so that the origin can be identified
- Submit data to ThailandCoastalCleanup@gmail.com

Analyze Data

8 Laws and Regulations

What Marine Life is Protected?

1. ALL Corals and Sea Fans

Either living or dead, are protected under fisheries' laws as conserved species. Nobody is allowed to keep corals or sea fans as personal property unless the item was registered before April 1995. The punishment to the offender is either fining for up to 40,000 baht or being put in jail for up to 4 years or both.

Nobody can harm coral. Offender will be either fined up to 40,000 baht or being put in jail for up to 4 years.

So remember dropping your anchor on coral reefs or causing deliberate harm to corals could land you in jail for 4 years and be fined 40,000 baht.

2. Fish

No fishing of about 400 species of aquarium fishes in environmentally protected areas and marine sanctuaries (Phuket area & Phi-Phi Islands area –within 3 km from shore).

Humphead wrasse (*Cheilinus undulates*) is classified as endangered under Appendix II of CITES (please find more information about CITES at the bottom of this section).

Other marine delicacies such as groupers, lobsters and sea cucumbers are overfished and face extinction as many end up on our dining tables.

3. Turtles

Hawksbill Turtle Shell protected under Appendix I CITES Export and Import Prohibited.

Turtles are increasingly endangered by destruction of beaches for land development, entanglement in fishing gear, wildlife trade, marine debris and pollution.

Turtles (specifically the Hawksbill species) are caught and their carapace used for jewellery, such as bracelets and hair combs.

All turtles protected by Thai and International Law

Illegal to buy turtle shell in Thailand

Illegal to take turtle products out of the country

Illegal to take Turtle shell products in to most other countries

4. Marine Curio Trade and Sea Shells

Tourists and visitors find shells washed up on our beaches attractive but the shells of dead molluscs have two important roles in the marine ecosystem:

- Once broken down they contribute to the formation of sandy beaches we enjoy.
- Provide homes for hermit crabs as they grow.

In some species, shells are illegal to takeout of the Country and illegal to take back to many of your home countries.

Shells for sale as collector's items are nearly always collected from live molluscs which has a direct impact on populations. This activity also causes damage to the habitat, as collectors overturn rocks and corals on the reef flat in search of them. These may look nice in your home, but not as nice as in there natural habitats, removing these species from their natural environment causes an imbalance in the predator prey relationship in the ecosystem.

What shells are protected?

Triton Trumpet Shell *(Charonia* spp.*)* Status and agency: RARE - IUCN

Giant Clams *(Tridacna* spp.*)* are protected by law under Appendix II of CITES.

It is illegal to buy Triton Trumpet Shell and Giant Clams, and illegal to take them out of the country.

5. Sharks and shark fin soup

Most Sharks are not protected by law and there is nothing illegal about consuming a bowl of shark fins soup or shark steak. There is a huge concern globally regarding the cruel and wasteful practice of "finning" sharks particularly the whale shark.

The whale shark (*Rhincodon typus*) is protected by law under Appendix II of CITES.

Whale sharks are declining in numbers due to a trade in their meat and fins. Sharks are top predators and therefore often contaminated with high levels of mercury which is deemed to be a health risk especially for pregnant woman and children.

6. Cetaceans

All Cetaceans are protected by CITES under either Appendix II or I.

7. Seahorses

Seahorses are protected by law (*Hippocampus* spp.) by Appendix II of CITES

You may find seahorses for sale as key chains or encased in paperweight. Buying a product like this is illegal. Large quantities of seahorses are traded each year for traditional medicines.

CITES

Convention on International Trade in Endangered Species of Wild Fauna and Flora is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

- Appendix I include species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

- Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.
- Appendix III is a list of wildlife and plant species identified as being subject to regulation within its jurisdtion for the purpose of preventing or restricting exploitation and that require the cooperation of other countries in the control trade.

National Park ACT, B.E. 2504 (Extracted from)
Protection and maintenance of the National Park Chapter 3 and Penalty Chapter 5

Section 16 Within the national park, no person shall;

(3) take out animals or do by any means whatsoever things endangering the animals:
Penalty - Section 24 Whoever violates shall be punished with imprisonment not exceeding five years or fine not exceeding twenty thousand baht, or both. Section 26 Whoever violates shall, in case the animal or property collected or taken out is of small value or a slight damage is caused thereby, be punished with fine not exceeding five hundred baht.

(4) do by any means whatsoever things endangering or deteriorating soil, rock, gravel or sand;
Penalty - Section 24 Whoever violates shall be punished with imprisonment not exceeding five years or fine not exceeding twenty thousand baht, or both. Section 26 Whoever violates shall, in case the animal or property collected or taken out is of small value or a slight damage is caused thereby, be punished with fine not exceeding five hundred baht.

(15) take any gear for hunting or catching animals or any weapon, unless permission is obtained from the competent official and the conditions on prescribed by the latter have been complied with;
Penalty - Section 27 Whoever violates shall be punished with fine not exceeding five hundred baht.

(18) discharge rubbish or things at the place not provided for such purpose;
Penalty - Section 27 Whoever violates shall be punished with fine not exceeding five hundred baht.

Wild Animal Reservation and Protection Act B.E. 2535 (1992)
(Extracted from)

CHAPTER THREE
Hunting Breeding Possessing and Trading of Wild Animals Carcass and Products Thereof

Section 16 No person shall hunt or attempt to hunt the reserved wild animals or protected wild animals. **Penalty** - Section 47 Whoever violates shall be punished with imprisonment not exceeding four years or fined not exceeding forty thousand baht, or both.
Section 18 No person shall undertake breeding operation of reserved or protected wild animal. **Penalty** - Section 48 Whoever violates shall be punished with imprisonment not exceeding three years or fined not exceeding thirty thousand baht, or both.
Section 19 No person shall be in possession of reserved wild animal, protected wild animal, carcasses of reserved or protected wild animals. **Penalty** - Section 49 Whoever possesses protected wild animals bred in captivity or carcass thereof without license shall be punished with imprisonment not exceeding one year or fined not exceeding ten thousand baht, or both.
Section 20 No person shall engage in trading of reserved wild animals, protected wild animals, carcasses of reserved and protected wild animals, and products thereof. **Penalty** - Section 47 Whoever violates shall be punished with imprisonment not exceeding four years or fined not exceeding forty thousand baht, or both. Section 50 Whoever trades protected wild animals bred in captivity or carcass thereof without license shall be punished with imprisonment not exceeding two years of fined not exceeding twenty thousand baht, or both.

CHAPTER FOUR
Importation, Exportation, Transitory Movement of Wild Animal and Wild Animal Check point
Section 24 The importation, exportation and transitory movement of wild animals and carcass thereof, which require accompanying permit in accordance with the Convention on International Trade in England Species of Wild Fauna and Flora, are permissible only with permission by the Director-General. The application for and granting of the permission shall be pursed under the standard, producer and conditions stated in the Ministerial Regulation.

CHAPTER EIGHT
Penalty
Section 55 Whoever assists in concealing, disposing of, taking away, purchasing, holding in pledge or receiving by any other means wild animals carcass, which have been acquired by through commission of an offence under this Act, shall be punished with imprisonment not exceeding one year or fined not exceeding ten thousand baht, or both.

What Can't Be Imported and Exported

The Wild Animals Reservation and Protection Act, B.E. 2535 (1992) More than 1,000 species of animals are officially listed as Reserved and Protected Animals under The Wild Animals Reservation and Protection Act, B.E. 2535 (1992) with limited 2 exceptions, none can be imported and exported either alive, as parts or products, as parts or products, or as trophies.

List of Marine animals protected:

Marine Mammals

Dugong or Sea cow *(Dugong dugon)*
Spinner dolphin *(Stenella longirostris)*
Striped dolphin *(Stenella coeruleoalba)*
Long-beaked common dolphin *(Delphinus capensis)*
Bottlenose dolphin *(Tursiops aduncus)*
Fraser's dolphin *(Lagenodelphis hosei)*
Rough-toothed dolphin *(Steno bredanensis)*
Spotted dolphin *(Stenella attenuata)*
Indo-Pacific hump-backed dolphin *(Sousa chinensis)*
Finless porpoise *(Neophocaena phocaenoides)*
Irrawaddy dolphin *(Orcaella brevirostris)*
Cuvier's beaked whale *(Ziphius cavirostris)*
Short-finned pilot whale *(Globicephala macrorhynchus)*
Bryde's whale *(Balaenoptera edeni)*
Killer whale *(Orcinus orca)*
False killer whale *(Pseudorca crassidens)*
Pygmy killer whale *(Feresa attenuata)*
Ginkgo-toothed beaked whale *(Mesoplodon ginkgodens)*
Fin whale *(Balaenoptera physalus)*
Melon-headed whale *(Peponocephala electra)*
Sperm whale *(Physeter macrocepalus)*
Dwarf sperm whale *(Kogia sima)*
Pygmy sperm whale *(Kogia breviceps)*

Pices

Whale shark *(Rhincodon typus)*

Marine Reptile

Hawksbill turtle *(Eretmochelys imbricata)*
Green turtle *(Chelonia mydas)*
Logger head turtle *(Caretta caretta)*
Leather back turtle *(Dermochelys coriacea)*
Olive Ridley turtle *(Lepidochelys olivacea)*

Invertebrate

All species of sea fan (Order Gorgonacea)
All species of black coral (Order Antipatharia)
All species of sea anemone (Order Actiniaria)
All species of hard coral (Order Scleractinia and order Stylasterina)
All species of fire coral (Genus *Millepora*)
All species of blue coral (Order Heliopracea)
All species of soft coral (Order Alcyonacea)
All species of giant clam (Family Tridacnidae)
Triton shell *(Charonia tritonis)*

Marine Protected Areas (26 Marine National Parks)

Andaman Sea

- Mu Ko Similan - PhangNga — ffsimilan@hotmail.com
- Mu Ko Surin - PhangNga — mukosurin_np@yahoo.com
- Ao Phangnga – PhangNga — aophangnga_np@hotmail.com
- Mu Ko Ra-Ko Pra Thong – PhangNga — reserve@dnp.go.th
- Khao Lampee – Had Thai Muang — lampi_thaimueang_np@hotmail.com
- Sirinath - Phuket — sirinath_np@yahoo.com
- Mu Ko Lanta - Krabi — lanta_np@yahoo.co.th
- Thanboke Khoranee - Krabi — reserve@dnp.go.th
- Khao Lak-Lam Ru - PhangNga — reserve@dnp.go.th
- Had Nopparatthara - Mu Ko Phi Phi — phiphi_np@hotmail.com
- Had Chao Mai - Trang — reserve@dnp.go.th
- Mu Ko Petra - Satun — mu_ko_phetra@hotmail.com
- Tarutao - Satun — tarutaosatun.go@hotmail.com
- Thale Ban - Satun — reserve@dnp.go.th
- Laem Son - Ranong — laem_son_np@yahoo.com
- Lam Nam Kraburi – Ranong — lumnumkraburi@hotmail.com
- Mu Ko Phayam – Ranong — reserve@dnp.go.th
- Marine National Park Operations Center — info@marineoperations.org

Gulf of Thailand

- Khao Sam Roi Yot - Prachuap Khiri Khan — reserve@dnp.go.th
- Had Wanakorn – Prachuap Khri Khan — reserve@dnp.go.th
- Mu Ko Chang - Trat — reserve@dnp.go.th
- Khao Laem Ya-Mu Ko Samet – Rayong — np_samet@hotmail.com
- Mu Ko Ang Thong - SuratThani — angthong_np@hotmail.com
- Had Khanom Mu Ko Thale Tai - SuratThani — reserve@dnp.go.th
- Mu Ko Chumpon – Chumpon — mukochumphon@yahoo.com
- Than Sadet – Ko Phangan — reserve@dnp.go.th
- Ao Manao-Khao Tanyong – Narathiwat — reserve@dnp.go.th

Marine Sanctuary

- Ko Tachai (within 2 km from shore)
- Ko Dokmai (within 1 km from shore)
- Hin Musang (within 2.5 km from islet)
- Ko Khai-nok (within 1 km from shore)
- Ko Khai-nai (within 1 km from shore)
- Ao Patong (within 3 km from shore)
- Area covering partly of Laem Panwa – Ko Hae – Ko Aeo – Ko Lone
- Ko Phi Phi (within 3 km from shore)

Useful Websites and Contacts

Ministry of Natural Resources and Environment	www.monre.go.th
Department of Marine and Coastal Resources (DMCR)	www.dmcr.go.th
Phuket Marine Biological Center Marine Endangered Species Unit Contact: Tel. 076-391-128	www.pmbc.go.th
Department of National Park, Wildlife and Plant Conservation (DNP)	www.dnp.go.th
Wildlife Conservation Division, Royal Forest Department Contact: Tel. 02-579-1565, 561-4837	
Natural Resources and Environmental Crime Division	www.forest.police.go.th
Department of Fisheries, Ministry of Agriculture and Cooperatives	www.fisheries.go.th
Peun Pa	www.peunpa.org
CITES	www.cites.org
TRAFFIC the wildlife trade monitoring network	www.traffic.org
Thai Customs Department	www.customs.go.th
Wildlife Conservation Society - WCS	www.wcsthailand.org

REEF WATCH

Location : Province.....Island.....Reef's name.....
Facing direction.....Latitude.....Longitude.....Date.....
Position accuracy
☐ completely certain ☐ fairy certain ☐ slightly uncertain ☐ very uncertain

Sketch location of the surveyed reef (if could not give the latitude, longitude)
Reef width (approx.) .....m. Average depth of dive.....m.
Maximum depth of the reef.....m. Time when record depth.....
Reef topography at diving site :
☐ gentle slope from shore ☐ obvious reef flat and reef slope
☐ steep slope or wall ☐ submerged rocky reef
Reef type :
☐ dense coral reef ☐ patch reef ☐ rocky reef
Zone of reef where you observed % cover
☐ reef flat ☐ reef slope ☐ both reef flat and slope
☐ wall ☐ irregular topography on submerged rock

(%) Percentage cover (visual estimate)

Live coral	Dead coral	Dead coral fragment scattering on sand	Soft coral	Sea fan	Fleshy algae	Other	Sand floor	Rock floor	Total
									100%

Common type of corals (can tick more than one)
☐ massive ☐ submassive, very thick branches
☐ short/long branches ☐ table ☐ leafy/verticle plate
☐ encrusting ☐ mushroom

In approx. area 10x10 m2 you found (none, small number, fair number, large number) of (or you may tell total number and estimate distant you dived) Distance dived.....m.
Needle spined urchin.....Crown-of-thorns starfish.....
Sea cucumber.....Parrot fish.....Bumphead parrot fish.....
Grouper.....Snapper.....Butterfly fish.....
Napoleon wrasse.....Spiny lobster.....

Reef attractiveness:

☐ exceptional ☐ pretty good ☐ moderately good ☐ limited ☐ very poor

Hard coral variety:

☐ exceptional ☐ pretty good ☐ moderately good ☐ a bit limited ☐ very poor

Reef fish number:

☐ superabundant ☐ abundant ☐ moderately ☐ a bit limited ☐ very poor

Reef fish variety:

☐ incredibly varied ☐ pretty varied ☐ moderately variety ☐ a bit limited ☐ noticeably few

Damage on the reef (Please check on box)

Causes of destruction	none	possible/little	some	moderate	extensive
Fishing gear					
Spear fishing					
Dynamite blasting					
Careless diving					
Shell collecting					
Stepping/holding on to coral					
Oil slick					
Anchoring on coral					
Sediment					
Sewage					
Crown-of-throns starfish					

Did you find.....?

	no.	yes, slightly	yes, moderate	yes, wide spread
Corals are bleaching				
Seaweed smothering the reef				
Standing dead coral				

Water visibility (viewed horizontally underwater).....m.

Water temperature.....

Sea floor charactor ☐ muddy ☐ fine sand ☐ coarse sand

Additional comments.....

.....

Reporter.....E-mail.....

Address.....

.....

.....

Please submit data online at www.greenfins-thailand.org alternatively you can send information to Niphon Phongsuwan, Phuket Marine Biological Center, P.O. box 60, Muang District, Phuket, 83000 or e-mail to nph1959@gmail.com, info@greenfins-thailand.org